

OSHA-30 Interactive Laboratory Course

Matthew Bramlett

Construction Management B.S.

California Polytechnic State University

San Luis Obispo, CA

This course is aimed to give the students of the Construction Management (CM) department a more in depth knowledge on topics covered in the online OSHA-30 hour safety course. The online focuses on a wider range of topics that are covered in the OSHA-10 hour course that students are required to complete in CM 413: Jobsite Management, such as hazard communication, OSHA inspection procedures, industrial hygiene & bloodborne pathogens, and much more. The course will also include topics outside the scope of the 30-hour class such as: heavy equipment inspections, rigging safety and techniques, challenges of working in the marine environment, and spill kits/ hazardous materials cleanup. Laboratory activities will be implemented into the course for student to get a hands on learning experience, and be exposed to some of the situations they will see in their careers. This course will give Cal Poly CM students an advantage over other universities students because they will head into the workforce with higher certifications and a wider knowledge of personal and worker safety.

Introduction:

Construction workers learn from day one that safety is of the utmost importance. Cal Poly's Construction Management program teaches safety as a priority, but lacks in teaching mitigation strategies. As a student of the Construction Management Department, I thought that there needed to be a heavier emphasis on jobsite safety while applying Cal Poly's "Learn by Doing" motto. Cal Poly prides itself on giving students hands on experience, however, during my summer internships working in demolition, I noticed that my education has taught me a lot about the office operations but was lacking education about onsite safety and the related hands on experience. Some of the biggest challenges I faced during my work experience was understanding different rigging techniques and how they can be applied, the proper use of life saving equipment, and operation and daily safety inspections of heavy equipment. For these reasons, I thought an interactive OSHA-30 laboratory course would be of great benefit to the students of the CM program. This course will prepare students for real world situations that they otherwise wouldn't otherwise be exposed to in the classroom.

Steps:

An important part of developing a curriculum for this class was understanding what topics were covered in the OSHA-30 hour online course. So after I found what was going to be covered in the course, the next step was to narrow down what I thought to be 7-10 of the more significant topics and develop an in class laboratory demonstration that related to those topics. One thing I really wanted to avoid was just reiterating what was being taught in the online class through a powerpoint lecture and focus on actually getting students out of the classroom to physically see and do the activities that they are learning about. However, I think that some of the activities covered in the online course will need some further explanations so I decided to add in some lectures that would complement the online modules and help lead the class into the labs.

After the course curriculum was created and I thought it was thorough, I moved onto creating the syllabus. Creating the curriculum first really helped me when developing the syllabus because it made choosing Program Learning Outcomes (PLO) and Student Learning Outcomes (SLO). I decided to really structure the course around the OSHA 30 online modules so as far as grading, students submitting their OSHA 30 certificate at the end of the quarter will make up a significant portion of their final grade. I found the challenge structuring the grading like this was that students may not stay up to date with their online work, which could be problematic because the in class activities work in unison with the online course. To counteract this, I decided to have checkpoint days where students will need to bring in a passing online score for certain topics to make sure that they are staying on top of the online course work that is essential for an efficient use of class time.

Deliverables:

When my project is completely complete, I will have produced an interactive course that is ready to implement into the Cal Poly Construction Management curriculum.

I will have completed:

- A syllabus breaking down the course objectives
- A schedule that works alongside the OSHA-30 online course
- Developed laboratory activities and in class activities
- Weekly homework assignments that will apply the information students are learning in class and online to a real world situation.

Lessons Learned:

This project had a lot of unanticipated challenges along the road. After researching topics that were covered in the OSHA online course, I wanted to make sure that the laboratory exercises were comprehensive to where students considering different areas of construction would still benefit. While developing the activities in the labs and in class exercises I had to think about what was actually feasible financially and practically. For example, I knew that a rigging lab

would benefit students taking the course, but it isn't realistic to develop a lab around an actual crane because that is too hard and expensive to get to campus for students to have access to it. Because of some of these feasibility issues, it forced me to scale down and simplify some of the labs, but I think that the alternatives I came up with will still be an effective learning experience.