

Course ID and Title: CE499 Construction Enterprise Risk Management

Units: 2

Term—Day—Time: Spring — Thursdays: 6-7:50PM
100 minutes, once per week

Location: RTH109

Instructor: Tyler Sendelbach

Office: TBD

Office Hours: TBD

Contact Info: email: sendelba@usc.edu, cell: 715-530-3481

Teaching Assistant: TBD

Office: [Physical or virtual address]

Office Hours:

Contact Info: [Email, phone number (office, cell), Skype, etc.]

Catalogue Description

Assess construction risk management: legal, financial, and project delivery aspects. Evaluate risk from the individual job-level up through the entire business enterprise.

Course Description

Construction within the United States alone is valued at over \$1.5 trillion and accounts for nearly 5% of the entire U.S. labor force. It also happens to be an industry that carries one of the highest degrees of risk as measured by injuries, project delays, cost overruns, legal disputes, and business failures. There is a niche industry called “contract surety” that is entirely dedicated to the study and management of these risks within construction. This contract surety industry will be the lens through which we evaluate the business of construction and the risks with which construction is faced.

The idea behind this course is to provide students with an alternative perspective on how we think about construction. Students will gain an understanding of the various professions that support the construction industry and how they all work together to manage the business of construction. Presented with risk management problems offering real-world applicability, students will be tasked with utilizing the course material to address them.

Topics Covered:

- Introduction To Contract Bonds
- Contract Bonds – Business Entities; Construction Contracts; & Bond Law
- Indemnity Provisions & Language
- Construction Contract Documents
- Construction Bidding & Bid Bonds
- Construction Project Underwriting
- Contract Status Report Analysis
- Financial Statement Analysis
 - Contractor Financial Statements (Balance Sheet)
 - Contractor Financial Statements (Income Statement)
 - Contractor Financial Statements (Contractor Work-In-Progress Report)

- Cash Flow Analysis & Forecasting
- Trend Analysis & Forecasting

Learning Objectives

Financial management, risk management, and surety bonding are the lifeblood of virtually all construction firms. A firm's ability to obtain work, especially in the public sector, is directly tied to these areas. In fact, a construction contractor cannot do public works construction without obtaining a bond. Upon completion of this course, students will have a thorough understanding of the risk environment along with applicable strategies toward improving a firm's overall risk position. Students will understand the importance of risk management and how the principles of bonding contribute toward contractor success.

By the end of this course, students should be able to demonstrate their mastery of the following objectives:

- Evaluate the necessity of bonds in construction, analyze their legal implications, and justify their requirement
- Assess a construction firm's financial position and determine the scope of work they can reasonably pursue, employing financial analysis techniques
- Analyze the unique accounting practices specific to the construction industry and interpret contractor financial statements, including balance sheets, income statements, and contractor work-in-progress reports
- Differentiate the risks associated with various project delivery methods, applying critical thinking skills to evaluate their advantages and disadvantages
- Utilize generative AI tools to assess financial and contractual risks in construction projects, demonstrating proficiency in incorporating technology for risk management
- Identify and overcome onerous language within construction documents, bond documents, and indemnity agreements, employing critical analysis and problem-solving skills
- Recognize the crucial roles played by construction-specific attorneys, CPAs, and bankers demonstrating an understanding of how they collaborate to manage construction projects effectively

Registration Restriction: Open only to juniors, seniors, and graduate students.

Course Notes

Copies of lecture slides and other class information will be posted on our Brightspace.

Technological Proficiency and Hardware/Software Required

This course will require a moderate level of technological proficiency, including basic computer skills such as word processing, internet research, and email communication. Students will also need to be familiar with the online learning platform Brightspace. Hardware requirements include a laptop or desktop computer with internet access.

Required Readings and Supplementary Materials

The Institutes Associates in Surety & Fidelity Bonding 152 textbook **Analyzing Contract Surety Bonding**

ISBN 978-0-89462-433-9

Optional Readings and Supplementary Materials

Any optional Readings & Supplementary Materials will be provided to class by instructor on Brightspace.

Description of Assignments and How They Will Be Assessed

Homework

There will be 6 total homework assignments throughout the semester in the form of case-studies. Students will be presented with a practical scenario that reflects a real-world challenge encountered by a contractor pertaining to the subject matter being covered in lecture. The homework assignments will consist of questions pertaining to the challenges encountered by the contractor, requiring a written analysis offering a resolution to the circumstances the contractor is facing. Homework will be completed on an individual basis and submitted via Brightspace as outlined in the course schedule. Grading is on a percentage basis of a maximum of 100%. The purpose of these assignments is to demonstrate how the textbook concepts apply in a real-world example.

Midterm/Final

The midterm exam will consist of 50 multiple-choice questions covering the material discussed in the first half of the course. The exam will assess the student’s understanding of the key concepts covered in the homework, and in-class discussions.

The final exam will be a comprehensive assessment of the entire course materials consisting of 100 multiple choice questions. The exam will cover all topics discussed through the semester.

Participation

Discussions in the classroom will emphasize the theory and understanding of the various concepts and methodologies related to contractor risk. While the outline above is a general overview of course content, class discussions and progress will guide the coverage of the above material. Student participation is a requirement of this course and as such, students will receive plenty of time to reflect, contemplate, and involve themselves in interactive discussion with both their peers and instructor. Participation will be enforced through in-class discussions, small group discussions, and student attendance.

Grading Breakdown

Assignment	Points	% of Grade
Homework		25
Participation		15
Mid-Term		30
Final		30
TOTAL		100

Assignment Submission Policy

Assignments are to be turned in via Brightspace or in-person the following week

Attendance

Attendance is required. Students will be allowed 3 total absences. Additional absences, unless discussed with and approved by instructor, will result in a point loss from final grade.

Academic Integrity

Unless otherwise noted, this course will follow the expectations for academic integrity as stated in the [USC Student Handbook](#). The general USC guidelines on Academic Integrity and Course Content Distribution are provided in the subsequent “Statement on Academic Conduct and Support Systems” section.

For this class expectations are:

- Collaboration: In this class, you are expected to submit work that demonstrates your individual mastery of the course concepts.
- Group work: Unless specifically designated as a 'group project,' all assignments are expected to be completed individually.
- Computer programs: Plagiarism includes the submission of code written by, or otherwise obtained from someone else.

Please ask the instructor [and/or TA(s)] if you are unsure about what constitutes unauthorized assistance on an exam or assignment, or what information requires citation and/or attribution.

You may not record this class without the express permission of the instructor and all other students in the class. Distribution of any notes, recordings, exams, or other materials from a university class or lectures — other than for individual or class group study — is prohibited without the express permission of the instructor.

Use of Generative AI in this Course

Generative AI is encouraged: You are expected to use AI (e.g., ChatGPT and image generation tools) in this class. Learning to use AI is an emerging skill; this is an opportunity for you to discuss with the instructor appropriate use of these tools. Keep in mind the following:

- AI tools are permitted to help you brainstorm topics or revise work you have already written.
- If you provide minimum-effort prompts, you will get low-quality results. You will need to refine your prompts to get good outcomes. This will take work.
- Proceed with caution when using AI tools and do not assume the information provided is accurate or trustworthy. If it gives you a number or fact: assume it is incorrect unless you either know the correct answer or can verify its accuracy with another source. You will be responsible for any errors or omissions provided by the tool. It works best for topics you understand.
- AI is a tool, but one that you need to acknowledge using. Please include a paragraph at the end of any assignment explaining if, how, and why you used AI and indicate/specify the prompts you used to obtain the results. Failure to do so is a violation of academic integrity policies.

Course Schedule & Weekly Breakdown

	Topics/Daily Activities	Readings (AFSB 152 Textbook)/ Preparation	Deliverables
Week 1	Introduction/Syllabus review; What is Surety and why is important to construction; The Miller Act	Chapter 2; 2.5	
Week 2	Benefits of Contract Bonds; Construction Project Design & Concepts	Chapter 1; 1.1 – 1.3	
Week 3	Types of Contractors; Construction Responsibilities; Why Contractors Fail; Indemnity Provisions	Chapter 1; 1.4 – 1.6	Assignment 1
Week 4	Forms of business ownership; Construction Clauses; Dispute Resolution & Payment Issues	Chapter 2; 2.1. 2.2	
Week 5	Construction Clauses (2); nonlabor relations & payment issues; State Lien Laws	Chapter 2; 2.3 – 2.4	Assignment 2
Week 6	Construction contract pricing methods; Contract Bidding Process; Estimating Costs; Use of Bid Bonds & Concluding the Contract Bidding Process	Chapter 2 & 3; 2.4-3.4	
Week 7	MIDTERM		
Week 8	Construction Company Evaluation (organizational & financial); Project Specific Risk Factors (1)	Chapter 4; 4.1- 4.3	Assignment 3
Week 9	Project Specific Risk Factors (2) Work-Backlog Factors; Unique challenges in backlog analysis and underwriting theory	Chapter 4; 4.4- 4.8	
Week 10	Financial Statements & level of service; Components of Financial Reports; Construction Accounting Methods	Chapter 5; 5.1- 5.2	Assignment 4
Week 11	Interim Financial Statements; Profit Recognition on work-in-progress; methods of financial analysis	Chapter 5; 5.3- 5.6	
Week 12	Work in progress; estimated data; status reports; analyzing contractor status reports; techniques toward analysis	Chapter 6; 6.1- 6.4	Assignment 5
Week 13	Financial Statement Analysis; balance sheet & income statement based upon trade (GC, sub, etc.)	Chapter 7; 7.1 – 7.4	
Week 14	Trend analysis & forecasting	Chapter 8; 8.1 – 8.2	Assignment 6
Week 15	Trend analysis & Forecasting (2); Backlog relativity guidelines & Case Study (Diversified Construction Company, Inc.)	Chapter 8; 8.3	
FINAL	FINAL	Refer to the final exam schedule in the USC <i>Schedule of Classes</i> at classes.usc.edu .	

Statement on Academic Conduct and Support Systems

Academic Integrity:

The University of Southern California is a learning community committed to developing successful scholars and researchers dedicated to the pursuit of knowledge and the dissemination of ideas. Academic misconduct, which includes any act of dishonesty in the production or submission of academic work, comprises the integrity of the person who commits the act and can impugn the perceived integrity of the entire university community. It stands in opposition to the university's mission to research, educate, and contribute productively to our community and the world.

All students are expected to submit assignments that represent their own original work, and that have been prepared specifically for the course or section for which they have been submitted. You may not submit work written by others or "recycle" work prepared for other courses without obtaining written permission from the instructor(s).

Other violations of academic integrity include, but are not limited to, cheating, plagiarism, fabrication (e.g., falsifying data), collusion, knowingly assisting others in acts of academic dishonesty, and any act that gains or is intended to gain an unfair academic advantage.

The impact of academic dishonesty is far-reaching and is considered a serious offense against the university. All incidences of academic misconduct will be reported to the Office of Academic Integrity and could result in outcomes such as failure on the assignment, failure in the course, suspension, or even expulsion from the university.

For more information about academic integrity see [the student handbook](#) or the [Office of Academic Integrity's website](#), and university policies on [Research and Scholarship Misconduct](#).

Please ask your instructor if you are unsure what constitutes unauthorized assistance on an exam or assignment, or what information requires citation and/or attribution.

Course Content Distribution and Synchronous Session Recordings Policies

USC has policies that prohibit recording and distribution of any synchronous and asynchronous course content outside of the learning environment.

Recording a university class without the express permission of the instructor and announcement to the class, or unless conducted pursuant to an Office of Student Accessibility Services (OSAS) accommodation. Recording can inhibit free discussion in the future, and thus infringe on the academic freedom of other students as well as the instructor. ([Living our Unifying Values: The USC Student Handbook](#), page 13).

Distribution or use of notes, recordings, exams, or other intellectual property, based on university classes or lectures without the express permission of the instructor for purposes other than individual or group study. This includes but is not limited to providing materials for distribution by services publishing course materials. This restriction on unauthorized use also applies to all information, which had been distributed to students or in any way had been displayed for use in relationship to the class, whether obtained in class, via email, on the internet, or via any other media. ([Living our Unifying Values: The USC Student Handbook](#), page 13).

Students and Disability Accommodations:

USC welcomes students with disabilities into all of the University's educational programs. [The Office of Student Accessibility Services](#) (OSAS) is responsible for the determination of appropriate accommodations for students who encounter disability-related barriers. Once a student has completed the OSAS process (registration, initial appointment, and submitted documentation) and accommodations are determined to be reasonable and appropriate, a Letter of Accommodation (LOA) will be available to generate for each

course. The LOA must be given to each course instructor by the student and followed up with a discussion. This should be done as early in the semester as possible as accommodations are not retroactive. More information can be found at osas.usc.edu. You may contact OSAS at (213) 740-0776 or via email at osasfrontdesk@usc.edu.

Support Systems:

[Counseling and Mental Health](#) - (213) 740-9355 – 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

[988 Suicide and Crisis Lifeline](#) - 988 for both calls and text messages – 24/7 on call

The 988 Suicide and Crisis Lifeline (formerly known as the National Suicide Prevention Lifeline) provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week, across the United States. The Lifeline is comprised of a national network of over 200 local crisis centers, combining custom local care and resources with national standards and best practices. The new, shorter phone number makes it easier for people to remember and access mental health crisis services (though the previous 1 (800) 273-8255 number will continue to function indefinitely) and represents a continued commitment to those in crisis.

[Relationship and Sexual Violence Prevention Services \(RSVP\)](#) - (213) 740-9355(WELL) – 24/7 on call

Free and confidential therapy services, workshops, and training for situations related to gender- and power-based harm (including sexual assault, intimate partner violence, and stalking).

[Office for Equity, Equal Opportunity, and Title IX \(EEO-TIX\)](#) - (213) 740-5086

Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

[Reporting Incidents of Bias or Harassment](#) - (213) 740-5086 or (213) 821-8298

Avenue to report incidents of bias, hate crimes, and microaggressions to the Office for Equity, Equal Opportunity, and Title for appropriate investigation, supportive measures, and response.

[The Office of Student Accessibility Services \(OSAS\)](#) - (213) 740-0776

OSAS ensures equal access for students with disabilities through providing academic accommodations and auxiliary aids in accordance with federal laws and university policy.

[USC Campus Support and Intervention](#) - (213) 740-0411

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

[Diversity, Equity and Inclusion](#) - (213) 740-2101

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

[USC Emergency](#) - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

[USC Department of Public Safety](#) - UPC: (213) 740-6000, HSC: (323) 442-1200 – 24/7 on call

Non-emergency assistance or information.

[Office of the Ombuds](#) - (213) 821-9556 (UPC) / (323-442-0382 (HSC)

A safe and confidential place to share your USC-related issues with a University Ombuds who will work with you to explore options or paths to manage your concern.

[Occupational Therapy Faculty Practice](#) - (323) 442-2850 or otfp@med.usc.edu

Confidential Lifestyle Redesign services for USC students to support health promoting habits and routines that enhance quality of life and academic performance.