Helicopter Aerodynamics

AEROENG 5610

Credit Hours:
3.00

Course Levels:
Undergraduate (1000-5000 level)
Graduate (5000-8000 level)

Course Components:
Lecture

Course Description:
Basic treatment of helicopter aerodynamics, performance, and design.

Prerequisites and Co-requisites:
Prereq: 3570 (530 and 570).

Course Goals / Objectives:
• Introduce students to the fundamentals of helicopter flight including rotorcraft aerodynamics, design, performance, and control in hover and forward flight

Course Topics:
• Introduction and Historical Perspective
• Momentum Theory
• Blade Element Theory
• Blade Motion, Dynamics, and Control
• Performance
• Design

Designation:
Elective