

AERODYNAMIC THEORY

AE 424/21166

Spring 2002

MWF 8:10-9:20 210 WH

1. Instructor: Dr. K.A. Hoffmann
2. Office: 203 WH
3. Office Hours: Monday through Thursday 9:30-10:30 a.m.
4. Text: *Aerodynamic for Engineers*, third edition, Bertin and Smith
5. Prerequisite: M 555, AE 373, AE 324 (corequisite: ME 521)
6. Homework: Homework will be assigned daily. It will be due on the front desk before class starts on the assigned date. The homework must follow the format specified on the following pages.
7. Exams: The exam dates will be announced in class. The procedures for the examinations are specified on the following pages. All exams are comprehensive.
8. Grade:*

4 Exams (15% each)	60%
Homework	10%
Final exam	30%
9. Drop Dates:** Final day to withdraw a course with a "W" April 5
10. Final Exam: 8:00-9:50 a.m. Friday, May 17, 2002

* Class attendance and participation will affect the final grade.

** Consult College of Engineering catalog for required approvals.

Course Topics

Chapters

1. Fundamental Principles and Equations of Fluid Motion	1,2
2. Dynamics of an Incompressible, Inviscid Flow Field	3
3. Incompressible, Viscous Boundary Layers	4
4. Characteristic Parameters for Airfoil and Wing Aerodynamics	5
5. Two-Dimensional, Incompressible Flows Around Thin Airfoil	6
6. Incompressible Flow About Wings of Finite Span	7
7. Dynamics of a Compressible, Inviscid Flow Field	8
8. Compressible, Subsonic Flows and Transonic Flows	9

PROCEDURES FOR THE EXAMINATION

1. Be in class at least five minutes before exam starts.
2. All materials must be left in the front of the classroom.
3. You may not leave the room during the examination.
4. You must have your student I.D. during the exam.
5. You are not allowed to borrow any material, such as a calculator, during the examination.
6. If you have any questions during the exam, raise your hand; do not leave your seat.
7. Follow the same format as the homework, unless otherwise specified.
8. If finished early, leave as quietly as possible.
9. No make-up examinations will be considered unless a valid acceptable excuse such as illness, is provided.
10. If you do not follow any of the stated procedures, you may lose some or all of the credit for the examination.

HOMEWORK FORMAT

1. Use 8.5" x 11" paper.
2. Do not write on the back.
3. Separate the problems by a line denoting the end of the problem.
4. Must be neat and organized.
5. State the necessary assumptions.
6. Should include the appropriate sketch, properly labeled.
7. Answers should be underlined or boxed.
8. Heading on each paper must have your name.
9. Staple and fold horizontally.
10. Cover page must have student's name, course and section number, date, set, and problem numbers.

** Homework which does not follow the format above will not be accepted.

*** No late homework will be accepted.

