

OSHE 382: CONSTRUCTION SAFETY
Spring Semester, 2017

Syllabus

Instructor: Lu Yuan, Sc.D., CSP
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Office Hrs: Monday and Wednesday, 3:30 pm to 5:00 pm. Other times by special appointment.

Course Description:

Credit 3 hours. Prerequisites: Enrollment in or prior credit for OSHE 111 and OSHE 121. The course will address the application of management principles, communication and human relations factors, safety/health rules, industry and federal standards, accident investigation, and technical issues especially within the job planning phases in the construction environment.

Notice: This course is a Real-World Ready class that incorporates an experiential-learning component to supplement the classroom instruction.

Course Objectives:

At the conclusion of this course, students are expected to:

1. Demonstrate construction safety in an increasingly challenging and changing environment.
2. Describe the roles of organizations and personnel involved in major construction projects and explain how each affects site safety.
3. Illustrate how contractors and subcontractors can be qualified and selected for a construction project.
4. Demonstrate how site safety programs can be coordinated among the many contractors on a construction site to provide the overall safety.
5. Explain the legal aspects including liability and regulatory requirements of construction safety.
6. Examine many technical issues in construction, particularly the requirements and applications of safety planning in the early job phases.
7. Achieve the following project objectives:
 - 1) Present an analysis of the safety and health issue/hazard in both oral and written formats.
 - 2) Formulate changes to produce positive impact against the select safety and health issue/hazard under study.
 - 3) Provide ample supporting detail, organize the presentation and report in logical manner, and use effective language, appropriate word choices, and correct grammar and syntax.

Course Text:

Hill, Darryl C. (2004) *Construction Safety Management and Engineering*. American Society of Safety Engineers, Des Plaines, Illinois.

Exams:

There will be two mid-term exams plus a final exam given during the semester to measure your progress and to provide a basis for your grade. Each of the three exams will consist of multiple choice, matching, fill-in-the-blank and, where applicable, short math problems. Each exam will cover the material studied during each of the three units of the class.

You will be permitted to make-up an exam ONLY if you have made arrangements PRIOR to the time the exam was originally administered. No make-up exam will be allowed if you have not made arrangements to take a make-up. The make-up exam must be taken BEFORE the next scheduled class period. **NO EXCEPTIONS will be allowed.**

Quizzes, Exercises, and Assignments (QEAs):

To make the class more fun and interactive, six QEAs will be “randomly” given during the semester. They may appear at the beginning of the class, or at the end of the class, or be due by the specified class. Each QEA is worth 10 points. The highest five scores will be counted toward the grade total and the lowest one will be counted as bonus points.

Project:

There will be a short research project which will require you to analyze a specific safety and health issue/hazard in the construction industry and formulate changes to produce positive impacts. The project will be reported both in 1) a paper of 5 to 10 pages, and 2) an oral presentation in 10 to 15 minutes. The project will be graded upon: 1) accuracy of analysis of the problem, 2) appropriateness of the corrective measures that are recommended, and 3) dissemination of information through oral presentation. Good grammar and correct spelling will also be considered in grading the paper.

You should provide me with a copy of your paper and presentation (if there is any) that I can keep. I will provide you with a summary of how the grade for your project was determined. The presentations of the projects are scheduled in the third unit of the class. The written reports are due on **Thursday, May 4th**. **Projects turned in after that date will receive only partial credit.**

Course Grades:

- Grades will be assigned in accordance with the Departmental Scale:

<u>Points</u>	<u>(Percent)</u>	<u>Grade</u>
461-500	(93 - 100)	= A, Superior
421-460	(85 - 92)	= B, Very Good
381-420	(77 - 84)	= C, Average
341-380	(69 - 76)	= D, Below Average
0-340	(0 - 68)	= F, Fail

- Basis for assigning grades:

Three Exams @ 100 points	=	300 points	(60% of grade)
5 QEAs @ 10 points	=	50 points	(10% of grade)
Research Project @ 150 points	=	150 points	(30% of grade)
TOTAL	=	500 points	

Course Requirements:

1. Adherence to departmental policies and procedures.
2. Regular class attendance as prescribed in the departmental requirements.
3. Read the material to be discussed in class prior to coming to class.
4. Complete and turn in homework, QEAs, and research project by due deadline.

NOTE:

1. Students will NOT automatically be dropped from class. Students who choose to drop must do so by the semester deadline! The last day to withdraw or resign from the university is Friday, 24 March, 2017.
2. If you are a qualified student with a disability seeking accommodations under the Americans with Disabilities Act, you are required to self-identify with the Office of Disability Services, War Memorial Student Union 1304.
3. Students' behavior/classroom decorum: "Free discussion, inquiry, and expression are encouraged in this classroom. Classroom behavior that interferes with either (a) the instructor's ability to conduct the class, or (b) the ability of the students to benefit from the instruction is not acceptable. Examples may include routinely entering class late or departing early; use of beepers, cellular telephones, or other electronic devices; repeatedly talking in class without being recognized; talking while others are speaking; or arguing in a way that is perceived as 'crossing the civility line.' In the event of a situation where a student legitimately needs to carry a beeper/cellular telephone to class, prior notice and approval by the instructor is required."
4. Academic Integrity. The academic community relies upon a high standard of integrity in the relations among its members. To the extent that this standard is not maintained, the good of the community suffers, and injustice (sometimes serious injustice) may be done. One of the most important aspects of academic integrity concerns the just measure of each student's academic accomplishments. These are ordinarily evaluated through written examination or submitted work. For such modes of assessment to operate fairly, it is essential that the instructor be assured that the work used to evaluate the student's performance is genuinely the student's own. It is also the responsibility of the student to uphold the academic integrity of the University. The use of unauthorized material, communication with fellow students during an examination, attempting to benefit from the work of another student and similar behavior that defeats the intent of an examination or other class work is unacceptable to the University. Cheating on examinations, plagiarism, improper acknowledgment of sources in essays and the use of a single essay or paper in more than one course without permission are considered very serious offenses and shall be grounds for disciplinary action.

Course Outline & Reading Assignments (Revised 01/09/17)
 Class meets on Tuesdays and Thursdays from 11:00 am to 12:15 pm

Week	Date	Topic	Textbook Readings Due ¹	Work Due
Unit 1: Introduction to Construction Safety				
1	Jan. 12	Introduction & Construction Safety in General	Chapter 1	
2A	Jan. 17	Introduction & Construction Safety in General	Chapter 1	
2B	Jan. 19	Construction Safety Program	Chapter 2	
3A	Jan. 24	Construction Safety Program	Chapter 2	
3B	Jan. 26	Workers' Compensation in Construction	Chapters 4 & 5	
4A	Jan. 31	Workers' Compensation in Construction	Chapters 4 & 5	
4B	Feb. 2	Contractor Selection	Chapters 6, 12 & 13	
5A	Feb. 7	Contractor Selection	Chapters 6, 12 & 13	
5B	Feb. 9	FIRST EXAM	Review Unit 1	
Unit 2: Safety Components and Legal Aspects				
6	Feb. 14 & 16	Construction Substance-Abuse Programs & Safety Incentives	Chapters 7 & 8	
7	Feb. 21 & 23	Prejob/Pretask Planning & Accident Investigation and Reconstruction	Chapters 9 & 10	
8	Feb. 28 Mar. 2	Mardi Gras Holiday		
9	Mar. 7 & 9	Safety Training	Chapter 11	
10	Mar. 14 & 16	Regulatory Requirements	Chapter 14	
11A	Mar. 21	SECOND EXAM	Review Unit 2	
11B	Mar. 23	RWR Activity - Final Project Discussion		
Unit 3: Technical Issues and Phase Planning <Topics may change based on the RWR activity.>				
12	Mar. 28 & 30	Phase Planning for Site Preparation	Chap. 21 & 23	
13	Apr. 4 & 6	Excavation, Concrete, and Steel Erection	Chapters 16, 20, & 24	
14	Apr. 11 & 13	Fall Prevention and Protection	Chap. 15 & 17	
15	Apr. 18 & 20	Spring Break		
16	Apr. 25 & 27	Mechanical Systems & Electrical Safety	Chap. 18 & 19	
17	May 2 & 4	Hazardous Materials & Confined Spaces	Chapters 22, 25 & 26	Term Project
18	May 9	FINAL EXAM	Review Unit 3	

Note: ¹- Other readings include lecture slides, journal articles, and other pertinent documents.