



“ANSI Z490.1- Fundamentals for Successful EH&S Training”

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Why do we train our workforce?

- Safety culture/Save Lives and Prevent Injuries and Illnesses
- Federal/State/ Local regulatory requirements
- Contract requirements
- Third party gatekeepers
- Needs assessment indication

“There's only one thing worse than training your staff and having them leave, and that's not training them and having them stay”

- Zig Ziglar

When it comes to EH&S training within your company, *ask yourself some questions:*

- Does the training improve worker behavior and confidence?
- Does the training reduce incident, injury and illness rates?
- Does the training have a direct effect on quality and performance?

If the answer to any of these questions is “**NO**”, then consider how your overall training program is *structured*, specifically with regard to adult learning along with the design, development, design and delivery of your program.

How is training currently developed and implemented within your company?

- Who “owns” it? Shared responsibility?
- How are training needs determined? Are they “triggered”?
- Does it include all employees, temp workers and subs?
- Who are your live trainers? Volunteers, appointees, outsourced? How about technology?
- Do you work with your insurance carriers/brokers?
- Do you conduct new hire orientations?
- Is it part of an overall written effective safety and health *program*?

What criteria should my training program be evaluated against?

- **DEFENSIBLE**- Are you prepared to defend your program under any worse case scenario?
- **RECOGNIZED**- Home grown programs or regulation/standard/industry based? CEUs?
- **ONGOING**- One and done? Regiment and schedule. Incident follow-up.
- **MEASURABLE**- Reduction in incidents clearly resulting from effective training and learning retention vs. plain luck? Testing results? Student course evaluation/survey?
- **EFFECTIVE**- Distinctive culture change in workforce behavior and awareness? More participative with feedback?

Training Mediums- Which is best?

- **Live/Traditional Classroom**- Can include both formal sessions with books/handouts and informal sessions such as tool box talks and incident analysis discussions
- **Media Based**- Use of training aids such as CD & DVD packaged courses
- **Online both E-learning and M-Learning**- Web based online programs taken with traditional PC or mobile device through flash or app
- **Blended Learning**- Use of live/virtual instructor combined with media

Managers and Supervisors- Vital to Training Program Success

- **Front Lines of Feedback**- Managers need to be vocal, visible, interactive and *believers* in the overall safety program
- **Agents of Measure**- Learning retention and practical application
- **Mirror Imaging**- Workers directly influenced by behaviors displayed by management
- **Development Training** – Communication, technology and human interaction.



Do you understand how adults truly learn?

Adults learn much differently than children do. **Andragogy** follows the eight principals of adult education:

1. Adults will only learn when they want to.
2. Adults will only learn when they feel they need to.
3. Adults learn by doing.
4. Adults will only learn by solving problems they can associate with their reality.
5. Adults learn better in an informal environment.
6. Adults need continuous feedback and encouragement.
7. Adults require a variety of teaching methods.
8. Experience can interfere in adult education.



The ADDIE model:

Developed in the mid-1980s- is a framework that lists generic processes that instructional designers and training developers use. It represents a guideline for building effective training and performance support tools in five phases.

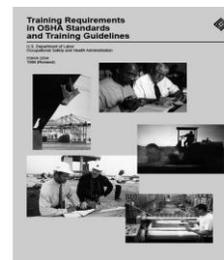
- Analyze
- Design
- Develop
- Implement
- Evaluate



Regulatory guidance for training course *inclusion* and *consideration*:

OSHA OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION
CODE OF FEDERAL REGULATIONS (CFR)

- 1910 (General Industry)
- 1926 (Construction)
- OSHA 2254- Training Requirements in OSHA Standards and Training Guidelines



The ANSI Z490.1 Standard:

However, historically, safety, health, and environmental training had been specifically addressed by only a few regulations with limited scope, such as asbestos, hazard communication, and HAZWOPER. Regulations usually specify the technical topics to be covered in a training course, but do not stipulate how to adequately **design, develop, deliver, and evaluate** training programs.

ANSI- Z490.1- Criteria for Accepted Practices in Safety, Health and Environmental Training

- Accredited by the American National Standards Institute on April 1, 1998, and grown out of an ASSE/ANSI task force that recognized need for improvement in safety, health and environmental training. Last revised 2009
- Criteria developed by combining accepted practices in the training industry with those in the safety, health, and environmental industries.

How the ANSI Z490.1 breaks down:

52 Pages, 7 Sections

1. Scope, purpose and Application

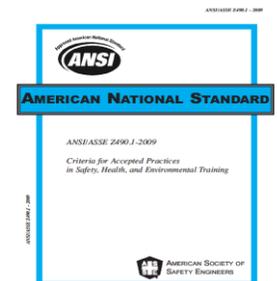
2. Definitions

3. Training Program Administration and Management-

- **Resource Management and Administration-** Responsibility and accountability of the program. Availability and allocation of program resources such as funds, personnel and technologies. Overall program quality management
- **Program Evaluation-** Periodic evaluation of training program management, training process, and training results. Training results used to continuously improve the program

4. Training Development-

- **Needs Assessment-**Examine the requirement or request. Will training fix the problem? Audience assessment including previous training, culture, literacy and language barriers, job function and regulatory requirements
- **Learning Objectives and Prerequisites-** Need to state the desired knowledge, skill, or ability to be learned by the trainee. Objectives need to be specific, measurable, achievable, reasonable, and timely
- **Course Design-** Recognized content by industry subject matter experts (SMEs) or regulatory requirements. Lesson plans, physical environment and time allocation requirements
- **Evaluation Strategy-** Must have effective evaluation of trainee's achievement of the learning objectives
- **Criteria for Completion-** Test scores, minimum attendance and participation
- **Continuous Improvement**





5. Training Delivery-

- **Trainer Criteria-** Carefully choose who you have delivered live training! Subject matter expertise and training delivery skills appropriate for **adult learning**. Continuing education requirements
- **Training Delivery Methods and Materials-** Planning and managing the learning environment. Use of technologies and learning aids

6. Training Evaluation-

- **Test results and student feedback-** Reaction surveys.
- **Post learning observations-** Increase in safe behavior(s) by all trainees, reduction in near hits, injuries, illnesses and worker's compensation claims.
- **Continuous Improvement**

7. Documentation and Record Keeping-

- **Systems and Procedure** -Records must be readily available, identifiable and maintained in an orderly fashion and for specific period of time in accordance with regulatory requirements and/or company policy.
- **Records-** Delivery records for each training event shall include dates, locations, sign in sheets, materials and trainer qualifications
- **Record Confidentiality and Availability-** The written training program plan shall include procedures for access, availability, and confidentiality of records.
- **Issuing Certificates-**Completion certificates must include trainee's name; course title; date and hours of instruction, statement trainee has successfully completed the course; name and address of training provider; expiration or periodic refresher date; unique trainee identification number; level of training or type of certificate awarded (if applicable); any other information required by regulation; number of credits (if applicable); and the signature of the trainer

3 Annexes

- A. References
- B. Training Course Development Guidelines
- C. Safety, Health & Environmental Trainer's Checklist

A word about the CET certification and CEUs:

CET- The Certified Environmental, Safety and Health Trainer Certification

The Certified Environmental, Safety & Health Trainer (CET) is a certification from the **Board of Certified Safety Professionals (BCSP)** held by those with experience and expertise in the:

- **Development**
- **Design**
- **Delivery** of safety, health and environmental training.





*Newly redesigned 200 question exam

IACET- The International Association for Continuing Education and Training

- Committed to best practices in adult learning and professional training
- **Internationally recognized** training
- Professional development
- CEUs and Contact Hours
- Authorized IACET providers must follow strict design and development criteria for CEU course qualifications including needs assessment, learning objectives/outcomes and certificates of completion



Some EH&S Training Program Tips

- An effective workforce training program should be part of an equally effective EH&S program
- Don't just train! Continually evaluate your program
- Assess assignment and education requirements of competent and qualified trainers
- Orientate and train your workforce **effectively and frequently** and evaluate your training program at least annually
- Use a variety of training mediums
- Orderly maintenance of training records is critical



Where to go for more help:

- Occupational Safety & Health Agency (**OSHA**) www.osha.gov/
- American National Standards Institute (**ANSI**) www.ansi.org/
- American Society of Safety Engineers (**ASSE**) www.asse.org/
- Center for Construction Research and Training (**CPWR**) www.cpwr.com/
- Board of Certified Safety Professionals (**BCSP**) www.bscp.org
- Equipment Manufacturers
- Industry Conferences and Peers