Heat Transfer

AEROENG 3580

Credit Hours:
3.00

Course Levels:
Undergraduate (1000-5000 level)

Course Components:
Lecture
Lab

Course Description:
Fundamentals of conduction, convection, and radiation.

Prerequisites and Co-requisites:
Prereq: 3560 (560 and 570), and enrollment as AeroEng-BS student (No pre-majors can enroll in this class).

Course Goals / Objectives:
• A fluency with the subject matter including: conduction, convection, and radiation.

Course Topics:
• Viscosity and Navier-Stokes equations
• Couette Flow
• Poiseuille Flow and other closed form solutions
• Boundary Layers
• Blasius, Falkner-Skan
• Compressible boundary layers
• Reynolds analogy
• Boundary Layer transition and turbulence
• Conduction
• Convection
• Radiation
Designation:
Required