

CE 3302: Transportation Engineering

Fall 2017

UTA Civil Engineering Program

Classes:	Tuesdays and Thursdays, 12:30 – 1:50 pm, 103 General Academic & Classroom Building	
Professor:	Dr. Stephen Mattingly	
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E-mail:	mattingly@uta.edu	
Faculty Profile:	https://mentis.uta.edu/explore/profile/dr-stephen-mattingly	
Office:	Nedderman Hall 432	
Office Hrs:	Tuesdays and Thursdays, 11-12 and 2-3, or by appointment	
Teaching Assistant:	Md Tousehik Ahmed Niloy, (mdtousehikahmed.niloy@mavs.uta.edu), NH B24	
Textbook:	Required: <i>Transportation Engineering: Theory, Practice and Modeling</i> , Teodorović and Janić, 1 st Edition	
Software:	Microsoft EXCEL or other spreadsheet	
Prerequisite:	CE 2331; CE 3311/2313 or concurrent registration therein; and CE 3301 or IE 3301 or concurrent registration therein	
Grades:	Group Project	10%
	Quizzes	5%
	Current Event Journal/Presentation	10%
	Homework	15%
	Exam I	16.25%
	Exam II	16.25%
	Final	27.5%
Course Context:	This course provides an introduction to the diverse field of transportation engineering. Transportation directly affects the public on a daily basis, and the public will typically develop diverse opinions on methods to improve the transportation system. Other fields within the practice of civil engineering can experience these phenomena, but typically to a lesser extent in the United States.	
Course Goals:	<ol style="list-style-type: none">1. Discuss the breadth, implications, and interactions present in transportation engineering2. Develop global awareness of issues affecting engineering problems.3. Explore the facets within transportation engineering4. Preview future topics available in elective classes5. Improve problem-solving and analytical skills	

CE 3302 Schedule

Date	Topic	Text	Assignment Due
Aug 24	Course Intro., Transportation Systems	Chapter 2	-
Aug 29	Transportation Systems	Chapter 2	-
Aug 31	Traffic and Transportation Analysis	Chapter 3, omit 3.4 & 3.10	-
Sep 5	Traffic and Transportation Analysis	Chapter 3, omit 3.4 & 3.10	HW#1: 2.3, 2.6, 2.9, 2.12
Sep 7	Traffic and Transportation Analysis	Chapter 3, omit 3.4 & 3.10	-
Sep 12	Traffic Flow Theory	Chapter 4	HW#2: 3.1, 3.4, 3.10, 3.13, 3.16
Sep 14	Traffic Flow Theory	Chapter 4	-
Sep 19	Capacity and Level of Service	Chapter 5	HW#3: 4.1, 4.5, 4.9, 4.13
Sep 21	Capacity and Level of Service	Chapter 5	-
Sep 26	Capacity and Level of Service	Chapter 5	-
Sep 28	Traffic Control	Chapter 6	HW#4: Handout**
Oct 3	Traffic Control	Chapter 6	-
Oct 5	Traffic Control	Chapter 6	-
Oct 10	Exam I		-
Oct 12	Highway Design	AASHTO Handout	HW#5: Handout**
Oct 17	Highway Design	AASHTO Handout	-
Oct 19	Highway Design	AASHTO Handout	HW#6: Handout**
Oct 24	Highway Design	AASHTO Handout	-
Oct 26	Transportation Demand Analysis	Chapter 8	HW#7: Handout**
Oct 31	Transportation Demand Analysis	Chapter 8	Project Report 1 Due
Nov 1	Last Day to Drop Class		
Nov 2	Transportation Demand Analysis	Chapter 8	-
Nov 7	Exam II		
Nov 9	Transportation Demand Analysis	Chapter 8	HW#8: Handout**
Nov 14	Transportation, Environment and Society	Chapter 11	-
Nov 16	Transportation, Environment and Society	Chapter 11	HW#9: Handout**
Nov 21	Transportation, Environment and Society	Chapter 11	-
Nov 23	Thanksgiving		-
Nov 28	Supplementary Material		HW#10: Handout**
Nov 30	Supplementary Material		Project Report 2 Due
Dec 5	Supplementary Material/Bike/Ped Post Test		HW#11: Handout**
Dec 14	Final, 11 am - 1:30 pm	-	-

* - Current AASHTO Formula differs for Stopping Sight Distance

** - Handout or will be uploaded on Blackboard

Optional Topics

- Public Transit
- Environmental Impacts
- Intelligent Transportation Systems
- Freight

Missed Exams

If an exam is missed, I should be contacted immediately. If I do not hear from you on the test day, and you do not have an adequate medical emergency/family emergency (hospitalization/doctor's note/death certificate), you will be given an alternative test version that will definitely be more difficult than the original version or receive a zero on the exam.

Quizzes (closed book)

In general, quizzes will be held infrequently, and will cover basic concepts from the readings and lectures. There will be no problem solving for the quizzes, just multiple choice, true/false and short-answer. We will discuss the solutions following the quiz. The lowest quiz score will be dropped.

Homework

The homework should be submitted on the day that it is due. I need the homework turned in by this date so that I can return the solutions to you within a week. If the homework is not submitted the maximum score will degrade in the following manner with each deduction associated with class meetings (90%, 70%, 40%).

Exams and Final (open and closed book)

The exams will last one and a half hours, and the final will be two and a half hours. While each test will focus on a specific section, any of the course objectives that have been covered to that point may be addressed. All of the problem solving will be open book while other portions of the test will be closed book.

Active Transportation Group Project

Each group (2 people) will complete one project. The project has three components: 1. Inventory of bicycle and pedestrian facilities in study area 2. Using UTA's Android App for recording bicycle and pedestrian conflicts and field observation of study area. 3. Recommended improvements to study area.

Current Event Journal with Presentation

Each student will keep a current event journal throughout the course. Each student is expected to identify one newspaper article each week (the date of the article should be clearly identified) that deals with transportation and add it to his or her journal; a total of 10 articles will be sufficient. The student will identify the significance of the article in a short paragraph. The journal will be collected for grading at least twice, and notice will be provided one week in advance. Each student will be selected without notice to make a three minute presentation of one of the articles that a previous student has not presented.

Attendance: At The University of Texas at Arlington, taking attendance is not required but attendance is a critical indicator in student success. Each faculty member is free to develop his or her own methods of evaluating students' academic performance, which includes establishing course-specific policies on attendance. As the instructor of this section, I allow students to attend class at their own discretion; however, there will be a few unannounced quizzes held during class throughout the semester. However, while UT Arlington does not require instructors to take attendance in their courses, the U.S. Department of Education requires that the University have a mechanism in place to mark when Federal Student Aid recipients "begin attendance in a course." UT Arlington instructors will report when students begin attendance in a course as part of the final grading process. Specifically, when assigning a student a grade of F, faculty report the last date a student attended their class based on evidence such as a test, participation in a class project or presentation, or an engagement online via Blackboard. This date is reported to the Department of Education for federal financial aid recipients.

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 through the doors to my left and to my right. After leaving through these doors, exits are available to both the left and right; out the door to the north an exit is also available along the north wall. 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 handicapped individuals.

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://www.uta.edu/ses/fao>).

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/>

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 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.

Title IX: 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.*

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 student’s feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington’s 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>.

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.*

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's 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 student's suspension or expulsion from the University.

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.

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.

The English Writing Center (411LIBR): The Writing Center Offers free tutoring in 20-, 40-, or 60-minute face-to-face and online sessions to all UTA students on any phase of their UTA coursework. Our hours are 9 am to 8 pm Mon.-Thurs., 9 am-3 pm Fri. and Noon-6 pm Sat. and Sun. Register and make appointments online at <http://uta.mywconline.com>. Classroom Visits, workshops, and specialized services for graduate students are also available. Please see www.uta.edu/owl for detailed information on all our programs and services.

The Library's 2nd floor Academic Plaza offers students a central hub of support services, including IDEAS Center, University Advising Services, Transfer UTA and various college/school advising hours. Services are available during the library's hours of operation. <http://library.uta.edu/academic-plaza>

Librarian to Contact: [Martin Wallace](#), martin.wallace@uta.edu, 817-272-3924, [Office Hours](#)