

Syllabus
MAE 2315 - Fluid Dynamics
(Required course by AE program)

1. **Instructor:** Zhen Han
2. **Email Address:** han@uta.edu
3. **Office Phone No.:** 817-272-7376
4. **Office Location:** 204B, Woolf Hall
5. **Office Hours:** TR 9:00am - 10:30am
6. **Meeting Days&Times:** TR 10:30am - 12:20pm, Jun 8, 2015 - Aug 18, 2015
7. **Meeting Location:** 404 Woolf Hall
8. **Course Website:** BlackBoard (<https://elearn.uta.edu/>)
 - Quiz/homework/exam grades will be posted on the course website
 - Check your grades every week and report errors within a week
9. **Course Prerequisites:** MAE 2323 (Dynamics) or co-requisite, MAE3309/MAE3310 (Thermal Engineering/Thermodynamics) or co-requisite and MAE3360 (Engineering Analysis) or co-requisite
10. **Required Readings/Materials:** Text book: Fundamentals of Fluid Mechanics, 7th Edition, Munson, ISBN-13: 978-1-118-11613-5
11. **Course Learning Goals/Objectives:**
 - To study fundamental concepts of fluid statics and dynamics.
 - To develop skills and techniques essential in analyzing and solving engineering problems involving fluid flow.
12. **Course Contents:**
 - (a) **Introduction and Fundamental Concepts (Chapter 1)**
 - (b) **Fluid Statics (Chapter 2)**

- (c) **Bernoulli Equation (Chapter 3)**
 - (d) **Finite Control Volume Analysis (Chapter 4 & 5)**
 - (e) **Differential Analysis of Fluid Flow (Chapter 4 & 6)**
 - (f) **Dimensional Analysis and Similitude (Chapter 7)**
 - (g) **Flow Over Immersed Bodies (Chapter 9)**
13. **Attendance:** Attendance required
14. **Drop Policy:** Refer to UTA course drop policy.
15. **Specific Course Requirements**
- (a) **Homework:**
 - Assigned during lectures and due at the beginning of the first lecture in the immediately following week.
 - Must be hand-delivered to the classroom.
 - Must follow the required format (see Homework Format).
 - If not explicitly stated otherwise, each homework problem will be graded out of 10 points.
 - All homework that is obviously transcribed will receive a score of zero.
 - There might be homework due in the final review week.
 - No late homework will be accepted.
 - (b) **Key Assignments:** *To assess students' ability to identify, formulate and solve engineering problems and ability to apply knowledge of mathematics, science and engineering, all exams will be designated as the key assignments this semester.*
 - (c) **Exams:**
 - 1 midterm and 1 final (2 exams total)
 - Closed books/Closed notes
 - Equation Sheet will be provided
 - No graphing/programmable calculators
 - Comprehensive final exam
 - No make-up work for unapproved absences

(d) **Grading Policy:**

- Homework: 10%
- Exams: 45% each; 90% in total

(e) **Final Letter Grade Assignments:**

Percent	Letter Grade
≥ 90	A
$\geq 80 < 90$	B
$\geq 70 < 80$	C
$\geq 60 < 70$	D
< 60	F

16. Other Information:

- **Grade Grievances:** Any appeal of a grade in this course must follow the procedures and deadlines for grade-related grievances as published in the current undergraduate / graduate catalog.
- **Drop Policy:** Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. Students will not be automatically dropped for non-attendance. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (<http://wweb.uta.edu/ses/fao>).
- **Americans with Disabilities Act:** The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the Americans with Disabilities Act (ADA). All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability or by calling the Office for Students with Disabilities at (817) 272-3364.
- **Academic Integrity:** All students enrolled in this course are expected to adhere to the UT Arlington Honor Code:

I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence. I promise that I will submit only work that I personally create or

contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.

Instructors may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System Regents Rule 50101, 2.2, suspected violations of university standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the students suspension or expulsion from the University.

- **Student Support Services:** UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to resources@uta.edu, or view the information at www.uta.edu/resources.
- **Electronic Communication:** UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at <http://www.uta.edu/oit/cs/email/mavmail.php>.
- **Student Feedback Survey:** At the end of each term, students enrolled in classes categorized as lecture, seminar, or laboratory shall be directed to complete a Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each students feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlingtons effort to solicit, gather, tabulate, and

publish student feedback is required by state law; students are strongly urged to participate. For more information, visit <http://www.uta.edu/sfs>.

- **Final Review Week:** A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week unless specified in the class syllabus. During Final Review Week, an instructor shall not give any examinations constituting
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- **Librarian to Contact:** <http://www.uta.edu/library>.