Construction Risk Analysis and Control

Ali Keyvanfar
Kennesaw State University, akeyvanf@kennesaw.edu

Follow this and additional works at: https://digitalcommons.kennesaw.edu/dcr

Part of the Curriculum and Instruction Commons

CM 6600-W01 Construction Risk Analysis and Control (Online)
College of Architecture & Construction Management
Term: Spring 2023

Prerequisite: N/A

Class Meeting time: NA

Course Website: http:d2l.kennesaw.edu

Class Location: Online (for Q&A at d2l/Microsoft team/GroupMe)

Class instruction methodology: Pre-recorded online

Instructor(s): Dr. Ali Keyvanfar (Online), Shreedhar Adhikari + Gayatri Sravanthi Kuntla (Online),

Office Location: H331 + Available at d2l/Microsoft team/GroupMe for live lectures for Q&A

Office Hours: Shreedhar: T/R (4 pm-6:30 pm), Dr. Ali: contact online 24/7

Email /Phone: akeyvanf@kennesaw.edu/858-265-7085

Course Communications: Electronic (online) using GroupMe account of the class, also direct email

Required Text: Will be provided in D2L.

COURSE SYLLABUS

The intent of the syllabus is to provide the students with information on the course content, required learning outcomes, grading policy, course policies, and Kennesaw State University student policies and resources. This syllabus also includes the tentative topical outline and schedule. Each student is expected to abide by the stated policies.

Course Catalog Description:
This course focuses on risk identification, risk assessment, risk management, risk mitigation, acceptance, and transfer. Quality assurance and Quality control are introduced also.

Student Learning Outcomes covered in this course:
UG-SLO 13- Understand construction risk management.
UG-SLO 15- Understand construction quality assurance and control
G-SLO 3: Apply problem solving techniques.
G-SLO 1: Create effective and professional written communications.
G-SLO 6: Apply advanced communication technology.
G-SLO 9: Understand risk management.

Course Learning Outcomes:
Upon completion of the course, the student will have the ability to:

CLO 1. Select risk factors associated with construction projects.
CLO 2. Recognize how to transfer and avoid risk as an owner/GC.
CLO 3. Describe and understand the risk associated with the construction contract.

CLO 4. Recognize and reduce risk by utilizing a decision-making method.
CLO 5. Identify differences in quality control vs. quality assurance.
CLO 6. Describe quality control/assurance tools and techniques.
CLO 7. Understand the advantages of advanced technology in risk and quality management

Purpose of Course:

Each course in the Construction Management program provides the student with an opportunity to attain knowledge, skills, and abilities in one or more of the 10 Student Learning Outcomes (SLO) set forth by the American Council for Construction Education (ACCE). The student's level of achievement of SLO is measured through one or more Course Learning Outcomes (CLO). The mapping of CLOs with SLOs for the course is shown in the table below followed by the table that presents the mapping of CLO with assessment tools.

Table 1: Mapping CLOs with SLOs

SLOs	CLO 1	CLO 2	CLO 3	CLO 4	CLO 5	CLO 6	CLO 7
SLO 3	CLO 1			CLO 4	CLO 5	CLO 6	
SLO 1		CLO 2	CLO 3				
SLO 9		CLO 2	CLO 3				
SLO 6							CLO 7

Table 2: Mapping of Assessment with CLO

Assessments	CLO 1	CLO 2	CLO 3	CLO 4	CLO 5	CLO 6
Quiz 1	CLO 1					
Quiz 2			CLO 3	CLO 4		
Project ppt	CLO 1	CLO 2	CLO 3	CLO 4		
Quiz 4					CLO 5	CLO 6
Con.Tech Quiz						CLO 7

COURSE POLICIES

Modality: This is an **Asynchronous Online** course. You are expected to engage with the course content on a regular basis and meet established deadlines defined in the syllabus or elsewhere in the course. This class may contain optional synchronous sessions that will be recorded for students unable to attend the special sessions due to schedule conflicts. You are not required to attend any synchronous class sessions offered. You are expected to be prepared for online delivery including arranging access to stable internet that can handle the demands of online courses and a computer with (internal or external) functioning webcam with microphone.

Attendance Policy: Attendance is required for this course (it will be based on outline submissions if this course presented online). The classroom environment will be treated the same way as if this was a corporate meeting in a large conference room in which your boss was delivering a presentation. As many of us are connected through our cell phones for Campus Alert System, you do not have to turn them off, but they must be on silent and put away (or mute the mic if it is online).

Quiz / Exam Policy: Follow the assessment schedule presented at "CM 3400: Course Topical Outline & Schedule."

Make-up Policy: Typically, only cases of family or medical emergencies are excusable reasons that students allowed to make up work. Students must notify the instructor prior to the due date to make arrangements.

Assignment Policy: Assignments will be done in a group setting and are expected to be completed by the due date.

Course Technology: Instructor utilizes D2L for course materials. Lecture outlines, handouts, and assignments and other course related materials will be posted (check daily). It is student's responsibility to review posted materials and have required computer equipment to access course material. Students must have access to a pc, notebook, or personal laptop for daily attendance and class assignments. (Please notify instructor immediately if you do not have access to this technology). At a minimum, students should be able to use a word processing application, a spreadsheet application and a presentation application (i.e., Microsoft Word, Excel and PowerPoint). Do not report technical issues to instructor - should you have technical issues, go to the LINK. Please also note the times for scheduled maintenance of the system as D2L will be unavailable during scheduled maintenance (See the LINK).

Evaluation & Grading:

Assignments	40%	A = 90-100
Project	45%	B = 80-89
Class participation	15%	C = 70-79
Total	100%	D = 60-69
		F = Below 60

Table 3: CM 6600 COURSE TOPICAL OUTLINE & SCHEDULE: Please, mind that the schedule is subject to change with notice. This outline represents the general format of the course. Instructor reserves the right to make changes depending on the progress of the class.

Module	Weeks	Topics	Reading	Assignments	Assessment
1	Week 1 of class	Importance of Risk Management	Ref. folder at D2L and PPT	Outline 1 (1 point)	
	Week 2 of class	What is Risk?; Example of Risk factors in construction; What is Risk Management?; False beliefs about Risk Management	Ref. folder at D2L and PPT	Outline 2 (1 point)	
	Self-study	Managing Risk in the Construction Industry (A certificate by Procore)	Cert. folder at D2L and PPT	Outline 3	Submission certificate 1 (10 points)
2	Week 3 of class	AGC-FMI Risk Management Survey; Glossary of Risk terminologies; Tools and Techniques in Risk Management	Ref. folder at D2L and PPT	Outline 4 (1 point)	
	Week 4 of class	Project p1 which will be covered in the online group meeting	Project folder at D2L	Outline 5 (1 point)	
3	Week 5 of class	Risk management workflow (Identification)	Ref. folder at D2L and PPT	Outline 6 (1 point)	**Quiz 1** (10 points) (Outlines: 1 to 5)
	Week 6 of class	Project 2 which will be covered in the online group meeting	Project folder at D2L	Outline 7 (1 point)	
4	Week 7 of class	Risk management workflow (Classification & Assessment) Progressive Grade Release #1	Ref. folder at D2L and PPT	Outline 8 (1 point)	
	Week 8 of class	Project p3 which will be covered in the online group meeting	Project folder at D2L	Outline 9 (1 point)	
5	Week 9 of class	Risk management workflow (Response planning)	Ref. folder at D2L and PPT	Outline 10 (1 point)	**Quiz 2.1** (10 points) (Outlines: 6 to 8)
	Week 10 of class	Project p4 which will be covered in the online group meeting	Project folder at D2L	Outline 11 (1 point)	
6	Week 11 of class	Risk management workflow (Response planning)	Ref. folder at D2L and PPT	Outline 12 (1 point)	
	Week 12 of class	Project PPT Submission which will be covered in the online group meeting	Project folder at D2L	Outline 13 and 15 (2 points)	**Quiz on Project** (12 points), **Quiz 2.2** (10 points) (Outlines: 10- 13)

	Self-study	Bond, Insurance, & Contingency	Ref. folder at D2L and PPT		Outline 14		**Quiz 3** (6 points) (Slide 73, 77, 78)
7	Week 13 of class	What is Quality? Quality management in construction; QA & QC <mark>Progressive Grade Release</mark> #2	Ref. folder at D2L and PPT		Outline 16 (1 point)		
	Week 14 of class	What is unique about construction quality management? QA & QC; Tools and Techniques in construction quality Management	Ref. folder at D2L and PPT		Outline 17 (1 point)		
8	Week 15 of class	5S/Kanban/TQM	Ref. folder at D2L and PPT		Outline 18 (1 point)		
	Week 16 of class	Quality impact; ISO; Glossary terms in CM	Ref. folder at D2L and PPT		Outline 19 (1 point)		**Quiz 4** (Outlines: 16 to 19) (6 pts) **Quiz 5** (11 points) (General)
	Self-study	"On the cite" certificate (By ConTech academy/Autodesk)	Cert. folder at D2 and PPT		Outline 20 to 24		Certificate submissions (10 points)

Further details on "COURSE POLICIES" can be found in Appendix A (Course-specific policies), Appendix B (Project plan), and Appendix C (Communication plan).

**"A midterm grade will be assigned by the midterm grade due date identified on the Spring 2023 academic calendar. This midterm grade is for assessing mid-semester performance prior to the last day to withdraw without academic penalty. You may view your midterm grade in Owl Express. Note that only your final grade will be officially recorded on your academic transcript."*

COVID-19 Syllabi Statements

Course delivery
KSU may shift the method of course delivery at any time during the semester in compliance with the University System of Georgia's health and safety guidelines. In this case, alternate teaching modalities that may be adopted include hyflex, hybrid, synchronous online, or asynchronous online instruction.

Staying Home When Sick
If you are feeling ill, please stay home and contact your health professional. In addition, please email your instructor to say you are missing class due to illness. Signs of COVID-19 illness include, but are not limited to, the following:

- Cough
- Fever of 100.4 or higher
- Runny nose or new sinus congestion
- Shortness of breath or difficulty breathing
- Chills
- Sore Throat
- New loss of taste and/or smell

COVID-19 vaccines are a critical tool in "Protecting the Nest." If you have not already, you are strongly encouraged to get vaccinated immediately to advance the health and safety of our campus community. As an enrolled KSU student, you are eligible to receive the vaccine on campus. Please call (470) 578-6644 to schedule your vaccination appointment, or you may walk into one of our student health clinics. For more information regarding COVID-19 (including testing, vaccines, extended illness procedures, and accommodations), see KSU's official Covid-19 website.

Face masks/covering in campus
You are strongly encouraged to wear a mask when in class. Based on guidance from the University System of Georgia (USG), all vaccinated and unvaccinated individuals are encouraged to wear a face

covering while inside campus facilities. Unvaccinated individuals are also strongly encouraged to continue to socially distance while inside campus facilities, when possible.

Per my personal class policy, anyone not using a face covering when required will be asked to wear one or must leave the area. Repeated refusal to comply with the requirement may result in the discipline through applying a 20 percent grade reduction (check Appendix A- *Course-specific policies*). Reasonable accommodations may be made for those who are unable to wear a face-covering for documented health reasons.

Seating Plans
Students will sit in the same seat for every F2F class so that the instructor can use a seating plan for contact tracing if a student contracts Covid-19.

Web Cameras
Instructors may require web cameras in their respective courses.

Where to Go for Help
KSU's COVID-19 Health Helpline - 470-578-6644

Students must call first before going to Student Health Clinic

For student accommodations, contact Disability Services - KSU Student Disability Services

Visit "coronavirus.kennesaw.edu" for KSU COVID-19 information and updates

UNIVERSITY POLICIES: Statement of Student Rights and Responsibilities

KSU Student Code of Conduct Plagiarism and Cheating:
No student shall receive, attempt to receive, knowingly give or attempt to give unauthorized assistance in the preparation of any work required to be submitted for credit (including examinations, laboratory reports, essays, themes, term papers, etc.). Unless specifically authorized, the presence and/or use of electronic devices during an examination, quiz, or other class assignment is considered cheating. Engaging in any behavior which a professor prohibits as academic misconduct in the syllabus or in class discussion is cheating. When direct quotations are used, they should be indicated, and when the ideas, theories, data, figures, graphs, programs, electronic based information or illustrations of someone other than the student are incorporated into a paper or used in a project, they should be duly acknowledged. No student may submit the same, or substantially the same, paper or other assignment for credit in more than one class without the prior permission of the current professor(s).

University Policy on Academic Misconduct: Academic honesty and integrity are fundamental values of the University community. Students should be sure that they understand the KSU Student Academic Integrity Policy (see this LINK for more details)

University Policy on Accommodating Students with Disabilities:
Students requesting accommodation for disabilities must first register with the Office of Disabled Student Support Services at http://www.kennesaw.edu/stu_dev/dsss/dsss.html. The Office of Disabled Student Support Services will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking the quizzes or exams. Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

**Netiquette: Communication Courtesy:
All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats, (see this LINK further details).

Electronic Recording & Social Media Policy

Electronic recording performed without the consent of the people being recorded chills the free exchange of ideas. Academic freedom, free inquiry, and freedom of expression should not be limited by the fear that one's brainstorming, polemic discourse, speculative inquiry, or any other kind of expressed curiosity made within the space of a university classroom will be made public without one's consent. This fear is unacceptable regardless of whether one is in an online, hybrid, or face-to-face classroom setting. Accordingly, no person shall electronically record any class discussion without the written permission of the instructor. No person shall publish online or elsewhere any electronic recording of a class discussion without the written permission of the instructor and any other persons who were recorded. This policy is not intended to discourage electronic recording in the classroom or the use of social media when such actions are performed with the written consent of the instructor and any other persons who were/will be recorded. Faculty accommodate all reasonable requests to electronically record a class discussion; these requests must be documented by the Disabled Student Support Services available at this LINK.

GETTING HELP

For issues with technical difficulties, please contact the Student Helpdesk:

1. Fill out a service form using this LINK.
2. Email: studenthelpdesk@kennesaw.edu
3. Call: 770-499-3555

This website (click at the LINK) to Getting Started With Technology Services would help as well.

Any requests for make-ups due to technical issues MUST be accompanied by the ticket number received from ITS when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail your instructor within 24 hours of the technical difficulty if you wish to request a make-up.

Additional Technology Resources

1. Student Service Desk and Help Center email: studenthelpdesk@kennesaw.edu
2. Browser Checker (Click at the LINK)
3. USG Desire2Learn Help Center (Click at the LINK)
4. D2L Training Options & Resources for Students (Click at the LINK)
5. Computertrain Online Courses (Click at the LINK)
6. ITS Documentation Center (Click at the LINK)
7. Check Service Outages (Click at the LINK)
8. Maintenance Schedule (Click at the LINK)

Academic Resources

1. Academic Tutoring Services (Click at the LINK)
2. Disability Resources (Click at the LINK)
3. ESL Study and Tutorial Center (Click at the LINK)
4. Library (Click at LINK)
5. Supplemental Instruction (Click at LINK)
6. The Writing Center (Click at LINK)
7. Math Lab (Click at LINK)

Student Support and Wellness Resources

1. Career Services Center (Click at LINK)
2. Counseling and Psychological Services (Click at LINK)
3. Center for Health, Promotion and Wellness (Click at LINK)

4. Student Health Clinic (Click at [LINK](#))

KSU desires to resolve student grievances, complaints and concerns in an expeditious, fair and amicable manner. The Complaints and Appeals Page was developed to assist current and prospective students in submitting complaints and appeals and to direct them to the most effective venue for accurate information and resolution. The resources on this page (Click at [LINK](#)) will direct students to the specific venue to appropriately address related student complaint.

Complaints for online students are resolved following the same general procedures for students who attend classes on campus. However, for any process that requires that a student appear in person, the university may make other arrangements. For processes that cannot be completed via telephone, e-mail, or written correspondence, the university may set up a two-way Video conference site in place of a meeting on the KSU campus.

Table 4: STUDENT LEARNING OUTCOMES: Upon graduation from an accredited ACCE master's degree program a graduate shall be able to demonstrate mastery of the following:

ACCE SLOs	TARGET
1. Create effective and professional written communications.	This ACCE SLO is targeted in this course
2. Apply critical thinking.	This ACCE SLO is NOT targeted in this course
3. Apply problem solving techniques.	This ACCE SLO is targeted in this course
4. Apply decision making techniques.	This ACCE SLO is NOT targeted in this course
5. Apply research methods.	This ACCE SLO is NOT targeted in this course
6. Apply advanced communication technology.	This ACCE SLO is targeted in this course
7. Apply professional ethics.	This ACCE SLO is NOT targeted in this course
8. Apply advanced construction management practices.	This ACCE SLO is NOT targeted in this course
9. Understand risk management.	This ACCE SLO is targeted in this course
10. Understand the principles of leadership in business.	This ACCE SLO is NOT targeted in this course