**CM 4710 – Construction Safety**

**College of Architecture & Construction Management Term: Spring 2020**

**Prerequisite:** CM 3110, 3180

# Class Meeting time: TTH 12:30 – 1:45 pm

**Course Website:** [http:d2l.kennesaw.edu](http://www.d2l.kennesaw.edu/)

# Class Location: Architecture (H)/ Room 174

**Class instruction methodology:** 3-0-3 face to face

**Instructor:** Irish Horsey

**Office Location:** H341A

**Office Hours:** T TH 10:00am – 12:00pm

**Email /Phone:** [ihorsey@kennesaw.edu](mailto:ihorsey@kennesaw.edu) / 470-578-5215

**Course Communications: ihorsey@kennesaw.edu** (*KSU mail - Outlook* *preferred method of contact*)

# Required Text/ISBN Number:

29 CFR 1926 OSHA Construction Industry Regulations or [www.osha.gov](http://www.osha.gov/) or [www.mancomm.com](http://www.mancomm.com/)

\*Additional reading material for selected topics may be assigned.

# COURSE SYLLABUS

Construction Management Faculty are involved in the development of knowledge, understanding, and application in an environment where we monitor, manage, and facilitate the learning process. Instructor strives to provide a rich learning environment that allows for a range of individual learning styles. The following syllabus provides specific topics for the course through various forms of teaching and discovery based on a selection of reading materials and other resources.

# Course Catalog Description:

A study of construction safety and loss control principles and practices. Topics include project security control, construction accident prevention, safety information sources, weather precautions, emergency planning, and OSHA procedures and regulations.

**Purpose of Course:** The purpose of this course is to help students determine critical safety requirements for a construction project such as fall, confined space, temporary electricity, excavations, struck-by and PPE. Have the ability to formulate a safety plan for a project. Be able to implement preventive and corrective safe actions upon discovering hazards. Lastly, be able to predict consequences in terms of legal and insurance implications for not following safety rules and regulations required by OSHA

**Course Goals, Objectives & Expectations:** There will be discussions each week on the topics for that week’s assignment. Discussions are designed for class interaction and will be worked on weekly, so questions may be answered and discussed with classmates during that time. Each week there will be subparts for you to understand on the topic that is being discussed. Students are asked to attempt to read ahead so they will be prepared to interact in the classroom for part of their class participation grade. It is the student’s responsibility to remain current with the weekly discussions. Any missed assignments, exams, or quizzes may not be made up and will result in a zero.

**How This Course Relates to the Student Learning Outcomes in the Construction Management Program:** In this course, students will learn how to carry out construction project management related tasks, demonstrate communication ability with construction project team members, and analyze ethical, social, and environmental responsibility of construction professionals.

# Student Learning Outcomes:

SLO 3 - Create a construction project safety plan.

SLO 6 - Analyze professional decisions based on ethical principles.

**Course Learning Outcome:**

**Upon completion of the course the student will have the ability to:**

CLO 1 - Develop a detailed safety manual that includes subparts discussed in OSHA 29 CFR 1926.

CLO 2 - Develop a knowledge of safety procedures, regulations, and hazards.

CLO 3 - Distinguish between ethical and non-ethical safety procedures in building construction.

**Purpose of this course:**

All courses in the Construction Management program contribute to the body of knowledge required to complete the Capstone project necessary for graduation. 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 20 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.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | **Mapping of CLO with SLO** | | | | | | |
|  | |  | |  | |  | | |
| **Assessment** | | | | **CLO 1** | | **CLO 2** | **CLO 3** | | |
| SLO 3 | | | | X | | X |  | | |
| SLO 6 | | | |  | |  | X | | |

**Mapping of Assessment with CLO**

|  |  |  |  |
| --- | --- | --- | --- |
| **Assessment** | **CLO 1** | **CLO 2** | **CLO 3** |
| Current Event 1 -10 |  |  |  |
| Milestone 1 |  |  |  |
| Milestone 2 |  |  |  |
| Milestone 3 |  |  |  |
| Exam 1 |  | **X** |  |
| Exam 2 |  | **X** |  |
| Exam 3 |  | **X** |  |
| Ethics Paper |  |  | **X** |
| Safety Manual | **X** | **X** |  |

# COURSE POLICIES

**Attendance Policy:** Attendance is required for this course. The Class Participation grade is based on your attendance to the class and other approved functions. 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. He/she would not tolerate their use and a “wise” young employee would probably shy away from their use in order to prevent their discharge from the firm as a result of their rudeness.

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. Any student that does not comply will simply be told to leave the class.

**Quiz / Exam Policy:** Three exams is given during the semester, all exams are available in D2L.

**Make-up Policy:** Only in cases of family or medical emergencies are students allowed to make up work.

**Assignment Policy:** Current Events are done individually. Assignments will be done in a group setting and is expected to be completed by the due date. No lab for this class. Due dates and times are given for all assignments. It is your responsibility to submit the work in the appropriate Drop Box in D2L before the time expires. If the Drop Box has an End Date, then that is the last possible date to submit late work. All student work will be graded within one week of submission.

|  |  |  |  |
| --- | --- | --- | --- |
| **Course Technology:** N/A  **Evaluation & Grading:** |  |  | |
| Exams (3) Assignments/Report/Presentation | - 60% (20% each)  - 10% |
| Final Project | - 20% |  |  |
| Class Participation | - 10% |  |  |
| A = 90-100 B = 80-89 | C = 70-79 | D = 60-69 | F = Below 60 |

**Course Schedule:** The following outline is intended to represent the general format of the course. The instructor may make changes if it is determined that such changes will better suit the needs of the students and the flow of instruction.

|  |  |  |
| --- | --- | --- |
| **CLASS TOPIC**  **WEEKLY ASSIGNMENT** | | |
| **Week 1** | Course Introduction/General Discussion  Intro to OSHA Part I – 1hr |  |
| **Week 2** | Managing Safety and Health – 1hr  Managing Safety and Health – 1hr | Ethics Assignment  Current Event 1 |
| **Week 3** | Focus Four (Falls) – 1hr  Focus Four (Falls/Electrocution) – .5hr/.5hr | Current Event 2 |
| **Week 4** | Focus Four (Electrocution) – 1hr  Focus Four (Struck-by) – 1hr | Current Event 3  **Test 1 (due Sunday 11:59pm)** |
| **Week 5** | Focus Four (Struck-by /Caught-in) – .5hr/.5hr  Focus Four (Caught-in) - 1hr | Current Event 4 |
| **Week 6** | Focus Four (PPE) – 1hr  Focus Four (PPE) – 1hr | Current Event 5 |
| **Week 7** | Health Hazards - 1hr  Health Hazards - 1hr | Current Event 6 |
| **Week 8** | Stairways and Ladders – 1hr  Steel Erection – 1hr | Current Event 7  **Test 2 (due Sunday 11:59pm)** |
| **Spring Break 3/28– 4/3 (Campus Closed – No Classes)** | | |
| **Week 9** | Cranes, Derricks, Hoists, Elev. and Conv - 1hr  Cranes, Derricks, Hoists, Elev. and Conv - 1hr | Current Event 8 |
| **Week 10** | Materials Handling, Storage, Use & Disposal – 1hr  Materials Handling, Storage, Use & Disposal – 1hr | Current Event 9 |
| **Week 11** | Conc & Masonry - 1hr  **\*Safety Manual Workshop #1**  Safety & Health Prog - 1hr | Current Event 10 |
| **Week 12** | Excavations – 1hr  Excavations – 1hr | **Test 3 (due Sunday 11:59pm)**  Milestone 1 |
| **Week 13** | Hand and Power Tools – 1hr  Hand and Power Tools – 1hr | Milestone 2 |
| **Week 14** | Ergonomics - 1hr  Ergonomics - 1hr |  |
| **Week 15** | Scaffolds – 1hr  Signs/Rollover/Motor Vehicles – 1hr | Milestone 3 |
| **Week 16** | Safety and Health Program – 1hr  **\*Safety Manual Workshop #2** | Final Project - Safety Manual **(due Sunday 11:59pm)** |
| **Final Exam Week** | Test 4 Due | **No Classes 11/19– 11/25 Fall Break (Campus Closed – No Classes)** |

*\*All students must be present to work at safety manual workshops*

# 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 at http://kennesaw.edu/handbooks/faculty/section2\_13.php

# 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.](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. <http://teach.ufl.edu/docs/NetiquetteGuideforOnlineCourses.pdf>

**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: <http://www.kennesaw.edu/stu_dev/dsss/prospect.shtml>

# GETTING HELP

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

* 1. Fill out a service form <http://uits.kennesaw.edu/support/formselect.php?s=tech>
  2. Email: [studenthelpdesk@kennesaw.edu](mailto:studenthelpdesk@kennesaw.edu) 3. Call: 770-499-3555

Getting Started With Technology Services <http://uits.kennesaw.edu/>

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 [studenthelpdesk@kennesaw.edu](mailto:studenthelpdesk@kennesaw.edu)
2. Browser Checker <https://usg.desire2learn.com/d2l/tools/system_check/systemcheck.asp?ou=6606>
3. USG Desire2Learn Help Center <https://d2lhelp.view.usg.edu/>
4. D2L Training Options & Resources for Students <https://web.kennesaw.edu/acs/pages/desire2learn/student-resources-d2l>
5. Computertrain Online Courses <http://www.kennesaw.edu/dlc/FacultyResources/>
6. ITS Documentation Center <http://uits.kennesaw.edu/docs/netaccess/guides/windows7_wifi_instructions.pdf>
7. Check Service Outages <http://status.usg.edu/>
8. Maintenance Schedule [https://usg.desire2learn.com](https://usg.desire2learn.com/)

# Academic Resources

1. Academic Tutoring Services <http://www.kennesaw.edu/stu_dev/alp/academic.shtml>
2. Disability Resources <http://www.kennesaw.edu/stu_dev/dsss/dsss.html>
3. ESL Study and Tutorial Center <http://www.kennesaw.edu/us/programs/esl.php>
4. Library <http://www.kennesaw.edu/library/>
5. Supplemental Instruction <http://www.kennesaw.edu/us/programs/si.php>
6. The Writing Center <http://www.kennesaw.edu/writingcenter/index.php>
7. Math Lab <http://mathlab.kennesaw.edu/>

# Student Support and Wellness Resources

1. Career Services Center <https://careerctr.kennesaw.edu/>
2. Counseling and Psychological Services <http://sss.kennesaw.edu/cps/>
3. Center for Health, Promotion and Wellness <http://www.kennesaw.edu/col_hhs/wellness/>
4. Student Health Clinic <http://studenthealth.kennesawstateauxiliary.com/>

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 the page will direct students to the specific venue to appropriately address related student complaint. <http://www.kennesaw.edu/complaints_appeals.shtml>

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.

**STUDENT LEARNING OUTCOMES**

**Upon graduation from an accredited ACCE 4-year program a graduate shall be able to:**

|  |  |
| --- | --- |
| **ACCE SLO** | **TARGET** |
| SLO 1 – Create written communications appropriate to the construction discipline. |  |
| SLO 2 – Create oral presentations appropriate to the construction discipline. |  |
| SLO 3 – Create a construction project safety plan. | 75% of students will receive a score of 75% or greater for this SLO. |
| SLO 4 – Create construction project cost estimates. |  |
| SLO 5 – Create construction project schedules. |  |
| SLO 6 – Analyze professional decisions based on ethical principles. | 75% of students will receive a score of 75% or greater for this SLO. |
| SLO 7 – Analyze construction documents for planning and management of construction processes. |  |
| SLO 8 – Analyze methods, materials, and equipment used to construct projects. |  |
| SLO 9 – Apply construction management skills as a member of a multi-disciplinary team. |  |
| SLO 10 – Apply electronic-based technology to manage the construction process. |  |
| SLO 11 – Apply basic surveying techniques for construction layout and control. |  |
| SLO 12 – Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process. |  |
| SLO 13 – Understand construction risk management. |  |
| SLO 14 – Understand construction accounting and cost control. |  |
| SLO 15 – Understand construction quality assurance and control. |  |
| SLO 16 – Understand construction project control processes. |  |
| SLO 17 – Understand the legal implications of contract, common, and regulatory law to manage a construction project. |  |
| SLO 18 – Understand the basic principles of sustainable construction. |  |
| SLO 19 – Understand the basic principles of structural behavior. |  |
| SLO 20 – Understand the basic principles of mechanical, electrical and piping systems. |  |