



## Subject Matter Experts (SME) Review New Safety Curriculum

**Program/Course Reviewed:** SAFE 210 – OSHA Accident Investigation

**College:** Lorain County Community College (LCCC) , 1005 N. Abbe Rd., Elyria, Ohio 44035

**Reviewed By:** ELSMART Associates, LLC (credentials of reviewers include Certified Safety Professional (CSP), Certified Industrial Hygienist (CIH), Certified Hazardous Material Manager (CHMM), Certified Environmental Trainer (CET), Registered Nurse (RN), Society Human Resources Manager – Certified Professional (SHRM-CP), Professional in Human Resources (PHR)) – Total years of experience for reviewers in Environmental, Safety, and Health over 100 years.

**Date:** 6-29-2018

### Review scale definitions:

**Exceptional:** Review component is a “best practice” and represents a model for replication.

**Very good:** Review component is complete and effective.

**Good:** Review component is adequate but presents opportunities for improvement.

**Ineffective:** Review component is weak and in need of significant improvement.

**No or Insufficient Evidence:** Review component was not covered or information provided in the documents was insufficient for assessment.





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Curriculum Map, Career Ladder/Stackable Credential Documentation, Syllabi	Excellent	Very Good	Good	Ineffective	No/Insufficient Evidence
1. Program CIP code/s appropriate to program title and outcomes.			X		
2. Effective program structure (prerequisites, course sequence, stackable credential-structure provide a clear, logical path to completion).					X
3. Outcomes aligned to occupational focus (industry skills and standards) and prepare students for appropriate industry certification/s.			X		
4. Outcomes are clearly stated.		X			
5. Outcomes are introduced and reinforced effectively.			X		
6. Course objectives are clearly stated and measurable.			X		
7. In multi-course programs, course objectives support one or more program or student learning outcome. In single-course programs, modules support one or more course objective.		X			

**Comments or recommendations specific to each section rated:**

1. Meets CIP guidance and recommendations
2. No prerequisites listed
3. Not aligned with behavioral, environmental, and physical hazards (human, organizational, equipment)
4. Stated clearly need to be updated.
5. Introduced not reinforced and not reviewed at conclusion.
6. Objectives clear but do not reflect skills needed by EHS personnel. ie. What are the three basic steps in a systematic approach to selecting corrective actions.
7. The course should require a completed investigation

**General comments or recommendations:**

Recommend How to conduct an Accident Investigation handbook by Handbook of Occupational Safety and Health. Discussion of methods would be valuable.





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Instructional Materials and Lab Resources	Excellent	Very Good	Good	Ineffective	No/Insufficient Evidence
1. Support stated course or unit learning objectives.			X		
2. Meet/reflect current industry practices and standards.				X	
3. Provide options for multiple learning styles.			X		
4. Instructional materials are cited properly.				X	
5. There is evidence of materials and resources that support on-line or technology-enabled learning.					X

**Comments or recommendations specific to each section rated:**

1. Supported current learning objectives but learning objectives need improved.
2. Needs updated to current references.
3. Some case studies presented but no use of video or software for demonstration. No visual description.
4. Did not use CPI-U as reported by the Bureau of Labor Statistics (bls.gov)
5. One online video. No other technology.

General comments or recommendations:

Current instructional lab materials do not support primary purpose of incident investigations and analysis is to prevent incidents by uncovering facts about each incident and try to prevent reoccurrences

Overview Table: Objectives, Modules/Units, Learning Activities and Assessments	Excellent	Very Good	Good	Ineffective	No/Insufficient Evidence
1. Modules/units are linked to course objectives.			X		
2. Learning activities promote achievement of stated module/unit objectives.			X		
3. Learning activities provide opportunities for interaction and active learning.			X		
4. Learning activities provide options for multiple learning styles.			X		
5. Learning activities are linked to current industry practices, standards and certifications.				X	

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6. Learning activities demonstrate evidence of innovation or enhancements to support adult learner success.			X		
7. Materials/resources (to include equipment, tools and software) are used in a way that students understand their purpose and use in industry settings.					X
8. Assessments measure stated learning objectives and link to industry standards.				X	
9. Assessments align with course activities and instructional materials and resources.				X	
10. Assessments are sequenced throughout the instructional period to enable students to build on feedback.				X	
11. Assessments are varied and appropriate to content.				X	
12. Assessments provide opportunities for students to measure their own learning progress.				X	

**Comments or recommendations specific to each section rated:**

1. Course objectives need to be updated.
2. Need to vary learning activities.
3. Good discussion exercises but no description of guided discussion or group assignment.
4. Limited variation for learning styles.
5. Need updated to current research in incident investigation to include varied methods.
6. Objectives do not support adult learning
7. No tools or software introduced
8. No assessments provided in modules
9. No assessments provided in modules
10. No assessments provided in modules
11. No assessments provided in modules
12. No assessments provided in modules

**General comments or recommendations:**

Objectives should include fundamental activities for successful incident investigation and prevention, primary purpose of investigation, responsibilities, timing of investigation, and communications of corrective actions,





minimum data collected and systematic method for investigation. Questioning techniques should include reference from Accident Investigation: How to ask Why” in Safety and Health 146, no 6.

1. Analysis of worksite
  - a. Define hazards and categories of hazards
  - b. Use of comprehensive surveys
  - c. Change analysis
  - d. Hazard analysis
  - e. Overview of inspections
  - f. Implementing employee reports of hazards
  - g. Accident/Incident investigations
    - i. Causes of injuries, illnesses and accidents
2. Introduction to Incident (Accident) Investigation
  - a. Definitions and characteristics of an effective accident investigation program.
  - b. Organized approach to accident investigation/analysis
    - i. The Six-Step Process

<b>Innovative or Enhanced Strategies</b>	<b>Excellent</b>	<b>Very Good</b>	<b>Good</b>	<b>Ineffective</b>	<b>No/Insufficient Evidence</b>
1. Accelerate Entry into Career Programs Refine assessment, transform developmental education and add support services to meet the needs of participants				<b>X</b>	
2. Create Clear Pathways to STEM Careers Expand access to and/or develop new stacked and latticed credentials in programs that meet employer needs			<b>X</b>		
3. Improve Employment Attainment Collaborate with industry, WIBs, state, and community-based organizations to engage, guide and employ participants			<b>X</b>		

**Comments or recommendations specific to each section rated:**

1. Need to support skill attainment. No exercise to apply skill attained.
2. Course should discuss how scientific method produces better investigation.
3. Course needs to discuss lost control and cost avoidance from investigation.

General comments or recommendations: Include workers compensation cost avoidance, direct costs, and indirect costs of injuries. Recommend OSHA safety pays.

