

AOE 3104 Vehicle Performance

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Text: Marchman, *Introductory Flight Performance*, second edition, 2001 (Available at A-1 Copies, University Mall, (Can be ordered on line at <www.alcopies.com> \$17.01)

Reference: Anderson, John ., *Aircraft Performance and Design*, McGraw Hill, 1999

Reference: Anderson: *Introduction to Flight*, 4th edition, McGraw Hill, 1999

Grade:	Midterm Exams	3
	Homework	2
	Final	<u>2</u>
	Total	7

Ground Rules: Students are encouraged to *discuss* homework assignments. However the final effort must be your own. Any computer assignments may be discussed but the coding, including data organization etc. must be your own effort.

Syllabus:

- I. Basic Aerodynamics
- II. Standard Atmosphere
- III. Airspeeds
- IV. Applied Aerodynamics
 - A. Airfoils
 - B. Wings
 - C. Lift and Drag
- V. Performance
 - A. Equations of Motion
 - B. Level flight
 - C. Climbing flight
 - D. Gliding flight
 - E. Range and Endurance
 - F. Take-off and landing
 - G. Turning flight
 - H. Energy Methods