# AME 105: Introduction to Aerospace Engineering


| Time: MWF 9:00-9:50 (Lecture) | Tu or Th 11:00-12:20 (Lab) |
| Room: VHE 206 | Lab Room: SAL 127 |

## Lecture Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Lecture/Discussion Topic</th>
<th>Reading</th>
</tr>
</thead>
</table>
| 1    | Aug 21, 23, 25 | Introduction/Engineering Fundamentals | Ch. 1 (history)  
Ch. 2 (basic physics, units) |
| 3    | Aug 28, 30  
Sept 1 (Q) | Eng. Fundamentals/Standard Atmosphere  
------ Labor Day Holiday ------  
Introduction to Aerodynamics | Ch. 3 (std. atm.) |
| 2    | Sept 4  
Sept 6, 8 | Bernoulli/Air Speed Measurement | Ch. 4.1-2 (continuity, compressibility) |
| 4    | Sept 11, 13  
Sept 15 (Q) | Airfoils/Aerodynamic Coefficients I | Ch. 5.1-4 (airfoils, force coefficients, airfoil data) |
| 5    | Sept 18, 20  
Sept 22 (Q) | Airfoils/Aerodynamic Coefficients II | Ch. 5.5-6 (basics)  
Ch. 5.13-15 (induced drag) |
| 6    | Sept 25, 27  
Sept 29 (Q) | Viscosity/Boundary Layers  
----- Mid-Term Examination #1 -----  
Aircraft Performance I | Ch. 4.15-16 (laminar boundary layers)  
Ch. 6.1-3 (drag polar, thrust req.) |
| 7    | Oct 2, 4  
Oct 6 (Q) | Drag/Separation/Turbulence | Ch. 4.20 (separation)  
Ch. 4.17, 19, 21 (turbulence) |
| 8    | Oct 9, 11  
Oct 13 (Q) | Aircraft Performance II  
-------- Glider Flight Tests -------- | Ch. 6.3-6 (thrust and power)  
Ch. 6.14 (L/D) values  
Ch. 6.13-14 (range and endurance) |
| 9    | Oct 16, 18  
***Oct 20***  
Oct 17 (Q) | Stability and Control I  
----- Thanksgiving Recess ------  
High-Speed Flight | Ch. 7.1-6 (static stability, long.)  
Ch. 5.6, 8-11 (compressibility) |
| 10   | Nov 20  
Nov 22-24 | No lecture (APS Meeting)  
----- Final Exam ------ | |
| 11   | Nov 27, 29  
Dec 1 | Last class/Review | |

*Flashcards and practice exams are available at the end of the week.

**Mid-Term Examination**

***Final Exam***

**** (Monday)***  
(11:00 a.m. – 1:00 p.m.) ***
Initial guess. Dates correct. Material approximately correct. v0 Last modified May 31th 2017 GRS

* Required textbook can be any convenient edition from #4 onwards. Electronic ok. Also used in AME 261.
** Highly recommended. Read for fun. Cheap.