

**Aerospace Engineering**  
**Level and Major: Undergraduate**

**Division: Flight Mechanics**

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**Course Title: Flight Mechanics (I)**

**Number of Credits: 3**

**Prerequisite: Aerodynamics (I)**

**Lecturer: Kamran Raissi**

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**Course Description:**

Aircraft Performance including take off, climb, cruise, decent, and landing.

**Course Goals and Objectives:**

Students learn to calculate the performance of an aircraft

**Course Topics:**

- Lift and Drag calculation
- Propulsion calculation
- Weight estimation
- Take off distance
- Climb performance
- Cruise performance
- Decent performance
- Landing distance
- Turning performance
- V-n Diagram

**The course aims to:**

Ability to calculate an aircraft performance

**Reading Resources:**

- B. McCormick, "aerodynamics, Aeronautics, and Flight Mechanics 2th ed.", John Wiley, 1994.

**Evaluation:**

Final Exam, Midterm, Homework, Project