

Syllabus

MAE 3303 - Compressible Flow (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:** WF 9:30am - 10:30am
6. **Class Meeting Days&Times:** MWF 11:00am - 11:50am, Aug. 25 - Dec 7, 2016
7. **Final Exam Schedule:** Wednesday, Dec. 14, 2016, 11:00am - 1:30 pm.
8. **Class Meeting Location:** NH109
9. **Course Website:** 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
10. **Course Prerequisites:** C or better in MAE 2323, C or better in MAE 2315, C or better in MAE 3309 (or MAE 3310), C or better in MAE 3360.
11. **Required Readings/Materials:** Text book: Fundamentals of Aerodynamics, John D. Anderson, Jr.. McGraw-Hill.
12. **Course Contents:** Fundamental thermodynamic concepts of compressible flow, isentropic flow, normal and oblique shock waves, expansion waves, quasi-one-dimensional flows within nozzles and diffusers, linearized compressible flow theory, the method of characteristics and supersonic nozzle design.
13. **Course Learning Goals/Objectives:** An understanding of the fundamentals and calculations of compressible flow

14. **Attendance:** Attendance is required

15. **Specific Course Requirements**

(a) **Quizzes:**

- Approximately 10 in-class pop-quizzes
- No make-up quiz for any absence

(b) **Homework:**

- Assigned during lectures and due at the beginning of the first class each week if not explicitly specified otherwise
- Each homework problem will be graded out of 10 points
- Must follow the required format (see Homework Instructions)
- 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 is accepted

(c) **Exams:**

- 2 midterms and 1 final (3 exams total)
- Closed book/notes (Appendices A, B, and C in the text book will be provided)
- No electronic devices except scientific calculators
- Comprehensive final exam
- No make-up exam for unapproved absence

(d) **Key Assignments:** *Key assignments are utilized to assess students' ability to identify, formulate and solve engineering problems in this class. This semester, the final exam will be designated as the key assignment.*

(e) **Grading Policy:**

- Pop-quizzes: 5% (Bonus)
- Homework: 10%
- Exams: 90% (3 exams, 30% each)

(f) **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:**

- **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://wwwb.uta.edu/aaofao/>).
- **Disability Accommodations:** UT 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), The Americans with Disabilities Amendments Act (ADAAA), and Section 504 of the Rehabilitation Act. 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 disability. Students are responsible for providing the instructor with official notification in the form of a letter certified by the Office for Students with Disabilities (OSD). Only those students who have officially documented a need for an accommodation will have their request honored. Students experiencing a range of conditions (Physical, Learning, Chronic Health, Mental Health, and Sensory) that may cause diminished academic performance or other barriers to learning may seek services and/or accommodations by contacting:

The Office for Students with Disabilities, (OSD) www.uta.edu/disability or calling 817-272-3364. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability.

Counseling and Psychological Services, (CAPS) www.uta.edu/caps/ or calling 817-272-3671 is also available to all students to help increase their understanding of personal issues, address mental and behavioral health problems and make positive changes in their lives.

- **Non-Discrimination Policy:** The University of Texas at Arlington does not discriminate on the basis of race, color, national origin, religion, age, gender, sexual orientation, disabilities, genetic information, and/or veteran status in its educational programs or activities it operates. For more information, visit uta.edu/eos.
- **Title IX Policy:** The University of Texas at Arlington (University) is committed to maintaining a learning and working environment that is free from discrimination based on sex in accordance with Title IX of the Higher Education Amendments of 1972 (Title IX), which prohibits discrimination on the basis of sex in educational programs or activities; Title VII of the Civil Rights Act of 1964 (Title VII), which prohibits sex discrimination in employment; and the Campus Sexual Violence Elimination Act (SaVE Act). Sexual misconduct is a form of sex discrimination and will not be tolerated. For information regarding Title IX, visit www.uta.edu/titleIX or contact Ms. Jean Hood, Vice President and Title IX Coordinator at (817) 272-7091 or jmhood@uta.edu.
- **Academic Integrity:** Students enrolled all UT Arlington courses are expected to adhere to the UT Arlington Honor Code:

I pledge, on my honor, to uphold UT Arlingtons 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.

UT Arlington faculty members may employ the Honor Code in their courses by 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. Additional information is available at <https://www.uta.edu/conduct/>.

- **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>.
- **Campus Carry:** Effective August 1, 2016, the Campus Carry law (Senate Bill 11) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes as prohibited. Under the new law, openly carrying handguns is not allowed on college campuses. For more information, visit <http://www.uta.edu/news/info/campus-carry/>
- **Student Feedback Survey:** At the end of each term, students enrolled in face-to-face and online classes categorized as lecture, seminar, or laboratory are directed to complete an online 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 via the SFS database is aggregated with that of other students enrolled in the course. Students anonymity will be protected to the extent that the law allows. UT Arlingtons effort to solicit, gather, tabulate, and publish student feedback is required by state law and aggregate results are posted online. Data from SFS is also used for faculty and program evaluations. For more information, visit <http://www.uta.edu/sfs>.
- **Final Review Week:** for semester-long courses, 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 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

- **Emergency Exit Procedures:** Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit, which is located [insert a description of the nearest exit/emergency exit]. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist individuals with disabilities.
- **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 <http://www.uta.edu/universitycollege/resources/index.php>.

The IDEAS Center (2nd Floor of Central Library) offers free tutoring to all students with a focus on transfer students, sophomores, veterans and others undergoing a transition to UT Arlington. To schedule an appointment with a peer tutor or mentor email IDEAS@uta.edu or call (817) 272-6593.