



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.
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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
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Designation:

Required