

Student Learning Outcomes Assessment Summary

Certificate, Safety, Health and Environmental Awareness

Community and Technical College

AY 2012/13 and AY 2013/14

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Focus of 2014 assessment are courses OSH 108, Injury Prevention & Risk Management, and OSH 250, Hazardous Material Operation

1. Assessment information collected

a. SLOA #1 Safety Standards/Regulations : ASSESSMENT CRITERIA:

Specific test results from PRT 110, OSH 108, and OSH 250 compiled and evaluated by subject area. In addition to these scores, key skill evaluations will be compiled from each of these courses to determine an overall rating for student demonstrated performance on the job safety analysis.

b. RESULTS

OSH 108: Test results indicated 100% of students passing the tests (associated with Outcome #1) with a 75% or higher score.

OSH 108: Skill evaluations performed for the JSA exercise and proper equipment use exercise indicated 100% of students received a passing score.

c. RECOMMENDATIONS / IMPROVEMENTS

OSH 108 test results indicate that the students would benefit from additional exercises in regulatory research to determine OSHA standards that apply to each workplace safety analysis. The OSH department feels that students are demonstrating a good overall understanding of workplace safety standards, and providing more exercises that require students to research the regulations would improve their knowledge of applying them to safety planning.

OSH 108 skill evaluations indicate that the students are

demonstrating acceptable skills during the exercises. The faculty recommend adding more detailed safety analysis projects that will require the students to identify potential hazards as well as provide the regulatory references and management protocols.

Additional recommendations for improvement is to provide students with a more extensive set of PPE examples, and to provide students with more examples of monitoring equipment to use in hands-on exercises.

Evaluation reveals that materials covered in the OSH program are similar to the OSHA 30 hour certification training. If instructor was a certified OSHA 30 hour instructor, the students could qualify to receive their OSHA 30 hour certification.

d. SLOA #2 Injury Prevention/Risk : ASSESSMENT CRITERIA:

Specific test results from OSH 108 and OSH 201 compiled and evaluated by subject area.

In addition to these scores, key skill evaluations will be compiled from each of these courses to determine an overall rating for student demonstrated performance.

e. RESULTS

OSH 108: Test results indicated 94% of students passing the tests (associated with Outcome #2) with a 75% or higher score.

OSH 108: Skill evaluations performed for the risk management exercise and incident investigation exercise indicated 100% of students received a passing score.

f. RECOMMENDATIONS / IMPROVEMENTS

The OSH faculty review recommends students get a wider variety of practical safety inspections. Students currently visit at least 2 facilities to perform safety inspections/risk assessments. The faculty recommend visits to 3 different types of facilities to give the students greater exposure to different areas of the regulations. Recommend students perform more detailed identification of hazards, and more

detail of how these are addressed in the safety management program. These improvements will increase the students' knowledge and experience with risk assessment.

g. SLOA #3 Safety Management: ASSESSMENT CRITERIA:

Specific test results from OSH 108 and OSH 120 compiled and evaluated by subject area.

In addition to these scores, key skill evaluations will be compiled from each of these courses to determine an overall rating for student demonstrated performance.

h. RESULTS

OSH 108: Test results indicated 98% of students passing the tests (associated with Outcome #3) with a 75% or higher score.

OSH 108: Skill evaluations performed for the recordkeeping management exercise and OSHA letters of intent exercise indicated 100% of students received a passing score.

i. RECOMMENDATIONS / IMPROVEMENTS

Tests and exercises indicate improvements needed in the student understanding of letters of interpretation from OSHA. The faculty review determined that additional exercises are needed to improve the students' knowledge of interpreting the recommendations and enforcement actions from OSHA. This would also provide them a greater understanding of the safety manager duties and responsibilities.

j. SLOA #4 Workplace monitoring/exposures: ASSESSMENT CRITERIA:

Specific test results from OSH 108 compiled and evaluated by subject area.

In addition to these scores, key skill evaluations will be compiled from each of these courses to determine an overall rating for student demonstrated performance.

k. RESULTS

OSH 108: Test results indicated 100% of students passing the tests (associated with Outcome #4) with a 75% or higher score.

OSH 108: Skill evaluations performed for the exposure exercises and proper monitoring equipment use exercises indicated 100% of students received a passing score.

l. RECOMMENDATIONS / IMPROVEMENTS

Tests and exercises indicate the students do not have a consistent problem area. The faculty review recommends additional practical exercises to help the students apply the knowledge.

Recommendations include repeating exposure exercises in both the OSH 180 class and the OSH 250 class, and improving monitoring and test equipment used by the students. Faculty recommends obtaining more current industry standard monitoring equipment, and using this equipment in more student exercise scenarios.

Advising students to the proper math level before the OSH 180 course has improved students success with formulas to determine exposure levels.

Faculty recommend assessing OSH 250 course along with OSH 180 to measure SLOA #4. Update SLOA plan.

m. **SLOA #5 Hazardous materials : ASSESSMENT CRITERIA:**

Specific test results from OSH 250 compiled and evaluated by subject area.

In addition to these scores, key skill evaluations will be compiled from each of these courses to determine an overall rating for student demonstrated performance.

n. RESULTS

OSH 250: Test results indicated 100% of students passing the tests (associated with Outcome #5) with a 75% or higher score.

OSH 250: Skill evaluations performed for the hazardous materials response exercise, proper DOT regulations exercise, and proper equipment use exercise indicated 100% of students received a

passing score.

o. RECOMMENDATIONS / IMPROVEMENTS

The faculty recommends purchasing HAZMAT response DVD's that illustrate techniques and responses to different situations.

The faculty recommends additional HAZMAT response and decontamination equipment to better simulate HAZMAT activities, to improve students application of knowledge.

The faculty recommends continuing the practice of meeting with the local HAZMAT Response Team to learn about recent issues and improvements to emergency response.

Evaluation reveals that the OSH 250 course materials are similar to the 40 hour HAZWOPER certification training. If the instructor was an OSHA certified HAZWOPER trainer, the students may qualify to receive their HAZWOPER certification at the successful completion of the class.

2. Conclusions drawn from the information summarized above

- a. Overall student performance is very good. Students would benefit from more hands-on activities with industry standard equipment to increase their experience levels and application of knowledge. The faculty recommends repeating workplace safety analysis exercises in each OSH course to improve student's demonstrated knowledge.

3. Curricular changes resulting from conclusions drawn above

- a. The 'skill evaluation' portion of the final exam is new in 2014. This is a valuable check of the students' practical skills, and will be continued.
- b. Instructors will continue to develop additional class activities requiring more OSHA regulations research, to strengthen the students' knowledge and practical skills.

- c. Instructors will provide more exercises of OSHA compliance interpretations and enforcement.
 - d. Adding additional safety equipment and monitoring equipment will give the students more practical experience, and instructional videos will help to demonstrate scenarios and methods that may not be practical to physically set up.
 - e. The department plans to institute the Occupational Health and Safety Technologist (OHST) practice exam during AY14-15 to determine students' knowledge at the end of the program, as compared to the OHST national standard exam.
- 4. Identify the faculty members involved in reaching the conclusions drawn above and agreeing upon the curricular changes resulting**
- a. Brian Ellingson, Program Coordinator, Associate Professor
 - b. Jim Mongold, Adjunct Professor