ME 458 Vehicle Dynamics
Fall 2008
(Note that this schedule will be continuously revised through out the term.
<u>**Students are responsible for keeping track of those revisions!**</u>
Make frequent visits to the ME 458 Ctools web site to find the most recent schedule.)
Class Schedule

Date	Subject	Reading	Assignment Due
9/3	Introduction, Definitions, & Coordinate systems	Notes, Chapter. 1, & J670 in Text Appendix	
9/8 M	Weight Distribution, Longitudinal Load Transfer,	Notes, Chapter. 1, in Text	
9/10	Introduction to CARSIM	Notes	
9/15 M	**No Class**		
9/17	Power Limited Acceleration Tires Part 1	Chapters 2 & 10 in Text	**Prob. Set 1 due**
9/22 M	Traction Limited Acceleration	Chapter 2 in Text	
9/25	Brake design Brake performance	Chapter 3 in Text	
9/29 M	Brake performance	Chapter 3 in Text	**Prob. Set 2 due**
10/1	Aerodynamics	Chapter 4 in Text	
10/6 M	Road Loads & Tires Part 1	Chapter 4, Lecture Notes, Chapters 6 &10 in Text	
10/8	Review for Mid Term Exam	Chapter 6 in Text	**Prob. Set 3 due**
10/13 M	**Mid Term Exam**	Chapter 6 in Text	
10/15	Tires Part 2	Notes & Chapter 10	
10/20 M	**Fall Break**		
10/22	Exam Results		
10/27 M	Steady Turning	Chapter 6 in Text	
10/29	Steady Turning	Chapter 6 in Text	
11/3 M	Special Topics		
11/5	Dynamic Turning	Notes	**Prob. Set 4 due**

Date	Subject	Reading	Assignments
11/10 M	Suspensions	Chapter 7 in Text	
11/12	Suspensions	Chapter 7 in Text	
11/17 M	Steering system	Chapter 8 in Text	
11/19	Ride	Chapter 5 in Text, Notes	
11/24 M	Ride	Chapter 5 in Text	**Prob. set 5 due**
11/26	Thanksgiving break		
12/1 M	Roll over	Chapter 9, Notes	
12/3	Special Topics: TBD		
12/8 M	Course Wrapup & Final Review		**Prob. set 6 due**
12/17 W	**4:00 PM to 6:00 PM Wednesday December,17 (Classroom TBD)**		

<p style="text-align:center">MIME 458— Vehicle Dynamics
Fall 2008</p>

Course location and time:
Location: 133 CHRYS
Date & Time: Mondays and Wednesdays, 3:40 PM to 5:00 PM

Instructor:
Ric Mousseau, Ph. D.
Office Location: 050 Autolab
Emergency Phone Contact: (248) 953-8459
E-mail: mousseau@umich.edu (best way to contact me)
Office Hours: Mondays & Wednesdays, 5 PM to 6 PM
                                    Saturdays before homework is due & exams from 1 to 2 PM

TA's
- GSI: Trevor Knauf, knauft@umich.edu
- Office hours TBD
- Grader: TBD

Text
Gillespie, Thomas, *Fundamentals of vehicle dynamics*, SAE Press, 1995 (be sure to look over the correction sheet on the Ctools web site)

Course Web Site
- ME458 CTools.
- PDF course notes, homework assignments, and vehicle dynamics related links.
- Also will post any class cancellations or corrections.

Assignments
- 6 homeworks worth a total of 30% of your grade. Late homework will only be accepted for a vaild reason (i.e, work related travel, job interview, and extenuating circumstances) inform me a week before the assignment is due.
- Mid term worth 30% of your grade.
- Final exam worth 30% of your grade
- 4 quizzes worth 10% of your grade (drop the lowest quiz)

Academic Dishonesty:
- I encourage students to work in groups, but if copying is detected in a homework assignment, a zero grade for that homework will be given.
- If any person is caught cheating on an exam, he/she will risk failing the exam and/or class.

Learning Expectations:
- Understand the basic vehicle dynamics concepts & terminology related to:
  - Braking and traction
  - Vehicle handling
  - Ride
  - Roll over
- Learn how to perform basic vehicle dynamic calculations, e.g.,
  - Vehicle stopping distance,
  - Handling metrics
  - Ride metrics
- Understand the basic Federal Government vehicle dynamics performance requirements.
- Learn how to use the CarSim simulation program to analyze vehicle dynamics performance.