MAE 515  FLUID MECHANICS

M,W 11:30 – 12:50   214 OBRIAN

Text: Fundamentals Mechanics of Fluids
      I.G. Currie

MAE 515 Incompressible Inviscid/Viscous Flow Fields

Fundamentals
   Continuum Concept
   Cartesian Tensors
   Flow Kinematics
   Basic Equations
   Special Forms
   Curvilinear Coordinates

Ideal Flow
   Fundamental Solutions
   Conformal Transformations
   Schwarz – Christoffel Transformation
   Airfoil Theory
   Three Dimensional Flows

Viscous Flows
   Exact Solutions
   Low Reynolds Number Flows
   Boundary Layers

GRADING:  Homework    20%
           Midterm      40%
           Final        40%

MAE 516:  Compressible Flow
           Stability Theory
           Transition
           Turbulence