MAE 360 Aerodynamics

Classroom Regulations:

The class runs from 7:30 to 8:45 am on Tuesdays and Thursdays. Despite the early start, please try to be on time to class as it is disruptive for students to arrive late. Students that habitually arrive late will be asked to drop the class.

Please observe the following class rules:

1. No laptops are to be used during class unless express permission is given to use them.
2. No mobile phones or other personal communication devices are to be used for any reason during class.
3. Students may not return to the classroom during a class period once they have left the classroom.

The information contained in this syllabus and in the course schedule is believed to be correct as of the first day of class, August 18, 2011. However, some course requirements and/or deadlines may change throughout the semester. Students are responsible for any information provided in class regarding changes to course policies, course work, deadlines or any other aspect of the course.

Grading Policy:

Twenty-five percent of the grade will be based on the laboratory portion of the course. The remainder of the grade will be based on:

- Weekly quizzes given on most Tuesdays for which there is class (5%)
- Homework assignments given roughly every two weeks (25%)
- Three midterm exams (3 x 10%)
- Final exam (15%)

All quizzes will be "closed-book" and will emphasize conceptual material. Exams will be "open-notes" and will be problem-oriented. Rules for materials allowed during exams will be explained in class before each exam. Please bring calculators to quizzes and to exams. Students must complete quizzes and exams independently. Collaboration is allowed and encouraged on homework assignments. However, you must prepare your own assignment independently, and acknowledge your coworkers when you have collaborated extensively.

There will be no make-up quizzes. There will be no rescheduling of the final exam except in the case of a student having more than three final exams scheduled in one day. Midterm
exams can only be made up if the student is away on university business during the scheduled exam period and if that student lets me know of the conflict at least one week in advance.

As outlined in the first-day handouts, students may receive a grade of "C" or better in the class if and only if they show mastery of the course core outcomes. These outcomes are:

1. Students will identify airfoil characteristics and how they affect the aerodynamic performance of the airfoil.
2. Students will identify finite-wing characteristics and how they affect the aerodynamic performance of the wing.
3. Students will perform calculations using basic aerodynamic theory (thin-airfoil theory, lifting-line theory, boundary-layer theory).
4. Students will use post-processing software (Fieldview) to analyze airfoils and wings using computed aerodynamic data.
5. Students will utilize wind-tunnel measurement systems.
6. Students will prepare and revise engineering laboratory reports.

Outcomes number 1, 2 and 3 are expected at the "application" level. This implies that you will recognize that you can apply these ideas to problems you have not seen before and that are somewhat different from the problems you have solved previously in class or on homework assignments. The other three outcomes are expected at the "comprehension" level, which means that you should be able to solve problems when you know the context. Students can show mastery of outcomes on midterm and final exams or by successful completion of those homework problems that provide evidence of competency for outcomes that are numerical in nature. Outcomes 5 and 6 will be measured in the laboratory and through the laboratory reports.

Grades of "A", "B", "D" and "E" will be determined based on the overall score for the graded materials in the course. The grading scale is not determined in advance since it will depend on the difficulty of the exams. Usually, students must receive an overall score of about 85% to receive a grade of “A” in my courses and an overall score of about 75% in order to receive a grade of “B”.
Academic Integrity:

Cheating will not be tolerated, and suspected cheating will immediately be reported to the Student Academic Services Office of the Ira A. Fulton School of Engineering.

Students are encouraged to work together on homework problems and laboratory analysis. However, each student must turn in his or her own work to be graded. The following are allowed:

1. Discussion of methodology and concepts for solving homework problems and analyzing laboratory results. Discussion may include process for solving problems as long as a) all participants in the discussion contribute, b) the discussion does not result in any document that provides solution to homework problems and c) the names of all participants in the group discussion are included on each student’s submission.

2. Group study sessions that include written-out solutions to homework problems as long as the final due date for that homework assignment has passed.

The following are NOT allowed:

1. Copying of any portion of another student’s homework or laboratory report. This includes the copying of any document that was created by “working together”.

2. Allowing the copying by another student of your own homework solution or laboratory report.

3. Making available in any way, including online, any homework assignment solution or laboratory report or examination solution to any other person before the end of the Fall 2012 semester.

4. Copying any homework solution, exam solution or laboratory report from any previous semester.

The "rule" for homework and laboratory reports is that you MAY discuss how to solve problems and analyze results, but the document you turn in for a grade MUST be created by you individually. If you are in doubt about whether or not your activities are allowed, please ask!