

COURSE SYLLABUS

The University of Texas at Arlington

College of Engineering

Department of Civil Engineering

**CE 5378 – Construction Contracts, Specifications & Administration
(3 Credit Hours)**

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

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Office Hours: by Appointment

Course Number, Section Number, and Course Title:

CE 5378 – Construction Contracts, Specifications & Administration

- Section 001, Room 111 Nedderman Hall
- Section 002, Off Web

Time and Place of Class Meetings: Tuesday & Thursday, 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 administration, insurance and concepts in value engineering. Topics include different types of specifications and CSI Master Format. Credit not granted for both CE 4334 and CE 5378.

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 project delivery process, giving particular attention to professional design, construction documents and administration of a construction contract.
- 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 various roles and responsibilities for those participating in the administration of a construction contract.
- develop skills in critical thinking and analytical judgment related to the development and execution of consultant and construction agreements.
- 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 three exams (two during the semester and one final which will be comprehensive) and 2 Pop Quizzes based on homework assignments and lectures. See the Tentative Course Outline on Pages 4 & 5 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%

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 on time 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. Contact the Financial Aid Office for more information.

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 “American 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 of 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: It is the philosophy of The University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline may include suspension or expulsion from the University. According to the UT System Regents' Rule 50101.52.2, “Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or

materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student for the attempt to commit such acts.”

Student Support Services Available: The University of Texas at 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. These resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals to resources for any reason, students may contact the Maverick Resource Hotline at (817) 272-6107 or visit www.uta.edu/resources 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 syllabi*. 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. Classes are held as scheduled during this week and lectures and presentations may be given.

Librarian to Contact:

Sylvia George-Williams, Engineering Librarian
UT Arlington Science & Engineering Library
Mailing address: B03D Nedderman Hall, Arlington, TX 76019
Phone: 817.272.7519
Email: sylvia@uta.edu

Electronic Communication Policy: The University of Texas at Arlington has adopted the University “MavMail” address as the sole official means of communication with students. MavMail is used to remind students of important deadlines, advertise events and activities, and permit the University to conduct official transactions exclusively by electronic means. For example, important information concerning registration, financial aid, payment of bills, and graduation are now sent to students through the MavMail system. All students are assigned a MavMail account. ***Students are responsible for checking their MavMail regularly.*** Information about activating and using MavMail is available at <http://www.uta.edu/oit/email/>. There is no additional charge to students for using this account, and it remains active even after they graduate from UT Arlington.

To obtain your NetID or for logon assistance, visit <https://webapps.uta.edu/oit/selfservice/>. If you are unable to resolve your issue from the Self-Service website, contact the Helpdesk at helpdesk@uta.edu.

Laptop use in the classroom: In order to minimize distraction, the use of laptop in the classroom is NOT allowed.

Cell Phone Policy: All cell phones must be off in class.

Grade Grievance Policy: Refer to UTA Catalog.

Assignment Policy:

Homework and/or class assignments, class attendance, quizzes, exams and the project are important segments of this course. **Homework and/or class assignments are taken at the beginning of the class and due at the stated date on the course outline.** Points will be subtracted for late assignments. **No credit after the solution is given or maximum one week late of any assignments.** Section 002 students must submit their homework via UTA email by the due date and time. Any graded homework will be emailed to students.

- Students, who copy homework, will receive a grade of zero (0) for those assignments **and will not make good grades on the tests.**
- For full or partial credit, you need to show all calculations in an organized, logical, and orderly manner. Please **write legibly, draw diagrams and underline your answers.** Type the questions and the answers for essay questions. Specify problem statements (information given), what is required, and the solution for each problem. **Draw the necessary diagram(s). Show all the units during your calculations and with your answers.** No partial or full credit if you do not show all of your work.

- Fold your assignment in half and put your name, course number, assignment #, date submitted and Problem #'s on the back.
- Use good quality paper, such as engineering graph paper with no spiral edges.
- Write on only one side of the paper.
- Either pen or pencil is acceptable.
- Include your name, section, and page number (e.g. 1/3 means Page 1 of 3 Pages) on each sheet.
- Staple all pages together in the upper left corner.
- Neatly box all answers, and include appropriate units for numerical answers.
- Show all work (e.g. no work means no credit will be given).

NOTE: If the above guidelines are not followed, the Grader will either reject the assignment outright, for extreme cases, or deduct points for items that do not conform to the specifications.

Exam Policy

- Students, who talk during the exam or quiz, look at each other's papers, or exchange materials, their exam and quiz paper will be marked and their file will be submitted to the Office of Dean of Engineering for appropriate action.
- You need to organize all their course notes, graded homework and lab assignments, and previous exams in a binder for a fast and quick reference.
- Periodic class exercises and/or quizzes may be given in the lecture period. You should bring the text, a calculator and engineering paper to every class period.
- During the exams and quizzes, you need to be AT LEAST one seat apart.
- Section 002 Off Web students need to attend all the exams in class or make appropriate arrangements with the instructor at least two weeks before the specific exam date.

Make-up Exam Policy: All students must take the final exam. 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.

CE 5378 – Construction Contracts, Specifications & Administration TENTATIVE COURSE OUTLINE

Day	Date	Topic	Text Reference	Assignments Due
Week 1				
Tuesday	January 14	Overview of Course & Objectives	Class Handout, <u>The Project Resource Manual</u> , CSI – Mod. 1 & 2	Review Class Project Assignment, List Typical Project Stages
Thursday	January 16	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
Week 2				
Tuesday	January 21	Contracts – EJCDC, AIA, Consensus Docs + Misc. Docs & Construction Phases	EJCDC C-700 on Blackboard	Read EJCDC General Conditions & Define Selected Terms
Thursday	January 23	EJCDC C-700, General Conditions of the Contract	EJCDC E-500 on Blackboard	Read EJCDC Owner/Engineer Agreement & Define Selected Terms
Week 3				
Tuesday	January 28	EJCDC E-500, Owner/Engineer Agreement	EJCDC C-520 on Blackboard	Read EJCDC Owner/Contractor Agreement & Define Selected Terms
Thursday	January 30	EJCDC C-520, Owner/Contractor Agreement	AIA A201 Document on Blackboard	Review AIA A201, Outline Major Articles

Day	Date	Topic	Text Reference	Assignments Due
Week 4				
Tuesday	February 4	AIA A201, General Conditions of Contract	AIA A102 & C401 Documents on Blackboard	Review AIA A102 & C401 Outline Major Articles
Thursday	February 6	AIA A102 Owner/GC & C401 Arch/Engr. Agreements	Consensus DOCS-200 On Blackboard	Review DOCS - 200, Outline Major Articles
Week 5				
Tuesday	February 11	Consensus DOCS – 200, Owner/GC Agreement		Develop questions for Guest Speaker
Thursday	February 13	Guest Speaker - Contract Attorney Tony Jach, Esq.		
Week 6				
Tuesday	February 18	Speaker – Contract Attorney Mitch Milby, Esq.	Review Past Lectures	Prepare Questions for Design Project
Thursday	February 20	Review for Exam / Discuss Design Project		
Week 7				
Tuesday	February 25	CONTRACTS EXAM	Example Project Manual on Blackboard	Review Project Manual, Describe Div. 1 “Front End”, List Specification Sections
Thursday	February 27	The Project Manual & CSI Format	The Project Resource Manual, CSI - Mod. 4 & 5	Review CSI Project Manual & Define The Three Parts of Each Spec
Week 8				
Tuesday	March 4	Anatomy of Specifications	Research BIM On the Web	Develop Questions for Guest Speaker
Thursday	March 6	Guest Speaker – Building Information Modeling	The Project Resource Manual, CSI – Mod. 4 & 5	Review CSI Manual & Define “Unit Price, Allowance & Substitution”, List four Negotiating Styles
Week 9				
Tues. & Thurs.	March 11 & 13	SPRING BREAK		
Week 10				
Tuesday	March 18	Alternates, Allowances, Substitutions, Unit Prices, Negotiating	The Project Resource Manual, CSI – Mod. 4, 5 & 6	Define Value Engineering Process, Identify Five VE Ideas & Describe
Thursday	March 20	Value Engineering	The Project Resource Manual, CSI – Mod. 7	Research Construction Administration & List Engineer's Responsibilities & Describe
Week 11				
Tuesday	March 25	Engineer & Construction Administration, Quality Control	The Project Resource Manual, CSI – Mod. 7	Research Mobilization, Shop Drawings & Create a Mobilization Check List & List Project Close-Out Activities

Day	Date	Topic	Text Reference	Assignments Due
Thursday	March 27 (Specs Project Due)	Pre-Construction & Mobilization + Submittals, Shop Drawings, Substantial Completion + Close-Out	<u>The Project Resource Manual</u> , CSI – Mods. 2, 3, 7	List Three Types of Schedules & Define
Week 12				
Tuesday	April 1	Scheduling	Review Past Lectures	Develop Two Questions for Speaker, Hand In
Thursday	April 3 (Design Project Draft Due)	Guest Speaker – Practicing Engineer, Mike Powell, P.E.		
Week 13				
Tuesday	April 8	Review for Exam		
Thursday	April 10	SPECIFICATIONS & CA EXAM		
Week 14				
Tuesday	April 15	International Building Code 2009 + Class Project	Research LEED On Web	List LEED Categories of Credits
Thursday	April 17	USGBC LEED 3.0, 2009 – New Construction		
Week 15				
Tuesday	April 22	Student Presentations		
Thursday	April 24	Student Presentations		
Week 16				
Tuesday	April 29	Contracts Review		
Thursday	May 1	Specifications / Construction Administration Review		
EXAM WEEK				
Tuesday	May 6	Final Exam (Comprehensive): 5:30 PM to 8:00 PM		