

Partnering  
for safer,  
healthier  
workplaces.



Southeastern OSHA Training Institute Education Center



Course Catalog



**Wendy Laing, CSP, MIE**

**Director, Southeastern OSHA Training  
Institute Education Center**

NC State University,  
Industry Expansion Solutions  
(Lead Organization)

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## Welcome

**The** Southeastern OSHA Training Institute Education Center is an exceptional partnership between NC State University Industry Expansion Solutions and The University of Tennessee Center for Industrial Services. Together, we are delighted to deliver relevant educational programs with practical tools and information that can be directly transferred to the workplace to improve safety performance, reduce injuries and illnesses and increase organizational excellence.

Our instructional and customer service staff work hard to build positive relations and effective instructional strategies to ensure a meaningful learning experience for course participants. We hope that our audiences maintain a competitive advantage by continuously improving their skill sets and become partners with us to improve safety and health in the workplace. Thanks for joining us!

*Wendy W. Laing*

# Instructional Team



**Glenn Clapp**

**Safety and Health Specialist**

Glenn Clapp, CHMM, CFPS is a Safety and Health Specialist with NC State Industry Expansion Solutions and assists North Carolina Industries in OSHA compliance, safety and health program development and training. Glenn has more than 20 years of experience in occupational safety with a strong emphasis in emergency management, hazardous materials, accident investigation and HAZWOPER. An Authorized Outreach Trainer for General Industry, Glenn also has an M.S. degree in Occupational Safety.



**Lance D. McClure**

**Safety and Health Specialist**

Lance D. McClure is a Safety and Health Specialist with NC State Industry Expansion Solutions and assists North Carolina industries in OSHA compliance, safety and health program development and training. An Authorized OSHA Outreach Trainer for both Construction and General Industry, Lance has been an NCCER Master Trainer for eight years and has trained others to become NCCER instructors.



**Michael "Mac" McNulty**

**Safety and Health Specialist**

Michael "Mac" McNulty is a Safety and Health Specialist with NC State Industry Expansion Solutions and provides hazardous waste operations, emergency response (HAZWOPER) and incident spill response training and exercise evaluations to North Carolina businesses and local, state and federal agencies. Mac has a B.S. in Hazardous Materials Management and is an Authorized OSHA Outreach Trainer.



**Charlie Parrish, PE**

**Safety and Health Specialist**

Charlie Parrish, PE, is an Environmental Engineering Specialist with NC State Industry Expansion Solutions. He conducts technical assistance and training programs on ISO environmental and safety management systems, air quality permitting, DOT HazMat Transportation and environmental compliance. Charlie has a B.S. in Biology and an M.S. in Environmental Engineering.



**Wendy Shepherd**

**Safety and Health Specialist**

Wendy Shepherd is a Safety and Health Specialist with NC State Industry Expansion Solutions, assisting North Carolina industries in OSHA compliance, safety and health program development and training. Wendy has over 20 years of experience in occupational safety and health compliance, risk consulting, incident investigation, ergonomics and industrial hygiene sampling. Wendy has a B.S. in Environmental Health and is an Authorized OSHA Outreach Trainer.



**Holli Singleton**

**Safety and Health Specialist**

Holli Singleton is the Assistant Director of Environmental, Health and Safety Services at NC State Industry Expansion Solutions. She develops and presents safety and environmental continuing education courses, conducts work site assessments and is an Authorized OSHA Outreach Trainer. Holli has more than 20 years of experience in workplace safety and health. Holli has a B.S. in Health Education and holds a MESH (Manager of Environmental Safety and Health) certificate.

## NC State Partners

# Instructional Team



**Charles J. Gluck**

**Safety and Health Specialist**

Charles J. Gluck is a Safety Consultant for the University of Tennessee, providing HAZWOPER, DOT and first aid training. He is a retired Battalion Chief from the San Jose Fire Department and spent 37 years in the fire service. Charles owned a consulting business in California for 20 years, providing Fire Life Safety instruction and consulting. He is also trained in high angle rescue and confined space and trench operations and is an Authorized OSHA Outreach Trainer.



**Walter D. Idol, MS, NREMT**

**Safety and Health Specialist**

Walter D. Idol, MS, NREMT, is the Health, Safety and Preparedness Program Manager for the Center for Industrial Services within The University of Tennessee. He is a nationally registered paramedic with more than 30 years of experience in emergency operations, fire, EMS, HazMat and technical rescue. Walter has a B.S. in Forestry, an M.S. in Adult and Technological Education and is an Authorized OSHA Outreach Trainer.



**Bryan Lane**

**Safety and Health Specialist**

Bryan Lane is the Coordinator of the Southeastern OSHA Training Institute Education Center program within the University of Tennessee and is a consultant for the University's Center for Industrial Services. He conducts training in a number of occupational safety and continuous improvement initiatives. Bryan has a B.S. degree in Management and is an Authorized OSHA Outreach Trainer.



**Tim McGlothlin, MS, CPE**

**Safety and Health Specialist**

W. Tim McGlothlin, MS, CPE, is the Executive Director of The Ergonomics Center of North Carolina at NC State University. With more than 25 years of experience in ergonomics and human factors, Tim manages the center while performing field studies and workplace assessments. The Southeastern OTI Education Center partners with the experts of The Ergonomics Center for delivery of ergonomic courses.



**Wendy Padgett, MPPA, MSSEM**

**Safety and Health Specialist**

Wendy Padgett, MPPA, MSSEM, is the Safety and Health Director for the Southeastern Chapter of the National Safety Council. She has more than 15 years of experience in Occupational Safety and Health and has designed, developed, implemented and maintained numerous safety training programs and policies in the private and public sectors. Wendy is an Authorized OSHA Outreach Trainer.



Excellent course with terrific instructors. I learned a lot that I can apply at my job.

**Participant,**  
OSHA #510 OSHA Standards for  
Construction Industry

# Customer Care Team



**Tim Kelly**

Tim oversees program administration and compliance for the Southeastern OTI Education Center and all professional learning products and customer care processes for IES. He has more than 15 years experience in the training and development field, focusing on needs assessment, planning and facilitation. Tim has a B.A. in Psychology.



**Tamara Nagelberg**

Tamara administers the logistics for all IES public course offerings and online courses. She manages all details of the registration process, ensuring course participants and instructors arrive to a comfortable and safe learning environment. She also manages the MESH Certificate Program. Tamara has more than 14 years experience in education administration, coordination and customer service from various roles in college, university and medical offices. Tamara has a B.S. in Biology.



**Debra Robinson**

Debra provides administrative and customer support for all professional learning programs and OSHA Outreach activities at Industry Expansion Solutions. She also supports the NC Manufacturing Extension Partnership (NCMEP) Network and coordinates IES event and conference logistics. Debra has an associate degree in Applied Science and an associate degree in Arts.



**James Williamson**

James administers the daily operations and performance requirements for the Southeastern OTI Education Center. He works with OSHA Outreach Trainers to ensure they understand and comply with OSHA's Outreach Training Program requirements and procedures. He also assists trainers with reporting and processing OSHA course completion cards. In addition, he supports activities and logistics within the Professional Learning unit. James has a B.A. in Psychology.

## Training Organization Partners

**Industry Expansion Solutions (IES)** is the engineering-based, solutions-driven, client-focused unit of NC State's College of Engineering. Its broad portfolio of solutions and deep industry expertise help organizations grow, innovate and prosper. Its extensive partnerships with business, industry, education and government generate a unique culture of collaboration that provides access to cutting-edge expertise, research, and technology.

**The Center for Industrial Services (CIS)** is an agency of the Institute for Public Service at the University of Tennessee, the state's land grant college. The Center is part of the university's statewide system of higher education, and provides services and resources to industries and businesses throughout the state to improve their economic competitiveness. CIS houses the state's Manufacturing Extension Partnership Program, the University Economic Development Center and the Procurement Technical Assistance Center, with the mission of delivering solutions that help businesses succeed, grow and create high quality jobs.

## Host Sites

The Southeastern OTI Education Center also maintains relationships with the following training organizations in order to provide additional course offerings in OSHA Region IV.

- Safety and Health Council of North Carolina
- Southeastern Chapter National Safety Council

All OSHA courses hosted by these organizations are administered and instructed by the Southeastern OTI Education Center.

If you are new or need a refresher to occupational safety and health, these courses will provide a firm foundation of knowledge to implement a program at your organization.

## Benefits to these Foundational Courses

- Comprehensive foundation of OSHA's safety requirements for construction and general industry
- Fundamentals of safety and health program management and accident investigation
- Meets one of two prerequisites to become an Authorized OSHA Outreach Trainer
- Meets core course requirement for the MESH Certificate Program
- Meets the three required courses for OSHA's Public Sector Safety & Health Fundamentals Certificate Program

### OSHA #510 Occupational Safety and Health Standards for the Construction Industry

4 days | MESH hours: 30

This course covers OSHA policies, procedures and standards, as well as construction industry safety and health principles. A copy of the 29 CFR 1926 Construction Industry Standards is included with the registration fee. Participants must successfully pass a written exam at the end of the course.

This course meets one of two prerequisites for the OSHA #500 Trainer Course for the Construction Industry. Please note, the 30-hour Construction Industry OSHA outreach class is not considered equivalent to OSHA #510.

#### Participants will:

- Describe specific requirements in the OSHA 29 CFR 1926 standards that protect workers from common hazards associated with construction industry workplaces

### OSHA #511 Occupational Safety and Health Standards for General Industry

4 day | MESH hours: 30

This course covers OSHA policies, procedures and standards, as well as general industry safety and health principles. A copy of the 29 CFR 1910 General Industry Standards is included with the registration fee. Participants must successfully pass a written exam at the end of the course.

This course meets one of two prerequisites for the OSHA #501 Trainer Course for General Industry. Please note, the 30-hour General Industry OSHA outreach class is not considered equivalent to OSHA #511.

#### Participants will:

- Describe requirements in the OSHA 29 CFR 1910 standards that protect workers from common hazards in general industry workplaces

### OSHA #7500 Introduction to Safety and Health Management

1 day | MESH hours: 7

This course features information on the elements and effective strategies for implementing a safety and health management system in the workplace, utilizing relevant guidance standards. Interactive assignments and thought-provoking group projects enable participants to walk away with a strong understanding of how their organizations can start benefiting from implementing a safety and health management system for their company.

#### Participants will:

- Identify the four critical elements of a safety and health management system
- Identify the implementation strategies of a management system standard

### OSHA #7505 Introduction to Incident [Accident] Investigation

1 day | MESH hours: 7.5

This course provides an introduction to basic accident investigation procedures and describes accident analysis techniques. The goal of this course is to help participants gain the basic skills necessary to conduct an effective incident/accident investigation at their workplace. The course is a facilitated, interactive training session focusing on class discussion, case studies and group activities.

#### Participants will:

- Recognize the benefits of an effective investigation for accidents and near misses in the workplace
- Identify the six-step accident investigation procedure
- Practice methods for accident investigation through case studies, group activities and discussion





I am thankful to be part of the Southeastern OTI Education Center extended family. Having studied both general industry and construction, I find their impeccable classes, newsletters, website and staff are a consistent and effective resource for myself and my company.

**Katrina Harman Roper**  
Private Consultant, Spartanburg, SC

## OSHA #500

### Trainer Course in OSH Standards for Construction

4 days | MESH hours: 30

Successful completion of this course results in participants becoming Authorized OSHA Outreach Trainers to conduct both 10-hour and 30-hour construction industry classes that provide hazard awareness training to workers and employers.

During the course, students will develop a presentation and teach an assigned OSHA Construction Industry Outreach topic and successfully pass a written exam. Participants will be provided with a variety of training materials and resources.

#### Prerequisites:

- OSHA #510 Occupational Safety and Health Standards for the Construction Industry
- Five (5) years of construction industry safety experience

## OSHA #501

### Trainer Course in OSH Standards for General Industry

4 days | MESH hours: 30

Successful completion of this course results in participants becoming Authorized OSHA Outreach Trainers to conduct both 10-hour and 30-hour general industry classes that provide hazard awareness training to workers and employers.

During the course, students will develop a presentation and teach an assigned OSHA General Industry Outreach topic and successfully pass a written exam. Participants will be provided with a variety of training materials and resources.

#### Prerequisites:

- OSHA #511 Occupational Safety and Health Standards for General Industry
- Five (5) years of general industry safety experience

## OSHA Outreach Training Program

The Southeastern OSHA Training Institute Education Center offers qualified individuals the opportunity to become Authorized OSHA Outreach Trainers who deliver 10-hour and 30-hour outreach classes to workers in construction, general industry and disaster sites. These outreach classes teach workers and employers about OSHA, workers' rights and how to identify, avoid and prevent workplace hazards.

Become an Authorized OSHA Outreach Trainer. For more information, visit [ies.ncsu.edu/otieducationcenter](https://ies.ncsu.edu/otieducationcenter), or contact us at [SoutheasternOTI@ncsu.edu](mailto:SoutheasternOTI@ncsu.edu).



## OSHA #502

### Update for Construction Industry Outreach Trainers

2.5 days | MESH hours: 18

Currently, Authorized OSHA Construction Industry Outreach Trainers are required to attend this course once every four years to maintain trainer status.

#### Prerequisites:

- Students must submit a copy of their current trainer card at the time of registration

## OSHA #503

### Update for General Industry Outreach Trainers

2.5 days | MESH hours: 18

Currently, Authorized OSHA General Industry Outreach Trainers are required to attend this course once every four years to maintain trainer status.

#### Prerequisites:

- Students must submit a copy of their current trainer card at the time of registration

## OSHA #5600

### Disaster Site Worker Trainer Course

4 days | MESH hours: 24

Successful completion of this course results in participants becoming trainers in the Disaster Site Worker Outreach Training program, to conduct the Disaster Site Worker Course,

intended for second responders (those arriving hours or days after the event).

During the course, students will prepare a presentation on an assigned disaster site worker topic. Participants will be provided with a variety of training materials and resources.

#### Prerequisites:

- Completion of OSHA #500 Trainer Course in OSHA Standards for the Construction Industry or OSHA #501 Trainer Course in OSHA Standards for General Industry
- Three (3) years of safety training experience
- Completion of the 40-hour HAZWOPER course or equivalent

## OSHA #5602

### Update for Disaster Site Worker Trainer Course

1 day | MESH hours: 7.5

Currently, Authorized Disaster Site Worker Trainers are required to attend this course once every four years to maintain trainer status.

#### Prerequisites:

- Students must submit a copy of their current trainer card at the time of registration



The OSHA training and resources provided by Bryan Lane have proven to be a valuable asset not only in my own career, but also as a benefit to my company's safety program. Bryan's underlying message about the importance of continuously striving to improve our safety program speaks volumes. I look forward to the next opportunity to grow through the Southeastern OTI Education Center.

**Vince Murphy,**  
Regional Supervisor and National  
Safety Coordinator C.W.I.  
Nashville, TN





## OSHA #521

### OSHA Guide to Industrial Hygiene

4 days | MESH hours: 30

This course addresses industrial hygiene practices and related OSHA regulations and procedures. Given the responsibility to provide a workplace that complies with OSHA's industrial hygiene standards, participants will be able to recognize potential health hazards in accordance with OSHA's occupational health standards and guidelines. The course features workshops in health hazard recognition, OSHA health standards and a safety and health program workshop.

#### Participants will:

- Recognize basic industrial hygiene principles
- Identify methods to evaluate potential air contaminants
- Identify other health hazards such as noise, biological agents and musculoskeletal disorders
- Recognize methods to control health hazards

## OSHA #2015

### Hazardous Materials

4 days | MESH hours: 26

This course covers OSHA General Industry Standards and other consensus and proprietary standards that relate

to the use of hazardous materials. Course topics include flammable and combustible liquids, compressed gases, LP-gases and cryogenic liquids. Related processes such as spraying and dipping, and use of electrical equipment in hazardous locations are also discussed. Upon course completion, students will have the ability to assess compliance with OSHA hazardous materials standards, determine hazardous (classified) locations, and proper moving, storing, and handling of hazardous materials.

## OSHA #2055

### Cranes for Construction

3 days | Instructional Hours: 22.5

This course covers the best practices in crane and derrick operation using the OSHA Cranes and Derricks in Construction Rule as a guide. Information presented will help participants understand criteria specified in CFR 29 1926 Subpart CC designed to keep crane operators safe as well as other workers and visitors to the site.

#### Participants will:

- Identify the types of cranes and their components and attachments
- Determine safe operating conditions
- Recognize common violations of OSHA Standards
- Improve their ability to assess and oversee crane operations

## OSHA #2225

### Respiratory Protection

3.5 days | MESH hours: 26

This course covers the requirements for the establishment, maintenance, and monitoring of a respiratory protection program. Course topics include terminology, OSHA Respiratory Protection Standards, NIOSH certification, respiratory protection programs and medical evaluation requirements. Program highlights include workshops on respirator selection, qualitative and quantitative fit testing and the use of respiratory protection and support equipment. Upon course completion, students will have the ability to identify and describe the elements of a respiratory protection program, the proper selection, use, and inspection of respiratory protection, protection factors, and evaluate compliance with OSHA Standards.



## OSHA #2255

### Principles of Ergonomics

4 days | MESH hours: 30

This course covers the use of ergonomic principles to recognize, evaluate and control workplace conditions that cause or contribute to musculoskeletal and nerve disorders. At the conclusion of this course, participants will be able to assess the work environment for the prevention of Work-Related Musculoskeletal Disorders (WMSD). This course emphasizes general industry case studies covering analysis and design of workstations and equipment, laboratory sessions in manual lifting and coverage of current OSHA compliance policies.

#### Participants will:

- Identify work-related musculoskeletal and nerve disorders and describe associated risk factors
- Apply basic principles of workstation design
- Describe lifting and NIOSH measurement techniques
- Recognize OSHA's policy on ergonomics
- Describe the components of a successful ergonomics program

## OSHA #2264

### Permit-Required Confined Space Entry

3.5 days | MESH hours: 26

Many employers have confined spaces in their work environment that meet the definition of a permit space, according to the OSHA Permit-Required Confined Space Entry Standard for General Industry 29 CFR 1910.146 and 29 CFR 1926 Subpart AA for the Construction Industry. This course is designed to enable participants to recognize, evaluate, prevent and abate safety and health hazards associated with permit-required confined space entry.

#### Participants will:

- Learn and apply the requirements of OSHA's Permit-Required Confined Space Entry Standard for General Industry 29 CFR 1910.146 and 29 CFR 1926 Subpart AA for the Construction Industry
- Recognize, evaluate and control safety and health hazards associated with permit space entry
- Classify permit spaces and evaluate programs

## OSHA #3015

### Excavation, Trenching and Soil Mechanics

3 days | MESH hours: 20

This course focuses on the OSHA Excavation standard and on the safety and health aspects of excavation and trenching. Participants are introduced to practical soil mechanics and its relationship to the stability of shored and un-shored slopes and walls of excavations. Various types of shoring (wood timbers and hydraulic) are covered. Testing methods are demonstrated and a field exercise is conducted. At the conclusion of the course, participants will be able to identify compliance with OSHA standards 29 CFR 1926.650 through 29 CFR 1926.652.

#### Participants will:

- Recognize general excavation hazards
- Identify the different types of protective systems used at excavation sites
- Choose and apply acceptable soil testing methods
- Identify sloping system design requirements and support and shield systems
- Apply principles of soil mechanics regarding factors affecting soil stability
- Assess compliance of trench protective systems





## OSHA #3085

### Principles of Scaffolding

3 days | MESH hours: 22

This course covers the requirements for construction and the safe construction and use of scaffolding using the OSHA construction scaffold standard as a guide. Course topics include hazards associated with scaffold design, assembly, disassembly and use, types of scaffolds, determining scaffold capacity, employee qualifications and training, and maintenance, repair, and inspection requirements. Students will participate in workshops to reinforce concepts of safe scaffolding. Upon course completion, students will have the ability to identify the types of scaffolds and their components; determine safe assembly, use, and disassembly; and recognize common violations of OSHA Standards.

## OSHA #3095

### Electrical Standards

4 days | MESH hours: 30

This course provides participants with the ability to conduct an electrical safety inspection according to OSHA and consensus standard in order to keep the workplace free of electrical hazards. During this four-day course, students receive a thorough overview of electrical installations and electrical testing equipment

with emphasis on safety-related work practices, electrical hazard recognition, OSHA policies and procedures and the National Electrical Code.

#### Participants will:

- Recognize the hazards of electricity
- Apply fundamentals of electricity
- Explain electrical equipment functionality
- Assess electrical safety-related work practice conditions
- Apply OSHA and consensus electrical standards
- Recognize elements of power generation, transmission and distribution

## OSHA #3115

### Fall Protection

3 days | MESH hours: 22

This course provides an overview of state-of-the-art technology for fall protection and current OSHA requirements. At the conclusion of the course, the participant will be able to identify fall protection requirements mandated by OSHA standards.

#### Participants will:

- Recognize employer's responsibility of providing fall protection and training requirements
- Distinguish between conventional and nonconventional methods of

fall protection

- Identify fall arrest requirements and assess compliance with subparts of 29 CFR 1926 relating to fall protection
- Evaluate components of Fall Protection Plans
- Assess compliance of residential construction fall protection and non-residential roof construction with OSHA and consensus standards

## OSHA #7000

### OSHA Training Guidelines for Safe Patient Handling

1 day | MESH hours: 7.5

This course covers OSHA ergonomic guidelines for safe patient handling and methods to protect workers in all healthcare settings. Using OSHA's Ergonomics Guidelines for Nursing Homes as a basis for any healthcare facility, this course focuses on analyzing and identifying ergonomic hazards and practical solutions to address these issues.

#### Participants will:

- Be able to apply "OSHA's Ergonomics Guidelines for Nursing Homes" in their healthcare facility
- Identify, analyze and develop solutions for ergonomic risk factors in healthcare



## OSHA #7005

### Public Warehousing and Storage

1 day | MESH hours: 7.5

This course covers the hazards and injuries likely to occur in public warehousing and storage operations, including encounters with powered industrial trucks, material handling, lifting and ergonomics, hazard communication, walking and working surfaces, and life safety including fire protection and evacuation.

#### Participants will:

- Discover hazards in warehousing and storage operations
- Identify methods to control and abate these hazards

## OSHA #7105

### Evacuation and Emergency Planning

1 day | MESH hours: 7.5

This course covers OSHA requirements for emergency action and fire protection plans, and is designed for small employers or a designated representative such as a safety specialist, line supervisor or manager responsible for developing an emergency action plan.

#### Participants will:

- Identify the need and process for developing an emergency action plan
- Describe options for providing for fire, rescue, and medical services

## OSHA #7115

### Lockout/Tagout

1 day | MESH hours: 7.5

This course covers the role and responsibility of the employer to develop and implement an energy control program or lockout/tagout (LOTO) for the protection of workers, while performing servicing and maintenance activities on machinery and equipment, using the OSHA Control of Hazardous Energy Standard.

#### Participants will:

- Learn the requirements for implementing energy control programs and procedures and conducting training and audits

- Discover methods of detecting hazardous conditions and implementing control measures

## OSHA #7125

### Seminar on Combustible Dust Hazards

1 day | MESH hours: 7.5

This seminar provides businesses within general industry an opportunity to enhance their awareness of the hazards posed by combustible dust, as well as developing the controls and strategies that can help them prevent or mitigate combustible dust fires and explosions.

#### Participants will:

- Recognize the hazards and risks associated with combustible dust
- Learn control methods and standards to help prevent or mitigate combustible dust fires and explosions
- Learn about OSHA's National Emphasis Program for combustible dust hazards

## OSHA #7205

### Health Hazard Awareness

1 day | MESH hours: 7.5

This course covers common health hazards that are encountered in the workplace, such as chemical, biological, physical and ergonomic hazards and specifically addresses exposure to chemicals, asbestos, silica and lead.

#### Participants will:

- Discuss techniques to recognize health hazards
- Describe tools and methods to evaluate and control exposure to health hazards

## OSHA #7215

### Silica in Construction, Maritime, and General Industries

1 day | MESH hours 7.5

This course covers the development and implementation of controls and strategies to prevent or mitigate silica exposures in construction, maritime, and general industries.

#### Participants Will:

- Describe the requirements of OSHA's

respirable crystalline silica standards

- Recognize the hazards and risks associated with silica
- Identify assessment options and exposure control measures associated with silica exposure.

## OSHA #7225

### Transitioning to Safer Chemicals

1 day | MESH hours: 7.5

This course provides participants with information about the process for transitioning to safer chemicals, as well as the key methods, tools, and databases that can assist in this process. Using OSHA's seven-step substitution planning process, participants will be guided through evaluating chemical use, identifying and assessing alternatives and implementing those safer alternatives.

This course is ideal for purchasing staff, maintenance supervisors, facility managers and workers who utilize hazardous chemicals at their worksites. Participants are encouraged to bring a laptop computer in order to participate in the classroom group activities.

#### Participants will:

- Identify methods to examine current chemical use and identify alternatives to hazardous chemicals and processes
- Describe a strategy for selecting and implementing a safer alternative
- Emergency Planning and Environmental Management

## OSHA #7300

### Understanding OSHA's Permit-Required Confined Space Standard

1 day | MESH hours: 7.5

This course covers the requirements of the OSHA Permit-Required Confined Space Standard. Course topics include safety and health hazards associated with confined space entry and the evaluation, prevention and abatement of these hazards. The course covers OSHA requirements. It does not feature workshops (instrumentation, control methods and testing), which are included in the OSHA #2264 Permit-



Required Confined Space Entry.

**Participants will:**

- Identify confined space hazards and methods to evaluate and abate those hazards
- Formulate when a confined space shall be classified as a permit- required confined space

**OSHA #7400**

**Noise in the Construction Industry**

1 day | MESH hours: 7.5

This course covers the evaluation and reduction of noise hazards in the construction industry. Course topics include OSHA Construction Noise Standards, properties of sound, noise-induced hearing loss, noise exposure control, selection and use of hearing protection, conducting sound level surveys and worker training. Classroom demonstrations of noise instrumentation and hearing protection devices are featured.

**Participants will:**

- Identify the properties of sound and its relationship to noise-induced hearing loss, hearing protection usage
- Recognize how to conduct sound level surveys
- Locate and discuss the training requirements for workers

**OSHA #7405**

**Fall Hazard Awareness for the Construction Industry**

1 day | MESH hours: 7.5

This course covers the identification, evaluation, prevention and control of fall hazards in the construction industry. The course focuses on falls to a lower level, rather than falls to the same level resulting from slips and falls. Course topics include identifying, analyzing, and preventing fall hazards utilizing OSHA Fall Protection Standards.

**Participants will:**

- Identify fall hazards in the construction industry
- Discuss methods to control and abate the hazards

**OSHA #7410**

**Managing Excavation Hazards**

1 day | MESH hours: 7.5

This course covers the roles and responsibilities of the employer to educate and assign a competent person to excavation sites. Course topics include understanding and applying definitions relating to the OSHA Excavation Standard, excavation hazards and control measures, soil analysis techniques, protective system requirements and emergency response.

**Participants will:**

- Recognize the duties of a competent person in excavation work
- Gain the knowledge and skills required to perform these duties

**OSHA #7500**

**Introduction to Safety and Health Management**

1 day | MESH hours: 7

This course features information on the elements and effective strategies for implementing a safety and health management system in the workplace, utilizing relevant guidance standards. Interactive assignments and thought-provoking group projects enable participants to walk away with a strong understanding of how their organizations can start benefiting from implementing a safety and health management system for their company.

**Participants will:**

- Identify the four critical elements of a safety and health management system
- Learn the implementation strategies of a management system standard

**OSHA #7505**

**Introduction to Incident [Accident] Investigation**

1 day | MESH hours: 7.5

This course provides an introduction to basic accident investigation procedures and describes accident analysis techniques. This course helps participants gain the basic skills necessary to conduct an effective incident/accident investigation at their workplace. It is a facilitated, interactive training session

focusing on class discussion, case studies and group activities.

**Participants will:**

- Recognize the benefits of an effective investigation for accidents and near misses in the workplace
- Identify the six-step accident investigation procedure
- Practice methods for accident investigation through case studies, group activities and discussion

**OSHA #7845**

**OSHA Recordkeeping Rule Seminar**

1 day | MESH hours: 6.5

This course is designed to assist employers in identifying and fulfilling their responsibilities for posting certain records, maintaining records of illnesses and injuries and reporting specific cases to OSHA.

**Participants will:**

- Identify OSHA recording and reporting requirements
- Complete OSHA's Injury and Illness Recordkeeping forms 300, 300A and 301



## DOT Hazardous Materials Transportation Training

2 days | MESH hours: 14

This course covers the basic requirements for shipping hazardous materials using 49 CFR (DOT) regulations. This includes the fundamentals of shipping hazardous materials and hazardous wastes, quantity exemptions and exceptions and recent changes in the regulations.

## DOT Hazardous Materials Transportation Refresher

1 day | MESH hours: 7

This course reviews the requirements for shipping hazardous materials, using 49 CFR (DOT) regulations. It also discusses the fundamentals of shipping hazardous materials and hazardous wastes, quantity exemptions and exceptions and recent changes in the regulations. This course is required every three years to remain compliant.

## Hazardous Waste Management for Generators

1 day | MESH hours: 7

According to the Resource Conservation and Recovery Act (RCRA), generators of hazardous waste are required to properly classify, manage and ship their waste. This course offers guidance to those who must comply with the regulations for conditionally exempt, small and large quantity generators.

## 40-Hour HAZWOPER for Hazardous Waste Site Workers

5 days | MESH hours: 40

If workers perform activities that expose or potentially expose them to hazardous substances, OSHA requires them to be familiar with methods and procedures to protect themselves and others from the safety and health risks of these hazardous materials.

### Participants will:

- Identify and practice methods and procedures for recognizing, evaluating and controlling hazardous substances
- Select and use appropriate protective equipment including respirators, protective suits, boots and gloves

## 24-Hour HAZWOPER for Hazardous Waste Site Workers

3 days | MESH hours: 24

This course meets the training requirements of OSHA's HAZWOPER standard — 29 CFR 1910.120 paragraphs (b) through (o). If workers perform activities that require them to enter hazardous waste sites, they need to be prepared to protect themselves. This course will increase understanding of health and safety plans, protective equipment and many other aspects of working around hazardous waste.

### Participants will:

- Recognize site work plans, safety and health plans, hazard recognition, personal protective equipment and monitoring on hazardous waste sites
- Be able to work safely around hazardous materials and wastes

## 24-Hour HazMat Technician for Emergency Response

3 days | MESH hours: 24

This course meets the OSHA training requirements of hazardous material technician level for emergency responders as outlined in the HAZWOPER standard, 29 CFR 1910.120(q). HazMat technicians are individuals who respond to releases or potential releases for the purpose of stopping the release.

### Participants will:

- Learn methods and procedures for recognizing, evaluating and controlling hazardous substances
- Identify guidelines to properly protect response personnel up to Level A protection
- Discuss fundamentals of the Incident Command System (ICS)
- Demonstrate the use and limitations of direct-reading air monitoring instruments

## 8-Hour Hands-On HAZWOPER Refresher

1 day | MESH hours: 8

Unlike traditional HAZWOPER courses, this workshop focuses on recognizing and



Holli was amazing! She kept the class engaged and made the topics interesting and easy to understand!

(Participant, OSHA #511  
OSHA Standards for General Industry)

avoiding common physical and chemical industrial hazards by using appropriate preparatory techniques, on-site work practices and air monitoring instrumentation. This is an annual refresher class. ALL participants must complete a minimum of 24 hours of initial HAZWOPER training.

### Participants will:

- Identify common physical and chemical industrial hazards and review actual incidents involving these hazards
- Review common usage problems with air-purifying and air-supplying respiratory protection
- Discuss how to appropriately select air monitoring instrumentation and how to properly interpret results
- Practice competencies

## 8-Hour HAZWOPER for Environmental Professionals

1 day | MESH hours: 8

Environmental professionals should be familiar with compliance guidelines for hazardous waste site cleanup and corrective action operations as outlined in 29 CFR 1910.120(e)(8) and (p)(7)(ii). This course meets the annual refresher requirements of 29 CFR 1910.120 by presenting realistic HazMat issues for group discussion.

This is an annual refresher class. ALL participants should have completed a minimum of 24 hours of initial HAZWOPER training.

### Participants will:

- Employ critical thinking and demonstrate practical skills for HazMat incidents

## ISO 14001

### Environmental Management Systems - Internal Auditor Training

2 days | MESH hours: 14

This course introduces the concepts of ISO 14001 and helps the participant acquire the skills needed to conduct a successful internal audit of an Environmental Management System (EMS). Exercises include a fully simulated audit under the guidance of a certified Plexus Trainer.

## ISO 50001

### Energy Management Systems Overview

1 day | MESH hours: 7

After the success of management systems for environmental issues (ISO 14001) and quality issues (ISO 9001), ISO has issued ISO 50001 for Energy Management Systems (EnMS). This course explains the requirements of the ISO 50001 standard and helps individuals determine if it is the best fit for their organization. The instructor provides typical approaches and a full range of documents used to meet those requirements. For those who have decided on developing an EnMS, this class will reveal the systematic process to building an EnMS and gaining certification.

## ISO 45001

### Occupational Health and Safety Assessment Series - Internal Auditor Training

2 days | MESH hours: 14

ISO 45001 is an internationally recognized specification for Occupational Health and Safety Management Systems (OHSMS) published in 2018. This course describes the implementation and maintenance of an OHSMS and describes practical methods for ISO 45001 certification. The OHSMS can be adopted by any organization wishing to control and reduce occupational accidents, incidents and near misses.

Continual improvement of a safety and health management system includes management commitment, employee engagement, identification and control of workplace hazards, and training. Our specialists can assist with any of the steps of a management system, in addition to the identification of regulatory requirements.

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## Customizing Training and Services at Your Site.

### Safety and Health Audits

Southeastern OSHA Training Institute Education Center instructors are available to conduct comprehensive or area-focused safety audits to identify safety and health hazards so that employers can reduce or eliminate them, creating a safer and healthier workplace. We provide consultative support to explain OSHA and other state and federal regulations, support your compliance requirements with these regulations and produce confidential reports of observations and subsequent recommendations.

### Customized Technical Assistance

Safety and health needs don't always fit neatly into the boxes. Contact the Southeastern OTI Education Center if you have a need for specialized technical assistance. Whether you need to develop a Confined Space Entry program, coordinate an emergency drill or establish a Safety Committee, our Safety & Health Specialists can customize a solution to meet your specific challenges.

**Did you know?** Our mobile trailer can bring the classroom to you! We can provide HAZWOPER, emergency planning, and incident command instruction at locations throughout the region.

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Our Specialists have assisted more than 120 companies with customized technical assistance to achieve certification to an international environmental or safety and health management system.





The MESH Certificate Program demonstrates achievement through continuing education in occupational safety, health and the environment. Designed for environmental, safety and health professionals, the MESH Certificate Program enables participants to gain practical knowledge while earning a respected credential.

Participants earn the MESH Certificate when 100 hours of continuing education are completed through the **Safety and Health Council of North Carolina, NC Department of Labor and/or NC State University Industry Expansion Solutions.**

All programs are designed for working professionals and require no prior experience or degree. Course work is chosen by the student to best suit their individual needs. There are several MESH certificates for an individual to consider:

### MESH

The original MESH certificate is a great choice for anyone responsible for workplace safety, health or environmental issues. This certificate requires completion of a 30-hour core course plus 70 elective hours.

### Construction MESH (C-MESH)

Designed for anyone responsible for construction safety and regulations, the C-MESH certificate requires 60 of the 100 MESH credits be specific to the construction industry.

### Industrial Hygiene MESH (IH-MESH)

If industrial hygiene concerns fall within an individual's responsibilities, they may want to consider the IH-MESH certificate which requires that 60 of the 100 MESH credits be specific to industrial hygiene topics such as air quality, chemical exposure, occupational noise, etc.

### Public Sector MESH (PS-MESH)

The PS-MESH certificate should be considered by anyone responsible for safety in a local, state or federal government environment. Requirements include completion of a core course plus 70 additional hours that feature a blend of general industry, construction and industrial hygiene topics.

### Advanced MESH

Individuals who have completed at least one type of MESH Certificate can continue their professional development by pursuing the Advanced MESH Certificate. This is accomplished by attending two weeks of advanced environmental and safety training instructed by specialists from the Safety and Health Council of North Carolina, NC Department of Labor or NC State Industry Expansion Solutions.



### OSHA's Public Sector Safety & Health Fundamentals Certificate

An individual should consider pursuing OSHA's Public Sector Safety & Health Fundamentals Certificate if they currently work for the public sector in a local, state or government agency in the occupational safety and health field.

To earn a Public Sector Safety & Health Fundamentals Certificate, one must complete a minimum of seven (7) OSHA Training Institute (OTI) Education Center courses, comprised of three (3) required courses and additional elective courses, for a minimum of 68 instructional hours. The certificate program is separated into tracks for either Construction or General Industry. An individual has the opportunity to choose from a variety of topics such as occupational safety and health standards for construction or general industry, safety and health management, accident investigation, fall hazard awareness and recordkeeping.

### For more information:

[ies.ncsu.edu/osha-certificate-osha](http://ies.ncsu.edu/osha-certificate-osha)

# Certificate Program FAQs

### How do I get started on my MESH Certificate?

Complete the free online registration at [ies.ncsu.edu/mesh](http://ies.ncsu.edu/mesh).

### Which courses apply to the MESH certificate program?

MESH credits are earned by completing continuing education training. Classes taken for college credit are not counted as MESH credit. All environmental safety and health courses offered by the MESH program sponsors at the NC State University Industry Expansion Solutions, the Safety and Health Council of NC and the NC Department of Labor are eligible for MESH credit. Training provided by other organizations may be counted up to a maximum of 25 of the 100 required hours.

### What is a core course for the MESH Certificate?

All MESH certificates require a course approximately 30 hours in length offered by one of the MESH program sponsors. Below are some CORE course options:

- OSHA #511–Standards for General Industry
- OSHA #510–Standards for Construction Industry
- OSHA #501–Outreach Trainer Course for General Industry
- OSHA #500–Outreach Trainer Course for Construction
- OSHA 30-Hour or NC 30-Hour for General Industry or Construction
- OSHA #521 Guide to Industrial Hygiene (for IH-MESH only)

### What is the time frame for MESH credit hours to be considered?

Training taken within the last five years can count towards MESH credit.

### What is the cost of the MESH Certificate?

Though some courses are offered at no cost, most courses charge a registration fee. Aside from registration and other course expenses, the only cost of the MESH Certificate Program is a \$99 fee paid when you complete the required credit hours. This fee covers administrative costs and delivery of your framed MESH certificate.

### What happens when I have completed my 100 hours towards my MESH Certificate?

Once we have received and verified documentation of your 100 hours of MESH credit, we will send instructions on how to submit the \$99 MESH Certificate fee. No re-certification is required.

### What are the required and elective courses to achieve the OSHA Public Sector Safety & Health Fundamentals Certificate?

The three (3) required courses for the Construction and General Industry Certificates include:

- OSHA Standards course (either OSHA #510 Standards for Construction Industry or OSHA #511 Standards for General Industry)
- OSHA #7500 Introduction to Safety and Health Management
- OSHA #7505 Introduction to Accident Investigation

The four (4) elective courses can be selected from a series of OTI Education Center courses that are relevant for the public sector. To select from this list of courses, go to [ies.ncsu.edu/osha-certificate](http://ies.ncsu.edu/osha-certificate).

### How do I apply for the OSHA Public Sector Safety & Health Fundamentals Certificate?

Upon completion of the last course toward earning the certificate, request an application verification form from the Southeastern OSHA Training Institute Education Center, where you must have completed at least one of the required or elective courses. Complete the application verification form, submit proof of successful completion of each course and remit the processing fee.

### What is the appropriate proof of successful course completion?

Appropriate proof of successful course completion is a course completion certificate or official transcript from the respective OTI Education Center.

### What is the cost of earning the OSHA Public Sector Safety & Health Fundamentals Certificate?

The registration fees for the OTI Education Center courses vary depending on the length of the class. Once you complete all of the course work, there is an administrative fee of \$95 to submit your application for the Public Sector Safety & Health Fundamentals Certificate.

### How does the OSHA Public Sector Certificate program differ from the MESH Certificate program?

The Public Sector Safety & Health Fundamentals Certificate program supports federal OSHA's mission by training public sector employees in occupational safety and health to reduce incident rates for workers in state and local governments.

All of the courses included in this program must be taken at an authorized OSHA Training Institute (OTI) Education Center, such as the Southeastern OSHA Training Institute Education Center at NC State University or the University of Tennessee.



## GENERAL INDUSTRY

### Required (3)

- OSHA #511 OSHA Standards for General Industry
- OSHA #7500 Intro to Safety and Health Management
- OSHA #7505 Intro to Incident (Accident) Investigation

### Electives (4) [minimum of 29 contact hours]

- OSHA #521 OSHA Guide to Industrial Hygiene
- OSHA #2255 Principles of Ergonomics
- OSHA #3095 Electrical Standards
- OSHA #2264 Permit-Required Confined Space Standard **or**
- OSHA #7300 OSHA Permit Required Confined Space Entry
- OSHA #7000 OSHA Training Guidelines for Safe Patient Handling
- OSHA #7005 Public Warehousing and Storage
- OSHA #2045 Machinery and Machine Guarding Standards **or**
- OSHA #7100 Intro to Machinery and Machine Safeguarding
- OSHA #7105 Evacuation and Emergency Planning
- OSHA #7115 Lockout/Tagout
- OSHA #7200 Bloodborne Pathogens Exposure Control for Healthcare Facilities
- OSHA #7205 Health Hazard Awareness
- OSHA #7210 Pandemic Influenza Preparedness
- OSHA #7845 OSHA Recordkeeping Rule Seminar

## CONSTRUCTION INDUSTRY

### Required (3)

- OSHA #510 OSHA Standards for the Construction Industry
- OSHA #7500 Intro to Safety and Health Management
- OSHA #7505 Intro to Incident (Accident) Investigation

### Electives (4) [minimum of 29 contact hours]

- OSHA #521 OSHA Guide to Industrial Hygiene
- OSHA #2255 Principles of Ergonomics
- OSHA #2264 Permit-Required Confined Space Entry
- OSHA #3015 Excavation, Trenching, and Soil Mechanics **or**
- OSHA #7410 Managing Excavation Hazards
- OSHA #3095 Electrical Standards
- OSHA #3115 Fall Protection **or**
- OSHA #7405 Fall Hazard Awareness for the Construction Industry
- OSHA #7105 Evacuation and Emergency Planning
- OSHA #7110 Safe Bolting: Principles and Practices
- OSHA #7205 Health Hazard Awareness
- OSHA #7400 Noise Hazards in the Construction Industry
- OSHA #7845 OSHA Recordkeeping Rule Seminar

Partnering for safer, healthier workplaces.



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