CE 2375 Fall 2023

Class Reference Number: 11413

Class Meeting: 12:00-1:20 pm, TR, Aug 28-Dec 7

Class Room: LART 318


**Pearson MasteringEngineering (comes with E-Text)**
The purchase for access to this MasteringEngineering homework can also be made in combination with the textbook. (Available at UTEP Bookstore)

Instructor: Mayra C. Chavez, Ph.D.
Visiting Professor
Department of Civil Engineering
Office: E224
E-mail: mcchavez4@utep.edu
Office Hours: 1:30 pm - 2:30 pm, TR

Prerequisite: CE 2334: Statics

**Course Objectives**
At the end of the course, students will learn the following:

1. Understand the concept of fluid systems and control volume
2. Understand the concepts of temperature, pressure, and energy;
3. Understand fluid flow descriptions and graphical descriptions
4. Apply conservation of mass and energy;
5. Apply the Bernoulli and energy equations;
6. Apply the linear momentum equation;
7. Understand steady laminar flow within parallel plates and smooth pipes
8. Understand resistance to flow in rough pipes and minor and major losses in single pipe flow

**Chapters Covered**

1. Fundamental Concepts in Fluid Mechanics
2. Fluid Statics
3. Kinematics of Fluid Motion
4. Conservation of Mass
5. Work and Energy of Moving Fluids
6. Fluid Momentum
7. (9) Viscous Flow within Enclosed Conduits
8. (10) Analysis and Design for Pipe Flow
Approved Calculators (Scientific Calculators)

- **Casio:** All fx-115 models. Any Casio calculator must contain fx-115 in its model name.
- **Hewlett-Packard:** The HP33s and HP 35s models, but no others
- **Texas Instruments:** All TI-30X and TI-36X models. Any Texas Instruments calculator must contain either TI-30X or TI-36X in its model name.

**Grades**

Your grade for this course will be assessed based on your performance in the homework (15%), quizzes (15%), 3 mid-term exams (50%), and Final Exam (20%). Several quizzes will be given throughout the semester. The content of a quiz may be the materials covered in previous sessions or to be covered that day. There will be no make-up quizzes. Your worst quiz will be dropped. Three exams will be given during the semester, and one comprehensive Final at the end of the semester. Every student is required to take the exams. Every exam will be counted towards your final grade.

Your final grade will be calculated based on the points you have accumulated as follows:

- **A** \( \geq 90 \)
- **B** \( \geq 80 \) but <90
- **C** \( \geq 70 \) but <80
- **D** \( \geq 60 \) but <70
- **F** <60

The instructor reserves the right to revise this grading plan. However, students will be informed of any changes during the semester.

**Homework**

Students are encouraged to solve as many problems in the book as possible. Students need to complete the assigned homework problems online before the due date. Late homework assignment submissions will receive a deduction of 5% per day after due date, but never lower than 60% credit.

Problem Solving Tips: Start a problem with one new sheet and write down all the givens and unknowns. Then proceed with calculation procedures before entering the answer online. Write down necessary details in the solution for easy checking of calculational errors or other possible mistakes. Use the hints provided in the MasteringEngineering website for the problems. Discuss the problems with your classmates, the teaching assistant, or the instructor. You will do well in the class if you understand all the problems you solved.

Go to: [https://mlm.pearson.com/enrollment/chavez88870](https://mlm.pearson.com/enrollment/chavez88870).

**Detailed instructions included at the end of this document.**

**Course Portfolio**

Students are strongly advised to prepare a course portfolio documenting all materials relevant to the course. The portfolio shall contain the class notes, quizzes, exams, homework, study notes, and any relevant materials accumulated during the semester. The instructor believes the students will benefit from the portfolio years later when they need to review the learned subjects for advanced courses or professional engineer licensure exam.

**Attendance and Tardiness**

Attendance is mandatory. Absence can be checked by the instructor through exams, roll calling, randomly picked names for problem solving in class, or other mechanisms. **You could receive an F grade if you miss more than 5 classes without the instructor’s consent.** The instructor appreciates all efforts to attend the class. There will be no penalty for being late. You are always welcome to attend the class. However, all exams and quizzes will be given at **the beginning of the classes.** No additional time will be allowed for late attendees.
Study Aids

Instructor’s Office Hours
You are always welcome to visit the instructors at the posted hours or by making an appointment.

Teaching Assistant
There will be a teaching assistant (TA) assigned to each session of the course. The TA will assist the instructor in grading quizzes, proctoring exams, and answering questions. In addition to the instructor’s office hours, there will be TA’s office hours to answer your questions. The TA’s schedule will be announced in the second week of the class.

ACES and the Tutoring Center
Students are reminded of the tutoring services available in the ACES and the library. These services are provided to you by the University. Check the schedules and make use of the services.

Study Guide
Read the text to be discussed prior to the scheduled class and review the subject thoroughly after the class. Read the textbook carefully. Work on all examples given in the text and solve as many unassigned problems as you can. Expect to spend 8 to 10 hours each week on the subject. Establish a good studying habit and you will do very well in the class. Use the tutorial materials available in the MasteringEngineering before and after the class.

Policy on Cheating
Students are expected to be above reproach in all scholastic activities. Students who engage in scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and dismissal from the university. Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student, or the attempt to commit such acts. (Regents: Rules and Regulations, Part One, Chapter VI, Section 3, Subsection 3.2, Subdivision 3.22). Scholastic dishonesty harms the individual, all students, and the integrity of the university; policies on scholastic dishonesty will be strictly enforced. Students having any mobile communication device out during exam or quiz will be considered to be engaged in academic dishonesty.

If you have a disability and need classroom accommodations, please contact The Center for Accommodations and Support Services (CASS) at 747-5148, or by email to cass@utep.edu, or visit their office located in UTEP Union East, Room 106. For additional information, please visit the CASS website at www.sa.utep.edu/cass.

References
Students are encouraged to study materials related to the subjects discussed in the class. There are many books that can help students to improve their understanding of the subjects and their problem solving skills. A vast amount of textbooks for similar topics are available at the UTEP library. For example, here are two good supplemental text books:

# Class Schedule

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<th>Week</th>
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The above schedule, policies, and assignments in this course are subject to change in the event of extenuating circumstances or by mutual agreement between the instructor and the students.
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5. Select Chavez2375Fall23 from My Courses.

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