



# Helicopter Aerodynamics

## AEROENG 5610

**Credit Hours:**

3.00

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**Course Levels:**

Undergraduate (1000-5000 level)

Graduate (5000-8000 level)

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**Course Components:**

Lecture

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**Course Description:**

Basic treatment of helicopter aerodynamics, performance, and design.

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**Prerequisites and Co-requisites:**

Prereq: 3570 (530 and 570).

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**Course Goals / Objectives:**

- Introduce students to the fundamentals of helicopter flight including rotorcraft aerodynamics, design, performance, and control in hover and forward flight
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**Course Topics:**

- Introduction and Historical Perspective
  - Momentum Theory
  - Blade Element Theory
  - Blade Motion, Dynamics, and Control
  - Performance
  - Design
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**Designation:**

Elective