

CLARKSON UNIVERSITY
Department of Mechanical and Aeronautical Engineering
AE200 Aeronautical Engineering Seminar
Fall 2005

Course description: Introduction to aeronautical engineering. Aerodynamic and structural concepts and terminology. Principles of flight and propulsion systems. Introduction to aircraft stability & control, and other related areas.

Instructors: MAE Faculty

Coordinators: Ratan Jha (CAMP 364, 268-7686, rjha@clarkson.edu)

Office Hours: Tues 4 -5, Wed 2 -5, Thurs 4-5

Ken Visser (CAMP 360, 268-7687, visser@clarkson.edu)

Lectures: F 1:00-1:50, SN 213

Text: *Introduction to Aeronautics: A Design Perspective*, Brandt, S. A. et al.,
AIAA Education Series, 1997 (**Recommended**)

Learning Objectives:

1. Introduce the students to the basic concepts of aircraft design, aerodynamics, performance, stability & control, structures, propulsion, and manufacturing.
2. Familiarize the students with experimental facilities through visits to aeronautical engineering labs.

Evaluation Methods:

[1] Class participation

[2] Glider competition

Grading based on Pass/No Entry system.

Learning Outcomes:

By the end of this course, each student will:

1. Acquire basic concepts of aircraft design and related subjects. [1,2] (1,2,5,6)
2. Be able to construct a glider using principles of flight. [2] (1)
3. Be able to assess glider performance based on test flights. [2] (2)

Seminar schedule:

Seminar No.	Date	Topic	Speaker
1	Sept 02	Introduction	Jha, Visser, Marzocca
2	Sept 09	Concorde video	Visser
3	Sept 16	Aerodynamics	Visser
4	Sept 23	Aircraft structures	Jha
5	Oct 07	Aircraft performance	Marzocca
6	Oct 14	Aircraft stability and control	Marzocca
7	Oct 21	Aircraft propulsion	LaFleur
8	Oct 28	Combat aircraft design	Jha
9	Nov 04	Transport aircraft design	Visser
10	Nov 11	Wind tunnel lab	Visser, Jha
11	Nov 18	Manufacturing	Morrison
12	Dec 02	Glider competition	Visser, Jha
13	Dec 09	Glider competition results	Visser, Jha

*Visit to Potsdam Airport on a Saturday morning (Prof. Morrison) TBA