AE 3710
Aerodynamics II
Syllabus - Spring 2015

Class Schedule
Lecture: TR 9:30 am -10:45 am, CEAS D0201
Office Hours: T 2 pm - 3 pm, R 10:45 am - Noon

Pre-Reqs
AE3610, MATH 3740, ME 2580

Instructor
William W. Liou, Ph.D.
Professor and Director, Computational Engineering Physics Lab.
CEAS G230
(269) 276-3430
william.liou@wmich.edu
http://www.mae.wmich.edu/faculty/liou/wp_general.htm

Text Book

Course Description
Fundamentals of aerodynamics of compressible flows will be introduced. Knowledge of airfoil and wing in high-speed flow will be introduced. Theoretical methods and mathematical models of aerodynamics analysis will be described.

Objectives
- To teach the students the basic theory of compressible aerodynamics
- To teach the student the application of mathematics to the analysis of high-speed aerodynamics

Grading
Assignments: 10%
Pop Quizzes: 20%
Tests (Three and 15% each): 45%
Final Exam: 25%

85-100 A
80-85 BA
75-80 B
70-75 CB
65-70 C
60-65 DC
55-60 D
0-55 F


**Tentative List of Subjects**
1. Inviscid, Compressible Flow
2. Oblique Shock and Expansive Waves
3. Compressible Flow through Nozzles, Diffusers, and Wind Tunnels
4. Subsonic Compressible Flow over Airfoils: Linear Theory
5. Linearized Supersonic Flow
6. Elements of Hypersonic Flow
7. Viscous Flow

**Notes**

1. No make-up exams will be given for reasons other than documented medical emergencies. In any case, the students must inform the instructor prior to the test. The points for that test will be added to the final exam. If a student misses more than one test, the other tests will be graded as zero.

2. Solve homework problems on engineering paper. Solve one problem on each page. All the assignments will be collected and graded. Hand in your paper before the class.

3. Late homework penalty: 30% for one day late, 60% for two days and no credit for more than two days late.

4. You are responsible for making yourself aware of and understanding the policies and procedures in the Undergraduate Catalog that pertain to Academic Integrity. These policies include cheating, fabrication, falsification and forgery, multiple submission, plagiarism, complicity and computer misuse. If there is reason to believe you have been involved in academic dishonesty, you will be referred to the Office of Student Conduct. You will be given the opportunity to review the charge(s). If you believe you are not responsible, you will have the opportunity for a hearing. You should consult with me if you are uncertain about an issue of academic honesty prior to the submission of an assignment or test.

5. In class, beepers and cell phones alike should be turned off. Non-class-related uses of any computer platforms are discouraged.