**BCN 3730**

**Construction, Safety, Health and the Environment (3 credits)**

**Instructor: Dr. Andrew Wehle, STSC**

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**IMPORTANT CONSIDERATIONS**

* The topic/quiz/test/project calendar provided on this syllabus is tentative and thus subject to change if circumstances require it.
* Additional information is included in the appendices of this syllabus, as required by the University of Florida and the M.E. Rinker, Sr. School of Construction Management; please make sure you read all of it.
* Please Note: The instructor in not an employee of OSHA. The material provided in this course meets the OSHA requirements for the completion of the 30 Hour Construction Certification. Safety rules and regulations presented in class are the practices enforced by OSHA. The instructor presents the material as required in an impartial manner.
* Success in this course requires the following:

I. **You must come to class.**  
Plan to attend every class. If you miss more than **three class hours**, you are ineligible to receive your OSHA certification no matter how high your class grade may be, **NO EXCEPTIONS**. Please note OSHA counts hours not days so if you miss a double period, you have missed two class contact hours. Being late more than 10 minutes or leaving before the official end of the class period will be counted as an absence for OSHA purposes. Also, updates to this syllabus, additional course material (that will be on quizzes/exams), and helpful hints for projects will often be provided during class. If you miss class, you will miss that information. In that situation, you are responsible for obtaining it from other students, as it will not be repeated in future classes or provided in office hours. Contact me prior to class for absences due to illness or severe personal problems. If a true emergency prevents you from contacting me prior to class, contact me as soon as possible following the emergency.

Please note, your course time is assigned exclusively through the university schedule. ***Other courses cannot intrude or excuse you from attending this course during the assigned time allotted to this course.* NO EXCEPTIONS.**

II. **You must pay attention in class.**

Just showing up isn’t enough; you must be invested in the material. All students are expected to remain focused and to respect other students and the instructor by not engaging in distracting activities. Please keep classroom eating to a minimum. During class discussions, please stay on topic and respect the opinions of your colleagues. Turn off your cell phones for every class, and restrict use of laptops to note-taking. Texting, taking personal calls, and other distracting behaviors will result in you receiving an absence for that class period, **NO EXCEPTIONS**.

Please note: **any material discussed or presented in class can and will be used in any quiz, test, or assignment**. Not all course material tested will be course power point. It is the student’s responsibility to take class notes.

III. **You must produce quality work.**  
Safety may not be the most glamorous of subjects, but it is one of the most important. In order for you to succeed as a professional in construction management you must value and fully understand safety issues. Thus, in order for you to do well in this course, you **MUST** take the course material seriously. Please be diligent in preparing for class, studying assigned material, and researching/writing your final project. And please follow all guidelines and requirements (provided in this syllabus and in class) for final projects, or you will lose significant points. See Appendix A.

IV. **You must be honest.**  
This is your one and only warning: I have a zero-tolerance policy for any violation of the academic honesty policy including but not limited to cheating and plagiarism. Be sure you fully understand what constitutes plagiarism and cheating, because any form of either will result in disciplinary action, to up a failing grade for the **ENTIRE COURSE**. Additionally, I will seek the harshest judicial penalties allowable under UF’s policies.

**INSTRUCTOR AVAILABILITY**

Office Hours

Monday and Wednesday from 11:30 AM-12:30 PM in 312 Rinker Hall

Email Response Time (including Canvas messages)

Allow 48 hours for replies to emails. This may be extended to 72 hours if the email is left over a weekend or holiday.

Student Concerns

If you have concerns or questions about any assignment or situation in this course please contact me right away, vs. waiting until right before a test is handed out or an assignment is due.

**TEXTBOOK**

None.

**GRADING**

Quizzes 25% of total grade

3 Exams 45% percent of total grade

1 Safety Project 30% of total grade

For information on how UF assigns grade points, visit: <https://catalog.ufl.edu/UGRD/academicregulations/grades-grading-policies/>

A 94 – 100% C 74 – 76% A- 90 – 93% C- 70 – 73% B+ 87 – 89% D+ 67 – 69% B 84 – 86% D 64 – 66% B- 80 – 83% D- 60 – 63% C+ 77 – 79% E <60

Quiz/exam questions each have one correct answer and will not be re-graded after points have been awarded. Quizzes and exams are not considered cumulative; however, remember that later course topics often build on accumulated knowledge as the semester advances.

Safety project grades will be based on, but not limited to, the following criteria. 5% of total points will be taken from the final grade for each missing or inaccurate component:

1. Did you follow guidelines provided in class re: minimum length of paper, including fonts and spacing?
2. Did you include all required information/sections as outlined in class?
3. Is the information you included in each section relevant to that section, as discussed in class?
4. Did you provide proper citations/sources for both written sections and graphics/pictures used?
5. Is your writing clear, concise, professional, not redundant, and grammatically correct including spelling?

**COURSE OUTLINE/GENERAL INFORMATION**

Prerequisite

None

Description

Construction safety issues, concerns, requirements and procedures. The analysis includes costs, planning, administration, inspection, prevention, loss control and drug-free workplace. Understanding of the major health issues encountered on construction sites. Appreciation for the need to be environmentally responsible.

Method

Three lecture hours per week.

Objectives

To teach students to understand the regulatory requirements in construction safety, to analyze unsafe construction activities and recognize how management practices can favorably impact safety performance and understand how construction practices impact the environment. Students will create a site-specific safety plan.

Student Learning Outcomes

Upon completion of the course students will demonstrate their ability as described below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SACS SLO** | **ACCE SLO** | **Course Learning Outcome (CLO)** | **Assignments** | **Percent students passing with a min. of 70%** |
| 1 |  | Apply their knowledge of the OSHA regulations pertaining to construction safety and health | Average of Test 1, Test 2, Test 3, and Quizzes | 80% |
| 2 |  | Assess the level of performance of a firm in the area of safety and health | Average of Test 1 and Test 2 | 80% |
| 3 |  | Recognize effective management practices that favorably impact safety performance | Site Safety Plan Grade - Part 3 | 80% |
| 4 |  | Prepare a site-specific safety program | Site Safety Plan Grade - Part 2 | 80% |
| 5 |  | Understand and appreciate the need to be environmentally responsible | Test 3 Grade | 80% |
|  | 3 | Create a construction project safety plan. | SLO 1, 2, 3, 4 | 80% |
|  | 6 | Analyze professional decisions based on ethical principles. | SLO 5 | 80% |
|  |  |  |  |  |
| *ACCE = American Council for Construction Education* | | |  |  |
| *SLO= Student Learning Outcome* | | |  |  |

OSHA Certification

Successful completion of stated criteria will result in students earning the 30-hour OSHA cards. Stated criteria includes not only target grades above for both quizzes/exams and the safety project, but also attendance record. Students who have more than three maximum allowed hours from class will **NOT** receive an OSHA card, in compliance with federal regulations. Please note OSHA counts hours not days so if you miss a double period, you have missed two class contact hours

Final Site Safety Project

This course requires each student to develop their own site specific safety plan covering hazards specific to a construction project. In developing the plan, the student must consider the hazards present and how you plan to mitigate these hazards. To develop a site specific safety plan, you first need to perform a job hazard analysis. For each identified hazard, consider the likelihood of the event occurring and the severity of the event. Then determine how you will mitigate that hazard through engineering controls, work practices, or PPE.

The deliverable must contain both drawings and text to adequately describe your safety plan. Use ASCE citation style for all references. All graphics/images used must be properly cited. One single Word document must be uploaded, NO PDF’s will be accepted.

**Site Plan Minimum Specifications:**

1. **12 page length minimum, single spaced not including the title or reference pages**
2. **Margins: Top/Bottom=1”, Left/Right =0.75”**
3. **All images used must be properly cited**
4. **All published text must be properly cited**
5. **The plan must be composed of original work.**
6. **OSHA regulations can be referenced but must not be the over 25 percent content of the site plan. Site plans cannot be a cut and paste of OSHA regulations**
7. **Reference page is required with a minimum use of three text references**

See page 2 for a points breakdown for your final project.

Please note that any feedback provided by the instructor prior to the final due date does not guarantee higher grades, nor does it guarantee that all possible problems/issues with the project have been addressed. It is ultimately your responsibility to ensure that you are meeting all the requirements for this assignment; preliminary feedback is provided only as a courtesy.

More details on this assignment will be provided during the course including the assignment of an individual safety topic.

Weekly Schedule\*

|  |  |
| --- | --- |
| **Topic** |  |
| Intro to OSHA | 1/8/2024 |
| Intro to OSHA | 1/10/2024 |
| Focus 4/Falls | 1/11/2024 |
| Focus 4/Falls | 1/17/2024 |
| Stair/Ladders | 1/18/2024 |
| Stair/Ladders | 1/22/2024 |
| Focus 4/Electrocution | 1/24/2024 |
| Focus 4/Electrocution | 1/25/2024 |
| Focus 4/Struck By | 1/29/2024 |
| Focus 4/Caught In Between | 1/31/2024 |
| Managing Safety/Health | 2/1/2024 |
| Managing Safety/Health | 2/5/2024 |
| Elective - Foundations of Safety Leadership | 2/7/2024 |
| Elective - Foundations of Safety Leadership | 2/8/2024 |
| PPE | 2/12/2024 |
| PPE | 2/14/2024 |
| PPE | 2/15/2024 |
| Elective - Foundations of Safety Leadership | 2/19/2024 |
| Elective - Fire Protection and Prevention | 2/21/2024 |
| Elective - Excavations | 2/22/2024 |
| Elective - Excavations | 2/26/2024 |
| Health Hazards in Construction- Hazard Communication | 2/28/2024 |
| Health Hazards in Construction- Hazard Communication | 2/29/2024 |
| Elective - Concrete/Masonry | 3/4/2024 |
| Elective - Concrete/Masonry | 3/6/2024 |
| Elective - Cranes | 3/8/2024 |
| Elective - Cranes | 3/18/2024 |
| Elective -Motor Vehicles | 3/20/2024 |
| Elective - Tools (Power & Hand) | 3/21/2024 |
| Elective - Welding/Cutting | 3/25/2024 |
| Elective - Scaffolding | 3/27/2024 |
| Elective - Scaffolding | 3/28/2024 |
| Elective - Steel Erection | 4/1/2024 |
| Elective - Steel Erection | 4/3/2024 |
| Elective - Confined Space | 4/4/2024 |
| Elective - Confined Space | 4/8/2024 |
| Elective - Safety and Health Program | 4/10/2024 |
| Health Hazards - Asbestos | 4/11/2024 |
| Health Hazards - Asbestos | 4/15/2024 |
| Health Hazards - Lead | 4/17/2024 |
| Health Hazards - Silica | 4/18/2024 |
| Health Hazards - Silica | 4/22/2024 |
| Environment/Water | 4/24/2024 |

\*Subject to changes

**COURSE POLICIES**

Attendance

Please see page 1 and Appendix A for information on how missing class affects your OSHA certification and ability to keep up with course material.

Make-up Work

If you need to miss class when a quiz or exam is being given, you will only be given a make-up quiz/exam if you:   
1) contact me ahead of time to let me know, and 2) provide appropriate documentation. Guidelines for acceptable and unacceptable documentation are:

|  |  |
| --- | --- |
| **Appropriate Documentation** | **Inappropriate Documentation** |
| * A letter from the UF Student Health Care Center or the UF Counseling Center supporting your request and stating why you were unable to take the quiz/test * A letter from non-UF physicians, counselors, therapists, etc. supporting your request with specific language that addresses why you were unable to take the quiz/test * A police report, jury duty notice, or other official legal document that supports your case * Plane/bus/train tickets, turnpike toll receipts, or other travel documents that show you were called away from campus for an emergency on the day of the quiz/test * Funeral announcements, obituaries, or death certificates of relatives that clearly show your inability to take the quiz/test on that specific day | * Letters from friends, parents, or other relatives supporting your request * Letters from employers stating you had to work on the day of the quiz/test * Letters from student clubs, fraternities/sororities, etc. stating that you were involved with an event or activity on the day of the quiz/test * Statements from anyone suggesting that you may not qualify for employment, financial aid, housing, graduate or professional school, or other activities/opportunities if you do poorly in this class due to missing a quiz/test * Funeral announcements, obituaries, or death certificates of people whose relationship to you cannot be verified |

Make-up quizzes/exams must be taken in the office during my office hours on a mutually agreeable date as soon reasonable after the original quiz/exam date. Content will be similar, but not the same as the original quiz/exam. A student who misses a quiz or exam with appropriate documentation also has the option of asking that their final grade be calculated based only on assessments completed, instead of taking a make-up; the final decision is up to the instructor.

Deadlines

All projects must be turned in on the due date specified in class. Late projects lose one full letter grade for each day beyond the original due date.

**STUDENT CONDUCT/INTEGRITY**

Class Demeanor

All students are expected to arrive to class on time and behave respectfully and professionally toward fellow students and the instructor. There is no set dress code for this class unless a presentation is required; if so, then business casual rules must be observed.

Cell Phones

You may not use cell phones in this class. If your cell phone rings in class more than twice over the course of the semester, you will receive one absence from the course.

Headphones/Ear Buds/Air Pods

Please do not use these items while in class.

Academic Honesty

Students must follow University of Florida’s policy regarding plagiarism, cheating, and the use of copyrighted materials. Students are responsible for reading and abiding by the University’s Student Code of Conduct (<https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>).

All students registered at the University of Florida have agreed to comply with the following statement: “I understand that the University of Florida expects its students to be honest in all their academic work. I agree to adhere to this commitment to academic honesty and understand that my failure to comply with this commitment may result in disciplinary action up to and including expulsion from the University.” In addition, on all work submitted for credit the following pledge is either required or implied: “On my honor I have neither given nor received unauthorized aid in doing this assignment.” If you witness any instances of academic dishonesty in this class, please notify the instructor or contact the Student Honor Court (392-1631) or Cheating Hotline (392-6999).

Students who are unclear about what constitutes academic dishonesty, academic misconduct, plagiarism, or other violations should consult UF resources such as the Academic Integrity Training Module (<https://sccr.dso.ufl.edu/quick-links/academic-integrity/>). You may also consult with your instructor or anyone in the Dean of Students Office (Peabody Hall).

Essentially, cheating, plagiarism, or lying in any form is unacceptable behavior, even if you are just helping someone cheat or plagiarize, directly or indirectly. Cheating will result in a failing grade for this entire course and a formal report to UF Honor Court – don’t do it! Plagiarism on a writing assignment occurs when you use other people’s words, ideas, or arguments and do not cite them properly. Be sure to cite every source you use, including anything you pull from the Internet, even if the source is not directly quoted. Here’s a good guideline: If you use more than four words in a row from someone else’s writing, they need to be in quotation marks with a clear citation. Plagiarism on written assignments will result in a large reduction of points and possibly a zero on that entire assignment or a grade of “E” in the course (based on the percentage of plagiarism found by Turnitin; see below), plus a formal report to UF Honor Court.

|  |  |
| --- | --- |
| **Turnitin Percentage Found** | **Consequences** |
| ≤ 15% | Generally acceptable after review by instructor and the nature of material used. If all 15% is from one block of text, the instructor considers that plagiarism. It is up to the discretion of instructor to determine if plagiarism has occurred and will refer to Honor Court. |
| 16-25% | Reduction of points, report to Honor Court |
| 26-50% | Zero on assignment, report to Honor Court |
| >50% | E in entire course, report to Honor Court |

**While Turnitin is a valuable instructor resource, violations of the Honor Code are not limited to cases indicated by this service. The instructor reserves the right to investigate and refer all cases of suspected Honor Court violations outside of the use of this service.**

***By remaining enrolled in this course, you consent to all of these policies.***

**OTHER UF POLICIES AND RESOURCES**

University Policy on Accommodating Students with Disabilities

Students requesting accommodation for disabilities must first register with the Dean of Students Office (<http://www.dso.ufl.edu/drc/>). The Dean of Students Office 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.

Course Evaluation

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via [https://ufl.bluera.com/ufl/](https://urldefense.proofpoint.com/v2/url?u=https-3A__ufl.bluera.com_ufl_&d=DwMFAg&c=sJ6xIWYx-zLMB3EPkvcnVg&r=y2HjEMjRMHJhfdvLrqJZlYczRsfp5e4TfQjHuc5rVHg&m=WXko6OK_Ha6T00ZVAsEaSh99qRXHOgMNFRywCoehRho&s=itVU46DDJjnIg4CW6efJOOLgPjdzsPvCghyfzJoFONs&e=). Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

Counseling/Health Services

Students may occasionally have personal issues that arise in the course of pursuing higher education or that may interfere with their academic performance. If you find yourself facing problems affecting your coursework, you are encouraged to talk with the instructor and to seek professional assistance. Resources are available on-campus and off-campus for students having personal, academic, or career problems. Resources include:

* Counseling & Wellness Center, 392-1575, personal and career counseling, <http://www.counsel.ufl.edu/>
* Student Mental Health Services, 392-1171, <http://www.health.ufl.edu/shcc/smhs/index.htm#urgent>
* Student Health Care Center, 392-1161, personal and counseling
* Center for Sexual Assault/Abuse Recovery and Education (CARE), Student Health Care Center, 392-1161 x4321
* Career Resource Center, Reitz Union, 392-1601, career development assistance and counseling
* Alachua County Crisis Center, 352-264-6789 (available 24/7)

Computer Policy

In keeping with the University of Florida’s student computer policy all assignments completed for this class must be typed using a word processing program. Use of spell-checking and grammar-checking programs is strongly encouraged. Points will be deducted from assignment with excessive spelling/grammar errors. Use of desktop publishing software and computer generated graphics for course product that may eventually be included in student’s portfolios is also strongly encouraged.

Software Use

All faculty, staff, and students of the University of Florida are required and expected to obey laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate.

Acceptable Use Policy

Please read the University of Florida Acceptable Use Policy: <https://it.ufl.edu/policies/acceptable-use/acceptable-use-policy/>. You are expected to abide by this policy.