Safe Schools, Safe Students:

Using your School's IIPP to Engage CTE students in Learning Safe Work Practices

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What will I get out of this presentation?

- ❑ What are program elements **that support safety and health education** in Career Technical Education (CTE) programs
  - ✓ **Focus on systems: Injury and Illness Prevention Program (IIPP)**
- ❑ Research results: strengths and gaps in 2-year college programs
- ❑ Tools to assess your own programs
- ❑ Action Steps
- ❑ Resources

Who is in the room?

What is your role?

- ❑ CTE Administrator
- ❑ CTE Instructor
- ❑ Other School Work-Based Learning Staff
- ❑ SASH Training Participant
- ❑ Researcher
- ❑ Health and Safety Professional
- ❑ Other

Acknowledgements

- Funding
    - National Institute for Occupational Safety and Health
    - Center for Construction Research and Training

- Partners
    - Association for Career Technical Educators (ACTE)
    - National Council for Workforce Education (NCWE)

- Advisory Group

Why is this important?

- 78,000 Post-secondary CTE construction grads
- New and young workers
- Most not affiliated with formal apprenticeship programs
- Most going into residential construction

About our construction CTE study

RESEARCH QUESTIONS
- What program elements are needed to prepare students with strong safety and health skills in CTE construction programs?
- What's happening in these programs?

METHODS
- Focus groups with subject matter experts
- Online survey of 270 administrators and instructors
- 3 site visits
- Advisory Group
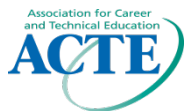
Core OSH Competencies

STUDENTS WILL HAVE SKILLS & KNOWLEDGE TO:

- ID, describe safety AND health hazards in construction
- Demonstrate understanding of hierarchy of controls
- Demonstrate ability to protect self and others from key hazards
- Conduct a job hazard analysis
- Explain worker rights/employer responsibilities under OSHA
- Demonstrate effective communication and self-advocacy skills
- Describe potential emergencies and emergency response procedures

What's needed?

- **Administrative Support:** Safety and Health Management System (SHMS)

- **Instructor Qualifications and Support**

- **In the Classroom:** Teaching and Learning

- **Offsite Learning:** SHMS practices

Guidance Document

YOUR CONSTRUCTION SAFETY PROGRAM: SAFE STUDENTS, SAFE WORKERS

A Guide for Administrators & Instructors in Post-Secondary Career Technical Education (CTE) Construction Programs

D Support for Engaging Industry Advisory Committees (IACs)

INDUSTRY ADVISORY COMMITTEES (IACS) are critical partners in CTE, bringing invaluable community and industry expertise, experience, and resources. All CTE programs receiving Perkins funding are required to have a technical education advisory committee that involves business, labor and industry. The role of this committee is to advise educators on the design, development, implementation, evaluation, maintenance and revision of technical/occupational programs within a career pathway.

CTE administrators and instructors who effectively engage their IACs in developing their safety and health systems and education are best positioned to prepare students for the safety systems and practices they will encounter in the construction industry.

"Our programs put safety first, and everything else second. It's driven by the IAC; they don't want new hires that get hurt. As an academic institution, we hold Industry Advisory meetings for every program we offer. We use that opportunity to speak directly with industry professionals in those fields."

—CTE Administrator

2. Instructor Qualifications & Support | Section D   53

http://bit.ly/cte-guide

Instructors Get Support to develop IAC

"When I first got here, I recognized that we needed a strong advisory council. So I charged all my instructors to build their IAC to approximately 12-15 members. We allow instructors Industry Visit Days. They go out and they specifically find new folks to add to the mix. They obviously work with their existing relationships, too. We are really fortunate in the programs we offer, we have a really strong job demand. We are constantly in contact with employers, because they are begging for our graduates."

– CTE Administrator

What This Looks Like

- ❯ IACs have clear expectations for engagement, how often they will meet, what their roles will be. Members should include participants who are actively engaged in training in their own organizations, from both labor and industry.

- ❯ Instructors receive paid time to recruit, and engage regularly with IAC members, including visiting their worksites.

- ❯ IACs are involved in a range of program safety and health activities, including:

  - Guiding curriculum content and development, providing real-life OSH case examples, and serving as guest speakers

  - Helping to set high goals and standards for instructor safety and health training, professional development, and evaluation

  - Participating in program and school health and safety committees and program safety audits and investigations

  - Providing safe, quality job or internship opportunities for students

  - Providing externship opportunities to instructors that allow them to deepen their understanding and keep current in the field

- ❯ Members of IACs have adopted high OSH standards in their own workplaces to protect workers, and serve on the IAC to provide support for quality education and training that leads to the development of safety and health employability skills.

FROM OUR RESEARCH

How CTE Construction Programs are doing

Industry Advisory Committees are being leveraged well in about half of programs.

Fewer than half of instructor respondents felt that their Industry Advisory Committee (IAC) had strong, regular, and effective industry engagement, and just over half said they were "very likely" to consult with their IAC to stay up-to-date on best OSH practices. On the positive side, most administrators reported that their instructors do receive paid time to work with their IACs, so there are resources available for improvement in this area. Instructors rated their IAC's support for safety and health issues highly.

How instructors rate their IAC's support for OSH resources

Helps instructors stay up to date on safety and health

★★★★☆
3.8 average

Advocates for safety and health resources at the school

★★★★☆
3.8 average

Gives input on safety and health skill assessment

★★★★☆
3.7 average

53% of instructors say they are very likely to consult with their Industry Advisory Council to stay up to date on best safety and health practices.

87% of administrators reported that instructors receive paid time to work with their Industry Advisory Committee.

ACTION STEPS

Administrators

- Establish concrete expectations for instructors regarding IAC recruitment and engagement for all programs.

  - IACs meet 2-4 times per year.

  - Instructors engage on the jobsite with IAC members at least twice year.

  - Members reflect current industry needs in your community, and include both labor and industry representation.

- Provide paid time to instructors to recruit and engage with IAC members.

Instructors

- Clarify expectations for IAC members, invite them to participate in specific tasks and roles related to safety and health (see ideas above in "What this looks like"), and hold them accountable.

  - The Minnesota State Colleges & Universities' Program Advisory Committee Handbook provides useful guidance for setting up effective IACs.

- Engage IACs in providing instructor externship opportunities to experience on-the-job OSHA consultation or inspections.

Resources

Resources from the Guidance Document

1. School & Program – Safety and Health Management System (SHMS)

   A. Management Leadership

   - Recommended Practices for Safety & Health Programs in Construction (OSHA)
     https://www.osha.gov/shpguidelines/docs/8524_OSHA_Construction_Guidelines_R4.pdf
     The OSHA guide comprehensively describes core elements essential to an effective Safety & Health Program, and provides the framework for the recommendations in this guidance document. CTE construction programs that reflect these core program elements will keep their students safe at school and expose them to the highest industry standard in safety and health protections.

   - Injury and Illness Prevention Program eTool for Construction Work (Cal/OSHA Consultation)
     https://www.dir.ca.gov/dosh/etools/09-031/construction.htm
     This etool will help programs to get started on their Injury and Illness Prevention Program (referred to in this guidance document as the Safety and Health Management System), or to review the plan they have in place.

   - Injury and Illness Prevention Programs White Paper (OSHA)
     https://www.osha.gov/dsg/InjuryIllnessPreventionProgramsWhitePaper.html
     This website lists states that require a written safety and health program.

   - State Plans Frequently Asked Questions (OSHA)
     https://www.osha.gov/dcsp/osp/index.html
     This FAQ reviews OSHA-approved State Plans. After reviewing this site check with your state OSHA program for specific requirements related to your state.

   B. Regular Inspections to Identify Hazards

   - Noise Exposure Resources

     - Hazard Alert: Noise (CPWR)
       http://www.cpwr.com/sites/default/files/publications/Noise 2013_1.pdf
     - Noise, Radiation, and Other Exposures for Construction Self-Inspection Checklist (NIOSH)
       https://www.cdc.gov/niosh/docs/2004-101/chklists/r1n69c–1.htm
     - Buy Quiet Program (NIOSH)
       https://www.cdc.gov/niosh/topics/buyquiet/posters.html
     - Sound Level Meter App (NIOSH)
       https://www.cdc.gov/niosh/topics/noise/app.html

How is my program doing?
Online Assessment Tools

- For CTE Administrators
- For Instructors

INSTRUCTOR ASSESSMENT

YOUR CONSTRUCTION SAFETY PROGRAM:

SAFE STUDENTS, SAFE WORKERS

A Guide for Administrators & Instructors in Post-Secondary Career Technical Education (CTE) Construction Programs

Assess your program in less than 30 questions!

At the end of the assessment, you'll get feedback on which areas your program is doing well in or which areas need improvement, with links to relevant sections of the Guide. Your answers are anonymous--no email address or identifiable information is collected.

Within your school, is there a written safety and health plan that covers all employees?

- ○ Yes
- ○ No
- ● I don't know

Do you know who is designated to oversee employee safety and health in your school?

- ○ Yes
- ○ No
- ○ I don't know

How is my program doing?
Online Assessment Tools

Your Results

PRINT for your records.

1A: Management Leadership
Your responses indicate your program is `DOING WELL`.
To learn more about this area please refer to Section 1A: Management Leadership

(Click **here** to get the entire Guide: Your Construction Safety Program: Safe Students, Safe Workers)

1B: Regular Inspections to Identify Hazards
Your responses indicate your program `NEEDS IMPROVEMENT`.
To review potential action steps you and your program could take please refer to
Section 1B: Regular Inspections to Identify Hazards

(Click **here** to get the entire Guide: Your Construction Safety Program: Safe Students, Safe Workers)

1C: An Active Reporting System to Identify Hazards
Your responses indicate your program is `DOING WELL`.
To learn more about this area please refer to Section 1C: An Active Reporting System to Identify Hazards

(Click **here** to get the entire Guide: Your Construction Safety Program: Safe Students, Safe Workers)

1D: Investigating All Injuries, Incidents, and Near Misses to Identify Underlying Hazards
Your responses indicate your program is `DOING WELL`.
To learn more about this area please refer to Section 1D: Investigating All Injuries, Incidents, and Near Misses to Identify Underlying Hazards

(Click **here** to get the entire Guide: Your Construction Safety Program: Safe Students, Safe Workers)

1E: Controlling Hazards to Prevent Injuries
**Your responses indicate your program is** `DOING WELL`.
To learn more about this area please refer to Section 1E: Controlling Hazards to Prevent Injuries

(Click **here** to get the entire Guide: Your Construction Safety Program: Safe Students, Safe Workers)
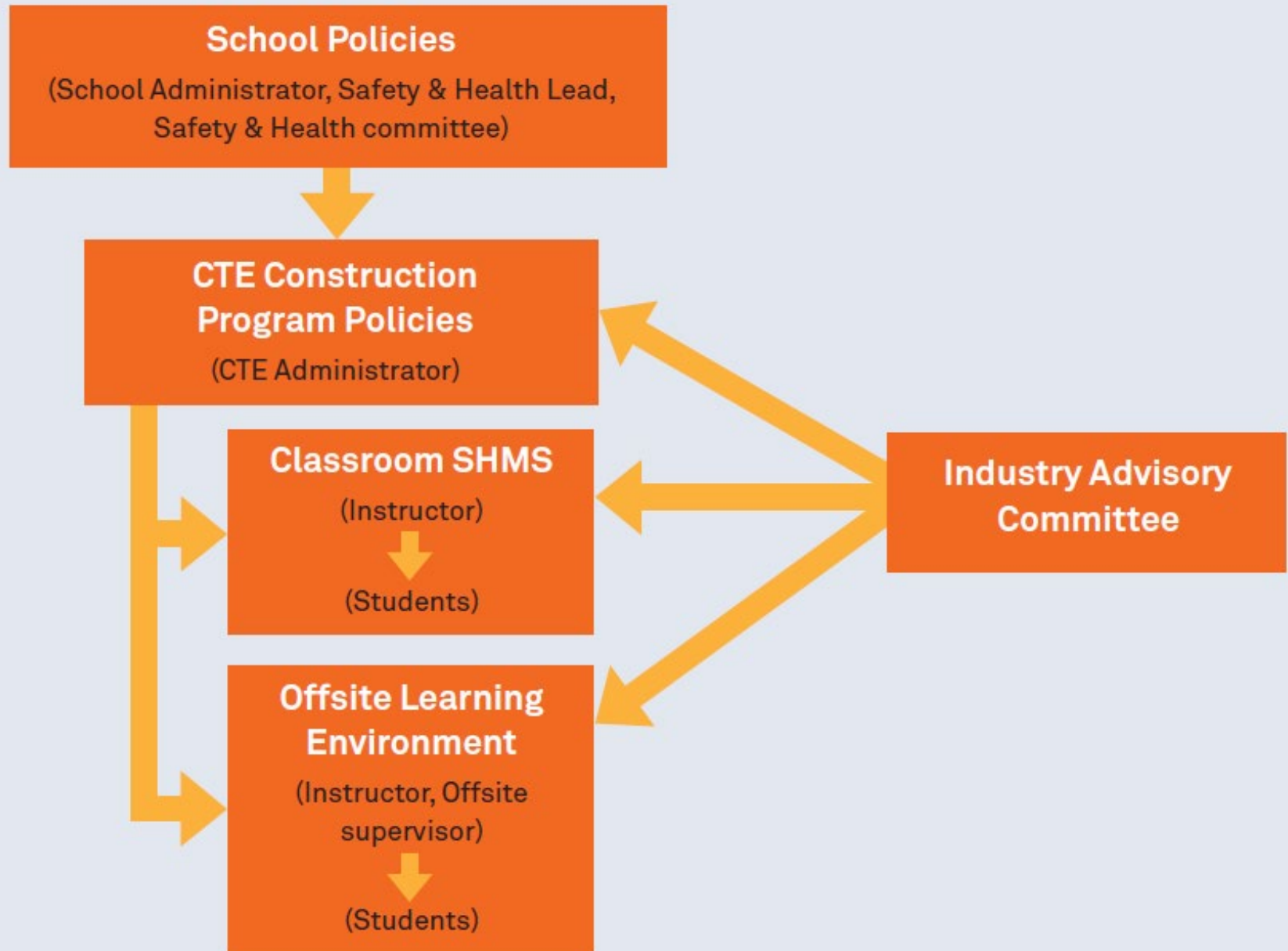
OSHA Recommended Practices for Safety & Health Programs

CORE ELEMENTS OF A SAFETY & HEALTH MANAGEMENT SYSTEM (SHMS)

- Management leadership
- Worker participation
- Hazard identification and assessment
- Hazard prevention and control
- Education and training
- Program evaluation and improvement
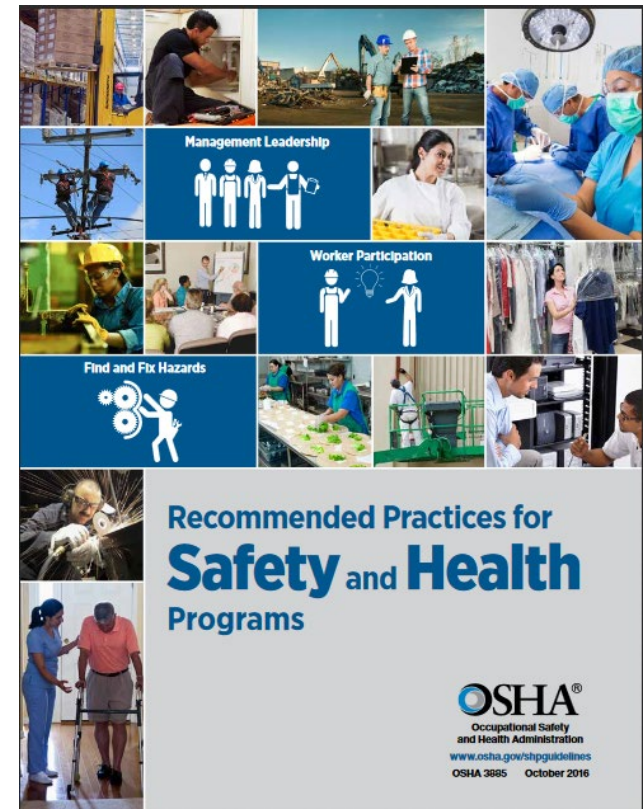
https://www.osha.gov/shpguidelines/docs/OSHA_SHP_Recommended_Practices.pdf

Who Plays What Role in the Safety System

School Policies

(School Administrator, Safety & Health Lead, Safety & Health committee)

CTE Construction Program Policies

(CTE Administrator)

Classroom SHMS

(Instructor)

(Students)

Offsite Learning Environment

(Instructor, Offsite supervisor)

(Students)

Industry Advisory Committee

School & Program IIPP Practices
Essential Elements

A. Management leadership
B. Regular inspections to identify hazards
C. An active reporting system to identify hazards
D. Investigating all injuries, incidents and near misses to identify underlying hazards
E. Controlling hazards effectively to prevent injuries

A. Management Leadership

Does your school have a health and safety plan?

- 9% of administrators don't know

- 22% of instructors don't know

- 66% of instructors knew who oversees employee safety

Action steps: p.18-19

B. Regular Inspections

Does your program have regular internal inspections to identify hazards?

- 50% of instructors report regular internal safety and health inspections
- 35% of instructors report that an outside entity conducts inspections—46% did not know

> *"It helps to have a periodic walkthrough by upper management to show students that the instructors are not the only members of the organization concerned with safety."*
> —Instructor

Action steps: p. 23

Action Steps:
Safety & Health Management System

■ **Establish a workable internal inspection process and schedule.**

- ▪ *Include students on your inspection teams.*

- ▪ *Follow-up on any classroom hazards that are identified.*

Promoting productive workplaces through safety and health research **NIOSH**

Use of Electrical Equipment

Language: English

DHHS (NIOSH) Publication Number 2004-101   October 2003

Self-Inspection Checklist

Optional Information

Name of school:	
Date of inspection:	
Career-Technical program/course/room:	
Signature of inspector:	

Guidelines

This checklist covers regulations issued by the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) under 29 CFR 1910.334. It applies to all electrical use systems. This checklist does not apply to qualified persons working on installations in vehicles and generation, transmission, distribution, communications, and railway installations. The regulations cited apply only to private employers and their employees, unless adopted by a State agency and applied to other groups such as public employees. A yes answer to a question indicates that this portion of the inspection complies with the OSHA or EPA standard, or with a nonregulatory recommendation. Definitions of terms in bold type are provided at the end of the checklist.

Portable Electric Equipment

https://www.cdc.gov/niosh/docs/2004-101/default.html

C. Active reporting systems

Does your school and/or program have a system for employees to report hazards?

- 9% of administrators did not know
- 12% of instructors did not know

Do students know how to report hazards?
Action steps: (p. 27)

D. Investigate all hazards and incidents

How are hazards and injuries investigated?

- 25% of administrators did not know how employee injuries were investigated

- 50% of programs reported ALWAYS investigating student injuries

- 67% of schools ALWAYS investigate employee-reported hazards

Action steps: p. 30

E. Controlling hazards effectively

- 86% of administrators and 91% of instructors agree classrooms have safe, up-to-date equipment.

- Only about 30% of both report that engineering controls/hazard elimination is prioritized.
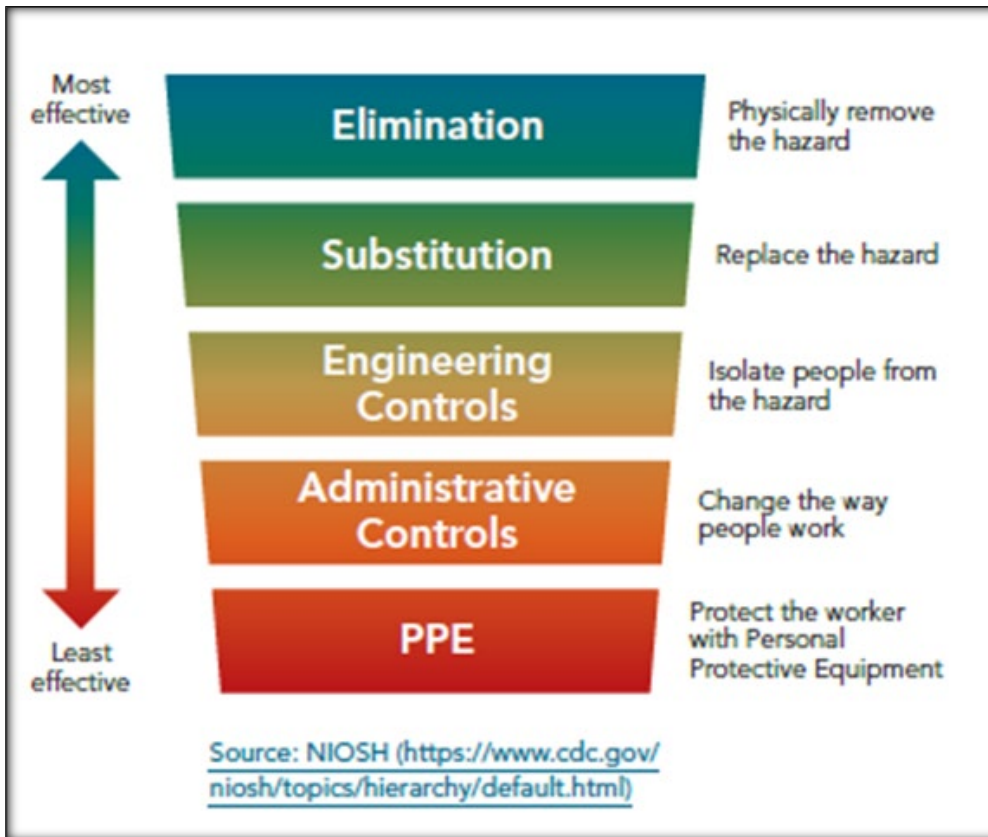
Action steps: p. 35

Quick Poll

Do you know what the "hierarchy of controls" is?

- ❑ Yes
- ❑ No
- ❑ Not sure

Understanding the "hierarchy of controls"

Most effective

Elimination — Physically remove the hazard

Substitution — Replace the hazard

Engineering Controls — Isolate people from the hazard

Administrative Controls — Change the way people work

PPE — Protect the worker with Personal Protective Equipment

Least effective

Source: NIOSH (https://www.cdc.gov/niosh/topics/hierarchy/default.html)

Action Steps:
Safety & Health Management System

- **Support prioritizing engineering or upstream controls when possible.**
  - Talk to your Industry Advisory Committee, other schools, and other resources.
  - Make a plan for long term fixes.
  - *Point out to students any engineering controls you have in place.*
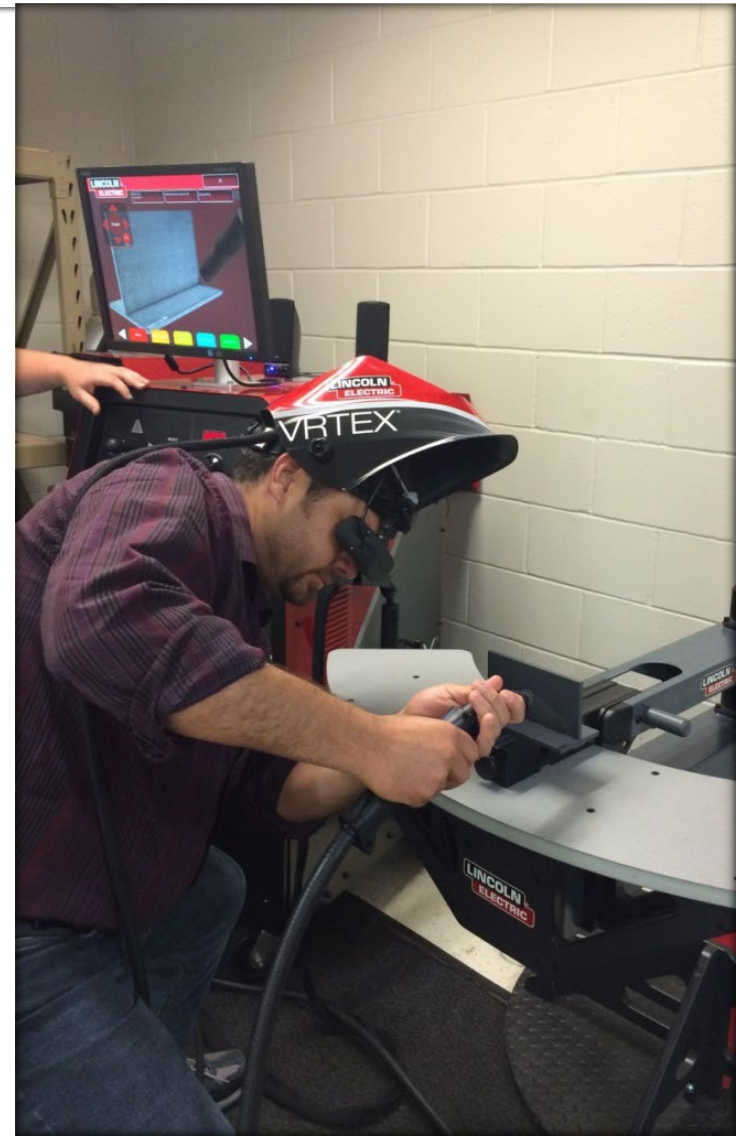
Instructor Qualifications & Support
Essential Elements

A. Instructor field experience
B. Training and support to be effective instructors
C. Training and staying up-to-date in safety and health
D. Support for engaging Industry Advisory Committees (IACs)

Assess your program…

- **Instructor Qualifications and Support:**
  - Have instructors taken the OSHA 30 or the 500/510 to be an authorized OSHA trainer?
  - Do instructors receive training in how to be effective teachers?
  - Do instructors have paid time to recruit and work with their Industry Advisory Committee (IAC) members?

Instructor Qualifications:
How Programs are doing

- All programs required 2-8 years industry experience
- 25% of programs **require** OSHA 30 hour course for instructors
  - 47% of instructors had OSHA 10
  - 24% of instructors had OSHA 30

"Every new teacher for the first three years goes to classes provided by the school. They learn about teaching technology & instructional preparedness, lesson plans, curriculum development, etc. I also observe their teaching."
—Administrator

Support for Instructors:
How Programs are doing

Industry Advisory Committees (IAC)

- 87% of Administrators report paid time for instructors to work with IAC
- 53% of instructors likely to consult with IAC
- 43% of instructors feel IAC is engaged and critical to program success

"Our programs put safety first, and everything else second. It's driven by the IAC. They don't want new hires that get hurt."
--Administrator

Action Steps:
Instructor Qualifications & Support

- **Include safety and health teaching goals in your Professional Development Plan.**
    - OSHA 30 for construction **OR** OSHA 500/510 to be an authorized OSHA trainer
    - Strengthening and updating teaching skills

Action Steps:
Instructor Qualifications & Support

- **Establish systems for recruiting and engaging IAC members.**
  - Clarify expectations
  - *Involve them: support your safety and health training*
  - Hold them accountable.

Effective Teaching & Learning
Essential Elements

A. Curriculum content reflects core safety and health competencies
B. OSHA 10 training
C. *Safety and health skills are taught effectively and classroom reflects SHMS/IIPP*
D. Students learn self-advocacy and problem-solving skills for the workplace

Assess your program…

- **Effective Teaching and Learning:**
  - Are students required to have OSHA 10 training?
  - Is safety and health training integrated throughout all trade skills courses?
  - Do students practice communicating with supervisors about safety and health concerns?

- **OSHA-10**
  - 55% require OSHA 10 and/or OSHA 30
  - 9% of instructors surveyed teach OSHA 10 integrated into trade skills class

Curriculum Content:
## How Programs are doing

- **Self-advocacy Skills**
  - 48% of instructors spend at least an hour on problem-solving and self-advocacy skills
  - 32% NEVER covered engineering and administrative controls employers should have

"Construction sites are hazard-riddled so students need to recognize those hazards…. If they do recognize something, they gotta raise the question to speak your mind and think for your self… Because the idea is to make it home every night."

—Instructor

Action Steps:
Teaching and Learning

- **Integrate the OSHA 10 throughout coursework.**

- **Focus on safety and health critical thinking skills,** such as Job Hazard Analysis and the hierarchy of controls.

- **Have students participate in the classroom Safety & Health System**.

- **Have students practice self-advocacy and communication skills.**

Hierarchy of Controls

https://www.cdc.gov/niosh/talkingsafety/
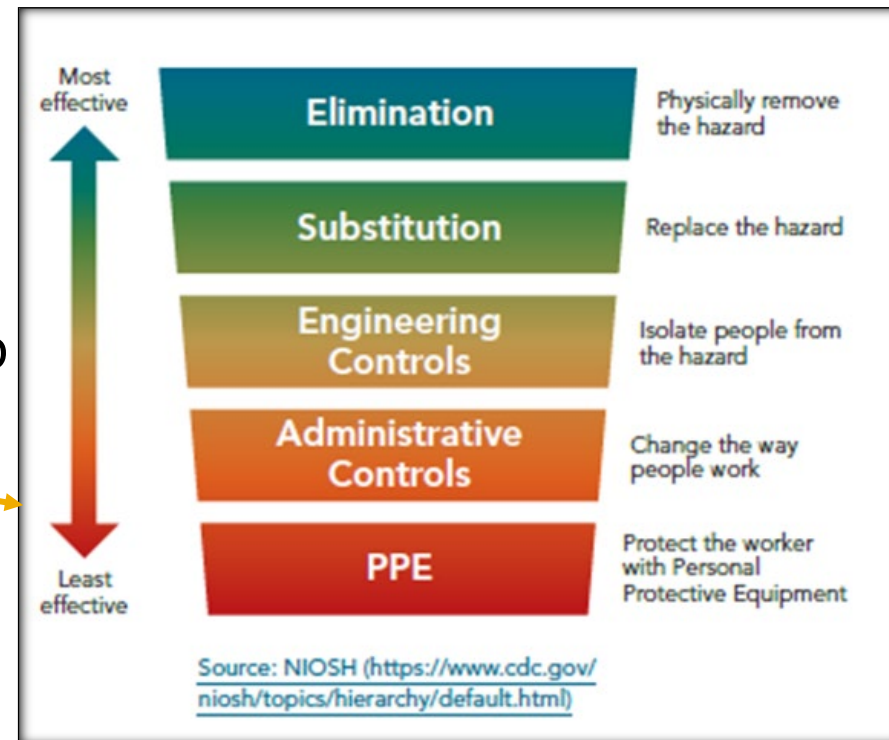
Action: Students use safety and health critical thinking skills

Conducting a Job Hazard Analysis (JHA)

Job Hazard Analysis		
Job:		
Date:	**Analysis by:**	**Approved by:**
Job Steps or Sequence	**Potential Hazards**	**Recommended Safe Procedures**
1.	1.	1.
2.	2.	2.
3.	3.	3.
4.	4.	4.
5.	5.	5.
6.	6.	6.

Action Steps:
Offsite Learning Experiences

Develop written policies to ensure a safe work environment, to include:

- Written safety agreement, verifying safety-responsible person onsite

- Site visits (before and during placement)

- Procedures if off-campus site is found to be unsafe.

Conclusion

- **CTE instructors and administrators are committed to safety & health**

- **Significant gaps**
  - Safety & Health systems
    - At school and program level
    - Integrated into student learning
  - OSH instruction integrated into all trade skill classes

Resources and Information

Get the Guide:
http://bit.ly/cte-guide

Other Resources:

- **OSHA Recommended Practices for Safety & Health Programs**

- **NIOSH Safety Checklist Program for Schools**

- **Youth@Work--Talking Safety**

- **School Action for Safety and Health**

Contact:

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Discussion Questions

1. Is there any action you will now take, based on what you've learned?
2. What additional information or resources would help you strengthen the safety and health program at your site?
3. Questions?