Ma a a a b c c a

Assistant Professor John Evans Office: ECAE 159 E-Mail Address: john.a.evans@colorado.edu Office Hours: Tuesday/Thursday, 9:30 am – 10:30 am The primary course objective is to develop a fundamental understanding of the origins and

There will be a class website at Desire2Learn. All relevant documents, lab assignments, schedules, and supplemental documents will be posted to this site throughout the semester. Please check back to see what has been posted.

The course will follow a blend of traditional lectures and computational and experimental labs. There will be a total of five computational labs and two experimental labs. Homework will be assigned every Tuesday to be due the next Tuesday at the start of class. There will be three midterm exams throughout the semester and a final examination. Finally, there will be a project involving CFD (Computational Fluid Dynamics) software. Student assessment will be based on homework assignments, programs and lab reports, midterm exams, the final exam, and the project.

Course grades will be assigned based on the following percentages:

36% Midterm Exams (3 x 12%) 24% Final Exam

10% Homework and Quizzes 30% Labs and Projects

Of the 30% allotted for Labs and Projects, 16% will be allotted for computational labs (3% for Lab 1, 1% for Lab 2, 3% for Lab 3, 5% for Lab 4, and 4% for Lab 5), 8% will be allotted for experimental labs (4% for each lab), and 6% will be allotted for the CFD project.

Grades will be posted to the course website on Desire2Learn. Group Effort only contributes to the final grade if the total Individual Effort grade is C or better.

Letter grades will be assigned as follows:

F	Below 60.00	0.00
		1

All three midterm exams as well as the final examination will be curved, while the homework, quizzes, labs, and projects will not be curved.

Our grading scheme is not designed to reward or punish. It is designed to indicate your level of competency compared to the standard that we set. Do you meet the minimum level of competency? Do you exceed the minimum? Are you below the minimum? The answers to these questions should be indicated by your final grade.

The final grade indicates your readiness to continue to the next level of courses. Meeting the minimum requirements indicates that you are prepared to continue at least at the minimum level required for the next in the sequence of courses. Exceeding the minimum means you are ready to enter the next course and that you have mastery of material beyond the minimum, that is, you show some level of proficiency.

Homework will be assigned every Tuesday during lecture to be due the next Tuesday at the start of lecture. There is a tenminute grace period (8:00 am – 8:10 am) during which the homework may be submitted. If you must miss class for an excused absence, you may submit your homework early. If you know in advance that you must miss a homework due date, send your instructor an e-mail to make arrangements. Late assignments will not be accepted under any circumstance.

Collaboration is permitted on homework.

methodology, while 2 of the 5 "correctness" points will be associated with correctness of the final answer. There will generally be no partial credit associated with "correctness".

There will also be 4-6 random reading quizzes throughout the semester. These will be worth 10 points each and will count toward a student's overall homework grade.

All homework must be on 8.5 x 11-inch paper. You may use ruled notebook paper, but blank paper or engineering paper is much preferred. Use only the front side of engineering paper. Do not submit assignments on spiral notebook paper with ripped edges. Multiple pages must be stapled in the upper-left corner. Your name (i.e., Last Name, First Name), assignment number, and due date should be visible on the outside in the upper portion of each page. Written work must be neat and readable with adequate spacing and margins. You are responsible for legibility – no re-evaluation will be granted. Very messy work will be returned to you ungraded and a score of zero recorded. Final answers must be indicated with an arrow, underline, or box. Multiple answers will be counted incorrect when only one is required.

There will be three midterm examinations:

Fundamentals and Potential Flow Incompressible Flow About Airfoils and Finite Wings Compressible Flow and Shock Waves

The midterm examinations will cover all material in the course including lecture, discussions, assignments, and computational and experimental labs.

The midterm examinations will be closed book except for a crib sheet, and collaboration on the midterm examinations will not be tolerated. Students who are caught in these activities will receive an "F" for the course and reported to the Dean's office for further punitive action.

There will be five computational labs throughout the semester. These are:

Introduction to Numerical Integration and Computation of Lift/Drag Introduction to Numerical Solution of Potential Flow using the PDETool Computing Lifting Flow over Thin Airfoils via Superposition Computing Lifting Flow over Thick Airfoils via the Vortex Panel Method Computing Lifting Flow over Finite Wings via Prandtl Lifting Line Theory

To complete these labs, students must have access to a computer, basic programming skills, and familiarity with some programming languages and/or environments similar to what is covered in introductory computing courses. The minimum requirement is some proficiency with MATLAB. If you are not familiar with MATLAB, it is your responsibility to become so. You have access to the ITLL Lab Plaza computers during regular class lab times and during periods for which no other class is using them. There are also a number of computers in the student group-study rooms and in the main building of the Engineering Center.

Collaboration is permitted on the computational labs. You may discuss the means and methods for formulating and solving problems and even compare answers, but you are not free to copy someone else's work.

Computational lab reports must be written individually. If you have collaborated with others while writing your code, be sure to credit them in the Acknowledgements section. Computational lab reports should be submitted via the course website by 8:00 AM on the due date. Reports will not be accepted after the given due date.

Further guidelines for the computational lab report write-up and submission will be given in class.

There will be two experimental labs throughout the semester. These are:

Examination of the Wake Behind Aerodynamic Bodies Study of Aerodynamic Forces and Moments About Finite Wings

Experimental laboratory exercises are more complex than hands-on homework and require special equipment such as a wind tunnel. You will work in teams and submit group reports for each experimental lab. Experimental lab reports should be completed using a word processor or desktop publishing package such as Microsoft Word. All group member names should appear on the cover page (one r

Safety is the number one priority for the experimental laboratory. You are required to attend the safety lecture presented by the ASEN 2000 Laboratory Coordinator during the first week of the

For ASEN 3111, these outcomes are grouped according to:

•

working, and living environment. CU Boulder will not tolerate, both in-class and outside of class, acts of sexual misconduct, discrimination, harassment, or related retaliation against or by any employee or student. CU's Sexual Misconduct Policy prohibits sexual assault, sexual exploitation, sexual harassment, intimate partner abuse (dating or domestic violence), stalking, or related retaliation. CU Boulder's Discrimination and Harassment Policy prohibits discrimination, harassment, or related retaliation based on race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender ex