

Fall 2006 — AOE 2104 — Introduction to Aerospace Engineering — CRN 90303

Instructor: Dr. Chris Hall, Randolph 224-D, 231-2314, cdhall@vt.edu

Lectures: 2:00 – 3:15 T Th, Whittemore 300

Office hours: 9:00 – 10:30 Tu W Th (*or by appointment*) (Subject To Change)

Text (required): John D. Anderson, Jr., *Introduction to Flight*, Fifth Edition, McGraw-Hill, 2005

Course Web Page: <http://www.aoe.vt.edu/~cdhall/courses/aoe2104>

Class Listserv: AOE2104_90303@listserv.vt.edu

Introduction to Aerospace Engineering. An overview of aerospace engineering from a design perspective; introductory aerodynamics, lift, drag, and the standard atmosphere; aircraft performance, stability, and control; propulsion; structures; rocket and spacecraft trajectories and orbits.

Goal: To introduce new Aerospace Engineering students to the field of AE and to the curriculum

Homework Policy: There will be weekly homework assignments of 3-4 problems each. Each problem must be completed on a separate sheet of paper. On Thursdays, I will take up one problem, which will be graded and returned. Solutions to the remaining problems will be posted on the course website. There will also be three essay assignments, announced later. Late submittals of homework will not normally be accepted.

Quizzes: There will be daily closed-book/note quizzes, to be completed on a 3×5 index card.

Exams: There will be two Midterms and a Final. All exams will be comprehensive. The second Midterm and the Final will include formula sheets.

Extra Credit: I will give two extra points to students who email me a photograph and description of an aerospace vehicle before September 12. I will select some of these to show in class and will ask the student to give a brief oral description in class.

Grading Policy:	Homework	15%
	Essays (3)	15%
	Midterm I	20%
	Midterm II	20%
	Final	25%
	Wild Card	5%
	Vehicle	2 points extra

Honor Code: The University Honor Code will be maintained. You are encouraged to discuss all assignments with instructor, teaching assistant, and classmates. However, all work submitted for a grade must reflect your own understanding of the material.

Topics: (text reference)

What is Aerospace Engineering? (Notes)

History (Chapter 1 & Notes)

Fundamental Thoughts (Chapter 2 & Notes)

Atmosphere and Aerodynamics (Chapters 3 & 4)

Aircraft Motion (Chapters 5, 6, & 7)

Spacecraft Motion (Chapter 8 & Notes)

Propulsion (Chapter 9 & Notes)