

Instructor: Michael Fairchild

SPRING 2015

**COURSE SYLLABUS**  
**The University of Texas at Arlington**  
*College of Engineering*  
**Department of Civil Engineering**  
**CE 5378 – Construction Contracts, Specifications & Materials**  
**(3 Credit Hours)**

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

**Office Number:** TBD

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**Office Hours:** by Appointment

**Course Number, Section Number, and Course Title:**

CE 5378 – Construction Contracts, Specifications & Materials

- Section 001, Room 229 Nedderman Hall
- Section 002, Off Web

**Time and Place of Class Meetings:** Monday & Wednesday, 5:30 PM to 6:50 PM

**Teaching Assistant (TA):** None.

**Description of Course Content:** Introduction to legal and contractual aspects of construction, types of construction contracts, product delivery methods, contractual relationships among different parties, construction details for various structural systems and different types of specifications and the CSI Master Format.

**Student Learning Outcomes:** Upon completion of the course, the student will:

**General**

- an ability to analyze and interpret data
- an ability to function on multi-disciplinary teams
- an understanding of professional and ethical responsibility
- an ability to communicate effectively
- the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental and societal context
- a recognition of the need for, and an ability to engage in life-long learning
- a knowledge of contemporary issues
- an ability to use techniques, skills and modern engineering tools necessary for engineering practice

**Specific**

- an ability to understand the global nature of the construction contracts, specifications, construction documents and construction materials.
- comprehend the general aspects of the conditions of a contract for construction and their effect on the construction process.
- recognize the purpose, structure and interfacing of specifications with the contract documents, and their importance to the construction of a project.
- know the how construction documents are organized and how to interpret construction drawings.
- develop skills in reviewing wood, masonry, concrete and steel construction details.
- analyze a construction and professional negligence law suit case study, develop opinions and conclusions based on the contract documents and present findings.
- review a sample project manual and analyze the structure of construction specifications.

**Requirements:** Consent of Professor Dr. Najafi or instructor.

**Recommended Textbooks and Other Course Materials:** The Project Resource Manual, Fifth Edition, published by The Construction Specifications Institute, © 2005, available at the Bookstore. “Standard General Conditions of the Construction Contract (2007)” and “Standard Form of Agreement Between Owner & Engineer for Professional Services (2008)”, published by the Engineers Joint Contract Documents Committee (EJCDC), on Blackboard.

**Descriptions of major assignments and examinations with due dates:** There will be two exams (one close to midterm and one final which will be non-comprehensive), one project, and several homework and lab 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:

Attendance & Homework	10%
Class Quizzes (2)	15%
Hourly Exams (2)	30%
Design Presentation	10%
Specifications Project	10%
<u>Final Exam (Comprehensive)</u>	<u>25%</u>
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.

**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.

**Attendance Policy:** At the University of Texas at Arlington, taking attendance is not required. Rather, each faculty member is free to develop his or her own methods of evaluating his or her students’ academic performance, which includes establishing course-specific policies on attendance. As the instructor of this section, I have established the following attendance policy: students are expected to attend all classes. For total professional development, class participation and oral discussions will be encouraged. Everyone is asked to arrive and be seated promptly for duration of class to minimize the disruption to others.

**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://web.uta.edu/aao/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](http://www.uta.edu/disability) or by calling the Office for Students with Disabilities at (817) 272-3364.

**Title IX:** The University of Texas at Arlington is committed to upholding U.S. Federal Law "Title IX" such that no member of the UT Arlington community shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity. For more information, visit [www.uta.edu/titleIX](http://www.uta.edu/titleIX).

**Academic Integrity:** 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.*

UT Arlington faculty members 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.

**Student Support Services Available:** 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](mailto:resources@uta.edu), or view the information at [www.uta.edu/resources](http://www.uta.edu/resources).

**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](mailto: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>.

**Student Feedback Survey:** At the end of each term, students enrolled in classes categorized as "lecture," "seminar," or "laboratory" shall be 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 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>.

**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:** 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 are located at the front of the room, on each side. 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.

## CE 5378 – Construction Contracts, Specifications & Administration

### TENTATIVE COURSE OUTLINE

Day	Date	Topic	Text Reference	Assignments Due
<b>Week 1</b>				
Monday	January 19	NO CLASS		
Wednesday	January 21	Overview of Course & Objectives	Class Handout, <u>The Project Resource Manual</u> , CSI – Mod. 1 & 2	Review Class Project Assignment, List Typical Project Stages
<b>Week 2</b>				
Monday	January 26	Overview of the Development Process, Contract Documents & Delivery Methods	<u>The Project Resource Manual</u> , CSI – Mod. 3 & 5	List Categories of Contract Documents, Delivery Methods, Construction Phases
Wednesday	January 28	Contracts – EJCDC, AIA, Consensus Docs + Misc. Docs & Construction Phases	EJCDC C-700 on Blackboard	Read EJCDC General Conditions & Define Selected Terms
<b>Week 3</b>				
Monday	February 2	EJCDC C-700, General Conditions of the Contract	EJCDC E-500 on Blackboard	Read EJCDC Owner/Engineer Agreement & Define Selected Terms
Wednesday	February 4	EJCDC E-500, Owner/Engineer Agreement	EJCDC C-520 on Blackboard	Read EJCDC Owner-Contractor Agreement & Define Selected Terms
<b>Week 4</b>				
Monday	February 9	EJCDC C-520, Owner/Contractor Agreement	AIA A201 Document on Blackboard	Review AIA A201, Outline Major Articles
Wednesday	February 11	AIA A201, General Conditions of Contract	AIA A102 & C401 Documents on Blackboard	Review AIA A102 & C401 Outline Major Articles
<b>Week 5</b>				
Monday	February 16	AIA A102 Owner/GC & C401 Arch/Engr.	Consensus DOCS-200 On Blackboard	Review DOCS - 200, Outline Major Articles

Day	Date	Topic	Text Reference	Assignments Due
		Agreements		
Wednesday	February 18	Consensus DOCS – 200, Owner/GC Agreement		Develop questions for Guest Speaker
<b>Week 6</b>				
Monday	February 23	Guest Speaker - Contract Attorney Tony Jach, Esq.		
Wednesday	February 25	Speaker – Contract Attorney Mitch Milby, Esq.	Review Past Lectures	Prepare Questions for Design Project
<b>Week 7</b>				
Monday	March 2	Review for Exam / Discuss Design Project		
Wednesday	March 4	<b>CONTRACTS EXAM</b>	Example Project Manual on Blackboard	Review Project Manual, Describe Div. 1 “Front End”, List Specification Sections
<b>Week 8</b>				
Monday & Wednesday	March 9 & 11	<b><u>SPRING BREAK</u></b>		
<b>Week 9</b>				
Monday	March 16	The Project Manual & CSI Format	The Project Resource Manual, CSI - Mod. 4 & 5	Review CSI Project Manual & Define The Three Parts of Each Spec
Wednesday	March 18	Anatomy of Specifications	Review Modules 5.10 & 5.11 of PRM	List the different types of construction drawings
<b>Week 10</b>				
Monday	March 23	Construction Drawings & Organization	Review Drawings on Blackboard	Sketch a Wood Framing Wall Section
Wednesday	March 25	Wood Framing & Construction Details	Review Drawings on Blackboard	Sketch a Section through a Masonry Lintel
<b>Week 11</b>				
Monday	March 30	Masonry Construction Details	Review Drawings on Blackboard	List the different types of Concrete Slab Systems
Wednesday	April 1 (Specs Project Due)	Concrete Construction Details	Review Drawings on Blackboard	Sketch a Section of Composite Concrete & Steel Construction
<b>Week 12</b>				
Monday	April 6	Steel Construction Details	Review Past Lectures	Develop Two Questions for Speaker, Hand In
Wednesday	April 8 (Design Project Draft Due)	Guest Speaker – Structural Engineer, Mike Powell, P.E.		
<b>Week 13</b>				
Monday	April 13	Review for Exam		
Wednesday	April 15	<b>SPECIFICATIONS &amp; CONSTRUCTION MATERIALS EXAM</b>		
<b>Week 14</b>				
Monday	April 20	International Building Code 2009 + Class Project	Research LEED On Web	List LEED Categories of Credits

Day	Date	Topic	Text Reference	Assignments Due
Wednesday	April 22	USGBC LEED 3.0, 2009 – New Construction		
<b>Week 15</b>				
Monday	April 27	<a href="#">Student Presentations</a>		
Wednesday	April 29	<a href="#">Student Presentations</a>		
<b>Week 16</b>				
Monday	May 4	<a href="#">Student Presentations</a>		
Wednesday	May 6	Final Exam Review		
<b>EXAM WEEK</b>				
Monday	May 11	<b>Final Exam (Comprehensive): 5:30 PM to 8:00 PM</b>		

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.