

# Course Syllabus - CNST 2345

## Construction Documents for Capital Projects

### **Course Description:**

This course introduces students to the construction documents commonly used in Industrial construction projects. It also focuses on the understanding of the hierarchy/relationships among those documents.

### **Course Prerequisites:**

C or better in CNST 2325.

### **Textbook:**

Clough, Sears & Sears' *Construction Contracting*, 7<sup>th</sup> Edition, John Wiley & Sons, Inc. ISBN 0-471 44988-1. (Textbook is optional but highly recommended.)

### **Course Learning Outcomes:**

Upon the completion of the course students will demonstrate the ability to:

1. Understand and compare aspects of different project delivery methods
2. Understand the various stakeholders involved and their roles in the different project delivery methods
3. Understand how to read construction documents and associated nomenclature
4. Understand the organization of information in construction documents
5. Extract information to perform various construction management tasks
6. Understand what contracts are and how they are used in the construction industry
7. Know common legal issues which arise in different phases of a construction project
8. Understand strategies for avoiding and/or resolving construction disputes

In addition to the learning objectives above, this course emphasizes Ethics, Safety, and Oral/Written Communication.

### **Student Learning Outcomes:**

7. Analyze construction documents for planning and management of construction processes:
12. Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process
17. Understand the legal implications of contract, common and regulatory law to manage a construction project

### **Course and Student Learning Outcome Mapping:**

Student Learning Outcome	Course Learning Outcomes
7	3, 4, 5
12	1, 2
17	6, 7, 8

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### **Class Grading:**

Attendance/Discussions                      10 %

Journal/Assignments	20%
Quizzes	40%
Final Exam	30%

**Points in Blackboard total to 1000 points (plus any extra credit)**

**Grading Scale:**

Letter Grade	Score
A	900-1000 points
B	800-900 points
C	700-800 points
D	600-700 points
F	Below 600

**Class Schedule:**

WEEK#	TOPIC	Text Chapter
Week 1 August 27	<b>Introduction to Contract Documents (Overview)</b> <ul style="list-style-type: none"> <li>• Construction Industry Overview</li> <li>• Project Structure</li> <li>• Construction Contract Types</li> <li>• Construction Reports</li> </ul>	1
Week 2 September 3	<b>Business Ownership/Organization</b> <ul style="list-style-type: none"> <li>• Business Structure</li> <li>• Business Structure</li> <li>• Roles &amp; Responsibilities</li> <li>• Responsibility VS Authority</li> <li>• Job Planning</li> </ul> <b>QUIZ #1 in Blackboard due 9/4</b>	2 & 3
Week 3 September 10	<b>Drawings and Specifications</b> <ul style="list-style-type: none"> <li>• Engineering/Design</li> <li>• Responsibility/Liability</li> <li>• Spearin Doctrine</li> <li>• Specifications</li> <li>• Codes and Other Standards</li> </ul>	4
Week 4 September 17	<b>Assignment 1 in Blackboard due 9/17 before class</b> <b>Cost Estimating &amp; Bidding</b> <ul style="list-style-type: none"> <li>• Estimating</li> <li>• Bidding</li> <li>• Requests for Proposal</li> <li>• Job Walk</li> <li>• Costs</li> </ul> <b>Delivery Method Review</b> <b>QUIZ #2 in Blackboard due 9/18</b>	5
Week 5 September 24	<b>Construction Contracts</b> <ul style="list-style-type: none"> <li>• Construction Contracts</li> <li>• Contract Documents</li> <li>• Payment Types</li> <li>• Retention</li> <li>• Liquidated Damages</li> <li>• Extension/Acceleration</li> </ul> <b>Basketball Case Study/QUIZ #3 in Blackboard due 9/25</b>	6
Week 6 October 1	<b>Assignment 2 in Blackboard due 10/8 before class</b> <b>Bonds</b>	7

	<ul style="list-style-type: none"> <li>• Performance &amp; Payment Bonds</li> <li>• Miller Act</li> <li>• Bonding Alternatives</li> </ul>	
<b>Week 7 October 8</b>	<b>Insurance</b> <ul style="list-style-type: none"> <li>• Builder's Risk</li> <li>• Liability Insurance</li> <li>• Worker's Compensation</li> </ul>	<b>8</b>
<b>Week 8 October 15</b>	<b>Business Methods</b> <ul style="list-style-type: none"> <li>• Financial/Accounting</li> <li>• Depreciation</li> <li>• Payments</li> <li>• Cash Flow</li> </ul>	<b>9</b>
<b>Week 10 October 22</b>	<b>Project Management</b> <ul style="list-style-type: none"> <li>• Roles and Responsibilities</li> <li>• Quality Assurance/Quality Control</li> </ul> <b>QUIZ #4 in Blackboard due 10/23</b>	<b>10</b>
<b>Week 11 October 29</b>	<b>Time &amp; Cost Management</b> <ul style="list-style-type: none"> <li>• Planning &amp; Execution</li> <li>• CPM</li> <li>• Precedence Diagram</li> <li>• Critical Path/Schedule Float</li> <li>• Labor Costs/Equipment Costs</li> <li>• Cost Control &amp; Cash Flow</li> </ul>	11 & 12
<b>Week 12 November 5</b>	<b>Assignment 3 in Blackboard due 10/22 before class</b> <b>Claims/Arbitration/Mediation (guest lecturer Michael Cortez)</b> <ul style="list-style-type: none"> <li>• Claims/Arbitration/Mediation</li> <li>• Disputes</li> </ul> <b>QUIZ #5 in Blackboard due 10/23</b>	<b>13</b>
<b>Week 13 November 12</b>	<b>Labor &amp; Employment Issues</b> <ul style="list-style-type: none"> <li>• Labor Law</li> <li>• Labor Relations Acts/National Labor Relations Board</li> <li>• Hiring</li> <li>• History of Unions; Role of Unions</li> <li>• Bargaining/Wages/Open Shop/Closed Shop</li> </ul>	<b>13 &amp; 14</b>
<b>Week 14 November 19</b>	<b>Project Safety</b> <ul style="list-style-type: none"> <li>• Project Safety Requirements/O.S.H.A.</li> <li>• Safety Statistics</li> <li>• Safety Reporting</li> </ul>	<b>15</b>
<b>November 26</b>	<b>THANKSGIVING – No Class</b>	
<b>December 3</b>	<b>Final Exam – In Blackboard</b>	<b>Comprehensive</b>

### **Academic Honesty:**

The instructor places all grades into the hands of the student, and the final grade is based on the performance of the student participation, journal/case studies, project, quizzes, and final examinations and the class project. Attendance and participation are the responsibility of the student. Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possible failure of the course and dismissal from the University. Since dishonesty harms the individual, all students, and the integrity of the University, policies on scholastic dishonesty will be strictly enforced.

### **Examination Policy:**

Exams will include material covered in the classroom discussions, homework, and materials posted to Blackboard as well as specified chapters of the text. Exam make-ups will only be allowed in the event of a verifiable emergency situation which must be documented to the instructor's satisfaction. Graded work assignments submitted after the stated submission date and time shall be reduced in possible grade by 20%. The student is responsible for all reading assignments and class handouts whether or not covered in class.

The last day of class is the deadline for students to verify their grades and the accuracy of their score. After this deadline, there will be no consideration for any changes.

### **University Counseling and Psychological Services:**

Counseling and Psychological Services (CAPS) can help students who are having difficulties managing stress, adjusting to college, or feeling sad and hopeless. You can reach CAPS (UH main campus [www.uh.edu/caps](http://www.uh.edu/caps), or UH Sugar Land campus <http://www.uh.edu/dsaes/uhsugarland/>) by calling [713-743-5454](tel:713-743-5454) during and after business hours for routine appointments or if you or someone you know is in crisis. No appointment is necessary for the "Let's Talk" program, a drop-in consultation service at convenient locations and hours around campus.

UH main campus: [http://www.uh.edu/caps/outreach/lets\\_talk.html](http://www.uh.edu/caps/outreach/lets_talk.html)

UH Sugar Land campus: <http://www.uh.edu/dsaes/uhsugarland/>

### **Classroom Behavior:**

High level of professionalism in the classroom is expected. The instructor has the right to set the rules in his/her classroom. A student does not have the right to make changes to the instructor's way of managing the classroom. Disruptive behaviors, such as excessive talking, arriving late to class, and using unauthorized electronic devices during class is not permitted. Repetitive and seriously disruptive behavior may result in removal from class in accordance with policies and procedures set by the Dean of Students Office.

### **Daily Report (Project Journal)/Case Studies:**

Each student is to maintain a journal using a three-ring binder. At each class meeting the student is to enter the following information into the journal on a new page using the daily log format provided:

- Name
- Date & Report Number (Session Number)
- Weather HSE Topic discussed
- Daily Report (Class notes)

Case Studies/Reading Assignments to be posted on Blackboard and will be completed on the daily log form. Late submission of assignments will be accepted but will incur a 10% penalty per week. Hard copies of the assignments will also be added to the Journal.

- After the final exam, the teacher will look at the journals via Microsoft Teams and provide comments. You will be graded on the completeness and neatness of your journal including printing and note taking abilities.

### **HSE Topics:**

Each class will begin with an HSE topic. Topics will be assigned during the first class. Volunteers who choose to present a topic will receive 20 points of extra credit. Topics should be presented using PowerPoint Slides (2-3) and should not be read from the slides. The HSE topic should also include a current weather report.

### **Quizzes:**

Multiple choice and True/False Quizzes will be given during the semester by hard copy. ALL QUIZZES WILL BE in Blackboard. Check Announcements for Quizzes announced during or after Class. One Quiz will involve a Case Study (analysis of a partial actual contract) and then answering analysis questions from that contract.

### **Final Exam:**

The final exam will be comprehensive multiple choice/true/false and will be administered through blackboard. Questions will be from lectures, modules, HSE topics, reading assignments, and articles posted. You will be allowed to reference your Journal during the exams.

### **Phones and other Electronic Devices**

Phones and other Electronic Devices are not to be heard. Make sure you silence these devices during class. Any device that emits noise during class is a distraction and is inappropriate for the classroom. Talking / texting on your phone during class is not allowed. It is not considerate to your fellow classmates who have paid for the course. All electronic devices must be turned off and out of sight during exams and quizzes. Students may be asked to leave for the day if this behavior persists. Academic evaluations during classes missed under these criteria will be counted as zero.

### **Changes in the Syllabus:**

The instructor reserves the right to make changes to the syllabus. Changes will be announced in class.

### **Course/Instructor Evaluation**

A course/instructor evaluation will be conducted in class during the last scheduled lecture. Any suggestions you have on improving the course, however, are welcome throughout the term.

### **Students with Disabilities**

University of Houston provides, upon request, appropriate academic adjustments for qualified students with disabilities. Any student with a documented disability (physical or cognitive) who requires academic accommodations should contact the Center for Students with Disabilities (713/743-5400) for more assistance.

For detailed information about Disabilities, Religious Holy Days, the Academic Calendar, and Academic Honesty, and other information, please visit the following website:

<http://www.uh.edu/provost/policies/student/resources/>.