

Department: Aerospace Engineering
Level and Major: Undergraduate

Division: Flight Mechanics

Course Title: Flight Testing

Number of Credits: 3

Prerequisite: Flight Mechanics (I) & (II)

Lecturer: Kamran Raissi

Course Description:

Understanding the aircraft flight testing principles, methods, procedure, implementation, and analysis

Course Goals and Objectives:

Become familiar with flight testing, methods, conduction, and analysis of the flight test results.

Course Topics

- Flight testing philosophy
- Prototype flight testing
- Subsystem flight testing
- Flight testing for certification
- Flight testing for airworthiness
- Flight testing procedures
- Flight testing checklist
- Equipment
- Personnel
- Safety
- Standards
- Performance testing
- Static stability testing
- Dynamic stability
- Controllability testing
- Flying quality testing
- Flight envelope evaluation

The course aims to (outcome):

Ability to conduct a flight test

Reading Resources

- R. Kimberline, "Flight Testing of Fixed Wing Aircraft", AIAA Educational Series, 2003.

Evaluation:

Midterm Exam

Project

Final exam

