

Instructor: Michael Fairchild

FALL 2018

COURSE SYLLABUS
The University of Texas at Arlington
College of Engineering
Department of Civil Engineering
CM 3339 – Construction Safety
(3 Credit Hours)

Name of Instructor: Michael Fairchild, AIA, NCARB, LEED® AP

Office Number: 340 Nedderman Hall

Office Telephone Number: 817-272-0650

Email Address: michaelf@uta.edu

Office Hours: Monday-Friday 1:00 PM until 2:00 PM

Monday-Wednesday 3:00 PM until 4:00 PM

Tuesday-Thursday 11:00 AM until 12:00 PM

Tuesday-Thursday 1:00 PM until 3:00 PM

Course Number, Section Number, and Course Title:

CM 3339 – Construction Safety

- Sections 001, Architecture Building 404

Time and Place of Class Meetings: Monday, Wednesday & Friday, 2:00 PM to 2:50 PM

Teaching Assistant (TA): TBD

Description of Course Content: Examination of applying 29CFR 1926 OSHA Construction Industry Regulations for the construction industry along with applicable state and federal construction safety laws pertaining to construction, alterations, or repair work at construction sites.

Student Learning Outcomes:

Upon completion of the course, the student will:

- Understand the complexities and requirements for creating a safe environment for construction workers in the field.
- Recognize unsafe construction site situations and the proper application of the OSHA regulations concerning personal safety equipment, fall protection, trench safety, equipment and other hazards.
- Know the construction industry standard terms defined by 1926 OSHA.
- Comprehend the importance of recording accidents and completing the OSHA reporting forms.
- Know the proper procedures for OSHA inspections, use of citations by OSHA and posting of such documents.
- Recognize opportunities to prevent workplace injuries, promote construction site safety and prevent workplace violence.
- Understand construction safety programs, emergency plans, company policies, accident investigations and hazard analysis.
- Comprehend how the cost of construction injuries impacts the industry and the purpose of worker's compensation insurance in resolving workplace accidents.

Specific Course Objectives:

- Demonstrate knowledge of OSHA Chapters 1903, 1904 and 1910 regarding inspections, reporting and general industry standards.
- Demonstrate knowledge of OSHA Subparts A through CC and the application of each for specific construction components, equipment and conditions.
- Demonstrate the ability to recognize unsafe construction site conditions and the proper use of personal protection equipment.
- At the completion of the course and after passing the final exam, successful students will receive an OSHA 30 Hour Training Card.

Requirements: Grade of C or better in CM 2331, Construction Documents, or Permission of the CE Chair or Admission to the CE Professional Program.

Recommended Textbooks and Other Course Materials

- **Textbook:** Construction Safety & the OSHA Standards, David L. Goetsch, 2nd Edition, Pearson, ISBN 13: 978-0-13-442018-9
- **Reference Guide:** 29CFR 1926 OSHA Construction Industry Regulations, American Construction School, Inc., January 2004, ISBN: 1-932249-28-1

Descriptions of major assignments and examinations with due dates: There will be two exams, plus the final exam (which will be comprehensive), project report and homework assignments. See Course Outline for specific dates.

Grading Policy: Grades will be determined according to the following scale (the grading scale may be lowered at the discretion of the instructor, but will not be raised):

Grade	% Required
A	90 -100
B	80-89
C	70-79
D	60-69
F	Less than 60

Students will be required to accumulate points from the following:

Homework	20%
Hourly Mid-Term Exam	40%
<u>Final Exam: OSHA 30</u>	40%
Total	100%

Make-up Exam Policy: All students must take the exams. Only extenuating circumstances will be accepted as excuse for missing the exam. Health related excuses require medical reports and the signature of a physician that provided treatment.

Grade Grievance Policy: Refer to UTA Catalog for more information.

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 for this course, I will take attendance for each class. 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.

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/aao/fao/>).

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. Michelle Willbanks, Title IX Coordinator at (817) 272-4585 or titleix@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 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.

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’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. Additional information is available at <https://www.uta.edu/conduct/>. Faculty are encouraged to discuss plagiarism and share the following library tutorials <http://libguides.uta.edu/copyright/plagiarism> and <http://library.uta.edu/plagiarism/>. Additional information is available at <https://www.uta.edu/conduct/>.

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>.

Engineering Librarian:

Sylvia George-Williams, Engineering Librarian

UT Arlington Science & Engineering Library

Mailing address: B03B Nedderman Hall, Arlington, TX 76019. Phone: (817) 272 7519, Email: sylvia@uta.edu

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 student's 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 Arlington's 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.

Laptop use in the classroom: In order to minimize distraction, the use of laptop and/or any other digital device (except standard scientific calculators) in the classroom is NOT allowed.

Emergency Exit Procedures: (Applies to face-to-face courses only.) Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit, look for illuminated EXIT signs. 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.

CM 3339 – Construction Safety

TENTATIVE COURSE OUTLINE

(The 29 CFR 1926 OSHA Construction Regulations is on reserve in the Engineering Library for Assignments.)

Day	Date	Topic	Reference	Assignments Due
Week 1				
Wednesday	August 22	OSHA Introduction	29 CFR 1926	What is the "General Duty Clause", Sect. 5. Duties?
Friday	August 24	OSHA Introduction & Managing Safety & Health		
Week 2				
Monday	August 27	Managing Safety & Health		

Wednesday	August 29	Managing Safety & Health		
Friday	August 31	Focus 4: Falls	29 CFR 1926	Read Subpart M. What does Paragraph 1926.501 (b)(1) state?
Week 3				
Monday	Sept. 3		LABOR DAY	
Wednesday	Sept. 5	Focus 4: Falls		
Friday	Sept. 7 (census date)	Focus 4: Electrocution	29 CFR 1926	Read Subpart K. What does Paragraph 1926.404 (c) state about outside conductors?
Week 4				
Monday	Sept. 10	Focus 4: Electrocution		
Wednesday	Sept. 12	Focus 4: Struck By		
Friday	Sept. 14	Focus 4: Struck By		
Week 5				
Monday	Sept. 17	Focus 4: Caught In Between		
Wednesday	Sept. 19	Focus 4: Caught In Between		
Friday	Sept. 21	Personal Protective Equipment	29 CFR 1926	Read Subpart E. List the major categories and what they cover.
Week 6				
Monday	Sept. 24	Personal Protective Equipment		
Wednesday	Sept. 26	Personal Protective Equipment & Health Hazards		
Friday	Sept. 28	Health Hazards	29 CFR 1926	Read Subpart Z. List the substances covered by this section.
Week 7				
Monday	October 1	Health Hazards		
Wednesday	October 3	Health Hazards & Stairs/Ladders		
Friday	October 5	Stairs & Ladders & Excavations	29 CFR 1926	Read Subpart X. What does Paragraph 1926.1053 (b)(11) state?
Week 8				
Monday	October 8	Excavations	29 CFR 1926	Read Subpart P. List the four options under Paragraph 1926.652 (b).
Wednesday	October 10	Fire Protection	29 CFR 1926	Read Subpart F. List the four types of fire extinguishers & their use.
Friday	October 12	Fire Protection		
Week 9				
Monday	October 15		MID-TERM EXAM	
Wednesday	October 17	Hand & Power Tools	29 CFR 1926	Read Subpart I. List the types of equipment that require point of operating guarding.
Friday	October 19	Hand & Power Tools		
Week 10				
Monday	October 22	Concrete & Masonry	29 CFR 1926	Read Subpart Q. What are the general requirements for formwork?
Wednesday	October 24	Concrete & Masonry		
Friday	October 26	Steel Erection	29 CFR 1926	Read Subpart R. What are the requirements under "plumbing-up"?
Week 11				
Monday	October 29	Steel Erection		

Wednesday	October 31	Welding & Cutting	29 CFR 1926	Read Subpart J. List the requirements for handling gas cylinders.
Friday	Nov. 2 (last day to drop)	Welding & Cutting		
Week 12				
Monday	Nov. 5	Powered Industrial Vehicles	29 CFR 1926	Read Subparts O and CC. What do Paragraphs 1926.600 (a)(1) & (a)(2) state?
Wednesday	Nov. 7	Powered Industrial Vehicles		
Friday	Nov. 9	Material Handling, Storage	29 CFR 1926	Read Subpart H. List the limitations for using wire rope, Paragraph 1926.251 (c)(4).
Week 13				
Monday	Nov. 12	Material Handling, Storage		
Wednesday	Nov. 14	Safety & Health Programs		
Friday	Nov. 16	Scaffolds	29 CFR 1926	Read Subpart L. List the various types of scaffolds under section 1926.452.
Week 14				
Monday	Nov. 19	Asbestos Hazard	29 CFR 1926	Refer Subpart Z. List the four types of Asbestos work and define.
Wednesday	Nov. 21	NO CLASS		
Friday	Nov. 23	NO CLASS		
Week 15				
Monday	Nov. 26	Confined Spaces	29 CFR 1926	Read Subpart AA. What are the duties of "Authorized Entrants"?
Wednesday	Nov. 28	1903: Inspections	29 CFR 1926	Read 1903. What does Paragraph 1903.7 (a) state?
Friday	Nov. 30	1904: Recording & Reporting	29 CFR 1926	Read 1904. What forms does OSHA require?
Week 16				
Monday	Dec. 3	1910: Gen. Industry Stds.	29 CFR 1926	
Week 17				
Dec. 7, 2:00 PM – 4:30 PM		OSHA 30 FINAL EXAM (Comprehensive) – verify date & time		

As the instructor for this course, I reserve the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course. – Michael W. Fairchild

Emergency Phone Numbers: In case of an on-campus emergency, call the UT Arlington Police Department at 817-272-3003 (non-campus phone), 2-3003 (campus phone). You may also dial 911.

NOTICE TO ON-LINE STUDENTS:

1. Students taking this course on-line must make arrangements for taking exams via an educational institution and administered by a professional proctor, OR, on-line students may take the exams with the in-class students.
2. If an on-line student is taking an in-class course that has conflicting Final Exam times, the student must make arrangements to take both exams by rescheduling one of the exams.