CEE3040 Syllabus

Fluid Mechanics, Section LS, 3 Credits

Summer 2026

Instructor Information

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General Course Information

Description

This course introduces students to the fundamentals of fluid mechanics. We shall apply Newton's law and conservation of mass principles to understand the properties of fluids at rest and in motion.

Course Learning Outcomes

- Develop the ability to apply conservation of mass and Newton's laws of motion to analyze simple fluid systems.
- Develop the ability to analyze fluids at rest and in motion, including pressure distributions, buoyancy, and basic flow fields.
- Develop the ability to apply energy principles, including the Bernoulli's equation, to solve fluid problems.
- Develop the ability to formulate and solve practical engineering problems involving fluid flow.
- Develop the ability to interpret and communicate solutions using physical reasoning, equations, and diagrams relevant to engineering applications.

Required Course Materials

- Class notes and handouts
- Fundamentals of Fluid Mechanics, B. R. Munson, D. F. Young and T. H. Okiishi (5th edition, John Wiley & Sons, Inc.)

Grading Policy:

Quiz=30%; Final test=35%; Homework=30%; In-class attendance=5%

A>90; B>80; C>70; D>60

Assignments

- Homework, 30%
- Quiz, 30%
- Final test, 35%

Description of Graded Components

The quiz and exams are closed book and notes, but an equation sheet allowed.

Homework grading: *all problems must be solved and posted on CANVAS by due time*, and 100 points if (and only if) one problem randomly graded is correctly solved. No partial grading for incorrect or incomplete solutions. I expect to receive your submissions posted on CANVAS by the due time; otherwise, CANVAS automatically sets a zero grade for late submissions.

Course Policies

Attendance and/or Participation

This will be an active classroom, where you will be expected to participate. I have noticed a drastic difference in the exam performance between students who regularly attend class and those who don't. Therefore, I will count attendance in determining your final grade. If you miss less than 5 classes, you will receive 5% toward your grade. Signatures will be collected in class.

Academic Integrity

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. Review Georgia Tech's Honor Code and the student Code of Conduct.

Any student suspected of cheating or plagiarism on a quiz, exam, or assignment will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

Core IMPACTS

Core IMPACTS is the University System of Georgia's General Education curriculum. If you are teaching a course that counts towards Core IMPACTS, you should include a syllabus

statement about the Core area and associated career competencies. This resource developed by the Center for Excellence in Teaching and Learning and Online Education at Georgia State University includes template syllabus statements for each of the Core IMPACTS areas that you may adapt for your course.

Accommodations for Students with Disabilities

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services (404-894-2563) as soon as possible to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs.

Student-Faculty Expectations Agreement

At Georgia Tech, we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. The Student-Faculty Expectations articulate some basic expectations that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, I encourage you to remain committed to the ideals of Georgia Tech while in this class.

Collaboration, Group Work, and Use of Generative AI

You are allowed to work in groups on all homework, but any work you turn in must be written in your own hand. In-class tests and exams are to be your own work.
Use of AI tools (e.g., ChatGPT, Claude, etc.) is permitted for learning support or reviewing material. However, all submitted work must reflect your own understanding. You must not submit AI-generated solutions as your own. Use of AI tools during quizzes and exams is not allowed.

Extensions, Late Assignments, & Re-Scheduled/Missed Exams

Make-up exams are given for illness, approved Institute activities or religious observances.

Student Use of Mobile Devices in the Classroom

The use of phones, laptops, and other electronic devices is not permitted during class time to minimize distractions and support an engaged learning environment. Exceptions may be made only with prior instructor approval for course-related purposes. The use of phones, laptops, and other electronic devices is not permitted during exams.

Student Well-Being

At Georgia Tech, we are concerned about your overall physical, social, and mental well-being. A comprehensive list of wellness related resources has been compiled and

maintained by the Office of the Vice President for Student Engagement and Well-being (student-resource-guide).

We will practice 5-min meditation at the beginning of class. Introducing meditation in the classroom can positively impact students' well-being by promoting relaxation, focus, and emotional regulation. It can help reduce stress and improve concentration, leading to a more conducive learning environment.