

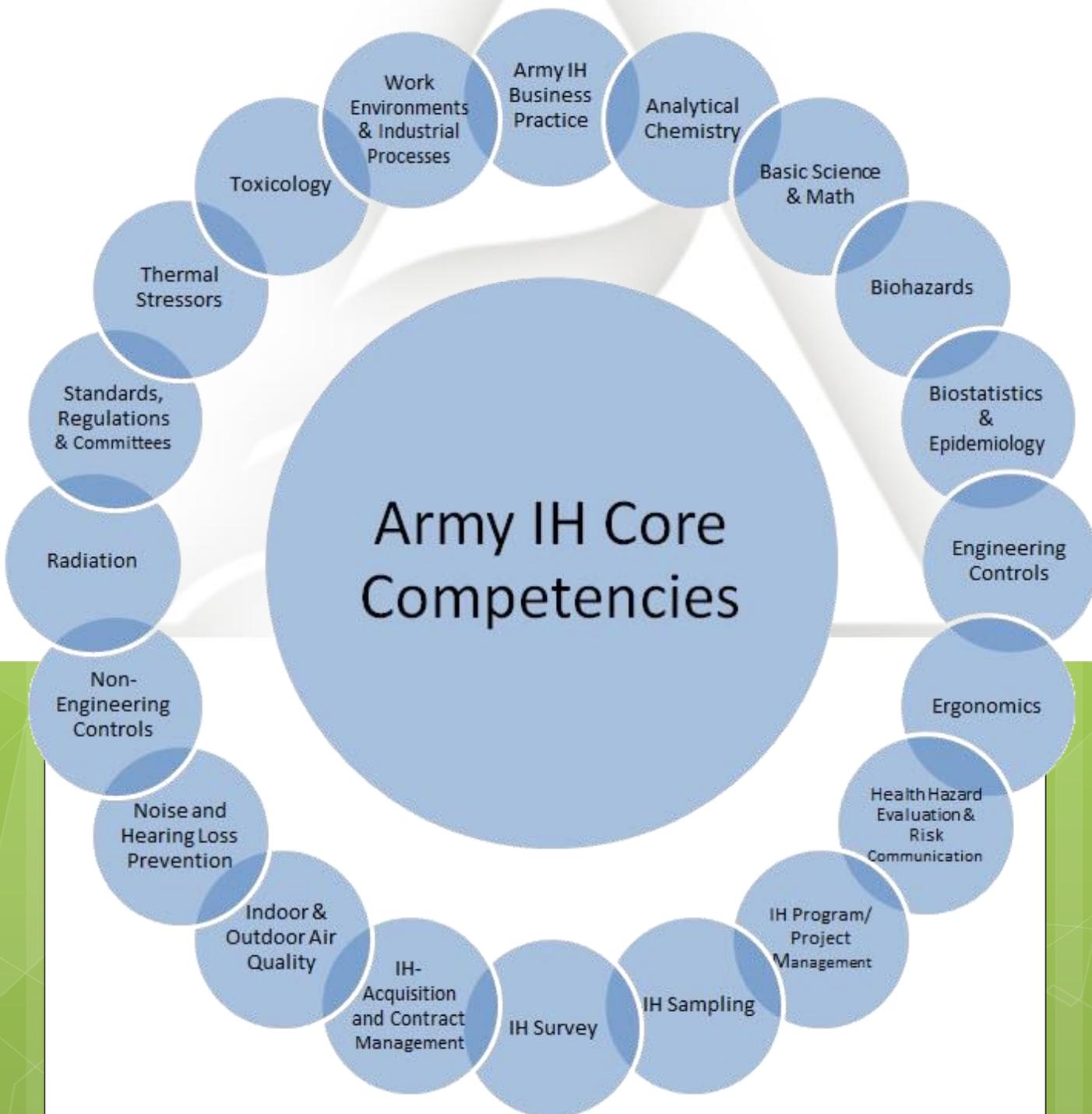


**PHC  
Industrial  
Hygiene  
Training  
Catalog**

**2016-2017**

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# Training Supports the Army IH Core Competencies



# How to Enroll (applies to all courses)

- <https://aiph-dohs.ellc.learn.army.mil>
- Search Catalog
- Highlight with mouse
- Select drop down arrow that says enroll
- Submit enrollment
- Look for course in “My Courses”

https://aiph-dohs.ellc.learn.army.mil

ARMY PUBLIC HEALTH CENTER

AIPH-DOHS Home EHE OEM PROGRAM 59 PROGRAM 88 PROGRAM 25 PROGRAM 22-23 PROGRAM 33 PROGRAM 1

Add Module Module Administrator Personalize Page

ALCON System Notice

\*\*\*\*\*ATSC-LLC  
ALCON SYSTEM  
BLACKBOARD  
NOTICE\*\*\*\*\*

ALCON:

The following dates  
are the next  
scheduled  
maintenance service  
outages:

11 MARCH 2016  
05:00 - 20:00

Course Catalog

AIPH-DOHS COURSES

Browse Course Catalog

Welcome to Blackboard

\*\*\*\*\*WELCOME TO ATSC - LLC BLACKBOARD  
SYSTEM\*\*\*\*\*

Welcome to the ATSC - LLC Blackboard System!  
Please familiarize yourself with your Blackboard by  
navigating and reading the information posted for you.  
Useful information includes recommended software  
for your course to work properly, courtesy links, and

My Announcements

No Institution Announcements have been posted in the last 7 days.

No Course or Organization Announcements have been posted in the last 7 days.

more announcements...→

My Courses

Courses where you are: Instructor

124 (move this course) HVAC Components & Controls  
(2.75hrs) (not currently available)

Paula Steven

## Browse Course Catalog

Search Catalog Course Name Contains MONSTER Creation Date Before 03/11/2016 Go Search this Category Search Entire

### Browse Categories

Select a category to see only courses belonging to that category

--unspecified category-- Go

### Browse Terms

Select a term to see only courses belonging to that term

--unspecified term-- Go

### Course ID

124\_MANAGE\_YOUR\_IH\_MONSTER\_WEBINAR\_SERIES\_0125P59\_2016\_001\_00\_N

### Course Name

Army Industrial Hygiene IH Monster & IH Leadership (Regularly Scheduled Webinars)

Enroll

# 2016/2017 Traditional Classroom Training Schedule

May 2016



May 16-20 DOEHS-IH Initial Course Bldg 6008 at APG, MD (APG Campus-28 seats)

May 31 - DOEHS-IH June 3 Bldg E1930 at APG, MD (Edgewood Campus- 16 seats)

June 2016



June 20-21 DOEHS-IH for Safety Professionals Bldg 6008 at APG, MD (APG Campus- 28 seats)

July 2016



July 12 & 13 Manage Your IH Monster Webinar "Taming That Monster - The SEG Bubble"

July 25-29 DOEHS-IH Initial Course - COE ONLY Sacramento, CA

Aug/Sept 2016



Aug 1-5 DOEHS-IH Initial Course - COE ONLY Bldg 6008 at APG, MD (APG Campus - 28 seats)

Sept 13 & 14 Manage Your IH Monster Webinar "De-Mystifying the Metrics"

Oct/Nov 2016



Oct 24-28 DOEHS-IH Initial Course Bldg 6008 at APG, MD (APG Campus- 28 seats)

Nov 1 & 2 Manage Your IH Monster Webinar " All About ANOVA"

Jan/Mar 2016



Jan 11 & 12, 2017 Manage Your IH Monster Webinar " Business Objects at Its Best"

Mar 14 & 15, 2017 Manage Your IH Monster Webinar " Mysteries of Medical Surveillance"

May 2017



May 8-12, 2017 Blueprint Reading and Design Review APG, MD (Edgewood Campus-30 seats)

May 15-19, 2017 Intermediate Industrial Hygiene Topics Course Phase 2 Dates- Phase 1 open on Blackboard NOW! at APG, MD (Edgewood Campus - 28 seats)

May 22-26, 2017 Industrial Ventilation 40hr Course at APG, MD (Edgewood Campus - 28 seats)

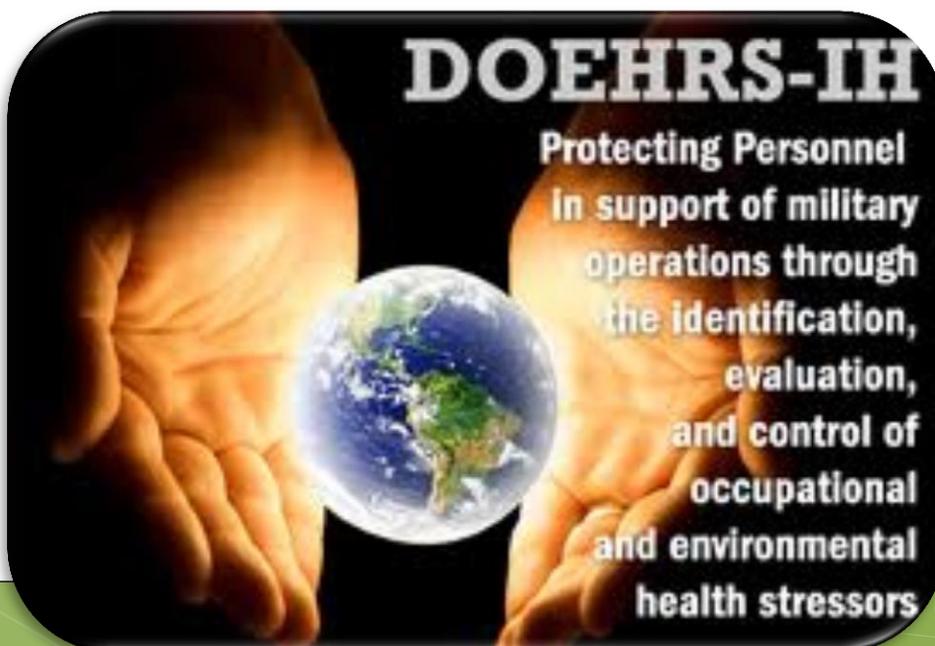
# Intermediate Industrial Hygiene Topics Course

- **Not your traditional classroom experience!**
- Learn Army IH Core Competencies
- Network with Subject Matter Experts and other Army IHs
- Hands on learning with IH equipment in real workplaces
- Learn IH Assessment Statistics using hands on practicums
- Team-building and decision making skills
- Mandatory Course for 0690s
- 80hrs (Phase 1 online – Phase 2 at APG, MD May 15-19, 2017)
- Phase 1 online OPEN NOW!
- Self-enroll at <https://aiph-dohs.elic.learn.army.mil>  
keyword 2017



# Army DOEHRS-IH Initial Course

- **8 hrs online & 4.5 days face to face hands on computer lab practicums/**
- **instruction** May 23- June 3, 2016
  - APG, MD
- Aug 1- 5, 2016
  - APG, MD
- Oct 24-28, 2016
  - APG, MD
- Phase 1 online OPEN NOW! (password protected enrollment – password is 2016)
- Self-enroll at <https://aiph-dohs.ellc.learn.army.mil>



Recommended  
Training for 0690s

# 40HR Industrial Ventilation Course

- **Not your traditional classroom experience!**
- Learn Engineering Control and Ventilation Core Competency
- Network with Subject Matter Experts and other Army IHs
- Hands on learning with IH equipment in real workplaces
- Learn IH Ventilation calculations and participate in hands on practicums
- 40hrs (all testing online – face to face training at APG, MD May 22-26, 2017)
- Registration online OPEN NOW!
- Self-enroll at <https://aiph-dohs.ellc.learn.army.mil> keyword 2017



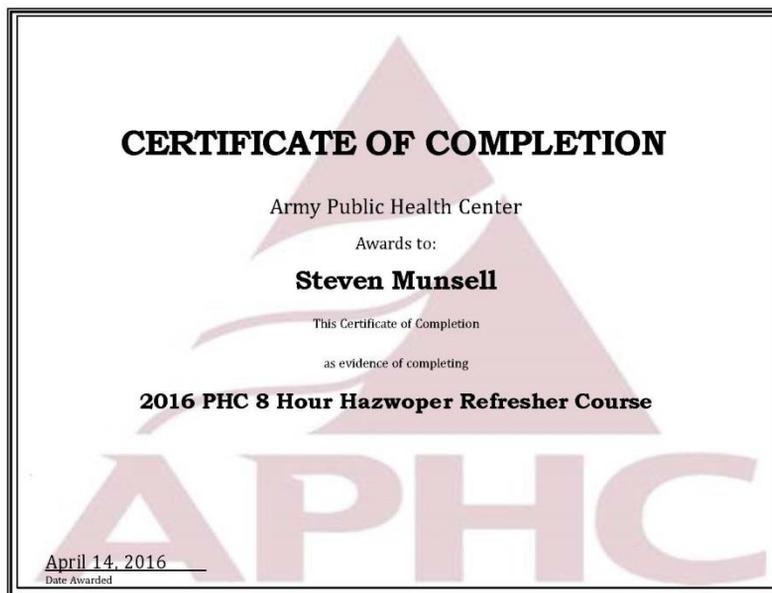
# Blueprint Reading & Design Review Course

- **Not your traditional classroom experience!**
- Supports the Engineering Control and Ventilation Core Competency
- Network with Subject Matter Experts and other Army IHs
- Hands on learning with actual blueprints
- Learn calculations, life safety codes, and participate in hands on practicums with blueprints
- 40 hrs (all testing online – face to face training at APG, MD May 8-12, 2017)
- Registration online OPEN NOW!
- Self-enroll at <https://aiph-dohs.ellc.learn.army.mil> keyword 2017



# Online Recertification Training

- HAZWOPER Refresher (8hr)
  - 2016 PHC 8 Hour HAZWOPER Refresher



# Live Web Conference Training

## o Manage Your IH Monster Webinars

- o March 22<sup>nd</sup> 1800 & 23<sup>rd</sup> 0700 Eastern
  - o Lab Interfaces
- o May 3<sup>rd</sup> 1800 & 4<sup>th</sup> 0900 Eastern
  - o Taming That Monster (Shop Monster)
- o July 12<sup>th</sup> 1800 & 13<sup>th</sup> 0900 Eastern
  - o Taming That Monster (SEG Monster)
- o Sept 13<sup>th</sup> 1800 & 14<sup>th</sup> 0900 Eastern
  - o De-Mystifying the Metrics
- o Nov 1<sup>st</sup> 1800 & 2<sup>nd</sup> 0900 Eastern
  - o All About ANOVA
- o Jan (2017) 11<sup>th</sup> 1800 & 12<sup>th</sup> 0900 Eastern
  - o Business Objects At It's Best
- o Mar (2017) 14<sup>th</sup> 1800 & 15<sup>th</sup> 0900 Eastern
  - o Magic of Medical Surveillance



<https://conference.apps.mil/webconf/ManageYourIHmonster>

Register at:

<https://AIPH-DOHS.elc.learn.army.mil>

(Course ID search = monster)

Conference Call numbers and codes, Slide Handouts, Recordings, Schedule of Events, and Certificates are always available at in the Blackboard Course for this meeting

# Online Self-Development, Self-Enroll, Self-Paced Training



## ○ Analytical Chemistry Competency

- Sampling Technical Guide 141 and Beyond (1.5 hrs)
  - Provide critical information about USAPHC Lab services that optimize IH customer's lab results
  - List information about USAPHC Lab services that optimizes the IH customer's lab results
  - Answer questions regarding the Technical content of the most recent TG 141
  - Explain the content found in the appendices of TG 141 about passive and particulate monitoring
  - Identify facts about passive and particulate monitoring information from the appendices of TG 141
  - Describe and identify appropriate analytical sampling methods

# Online Self-Development, Self-Enroll, Self-Paced Training



- **Army Business Practice Competency**
- Taking Field Notes the DOEHRs-IH Way!! (0.75 hr)
  - List examples of data collected during period and baseline IH surveys
  - Demonstrate use of the data collection tools/forms provided during this class
  - Recognize data that is/is not collected during IH periodic surveys

# Online Self-Development, Self-Enroll, Self-Paced Training



## ○ Basic IH Math and Science Competency

### ○ IH Math & Chemistry Review(0.5 hr)

- After taking this class students will be able to calculate:
  - PPM
  - Mg/M3
  - TLV
  - Sample volume
  - Moles
  - pH
  - Specific Gravity
  - Pressure, temperature, and volume of gasses

### ○ Introduction to Vision Conservation (5 hrs)

- Describe purpose and limitations of occupation vision standards
- Describe illumination principles, regulatory requirements, and human factors issues
- Describe the effects on illumination on color vision
- Describe scope and use of computers and computer displays
- Describe computer vision syndrome (CVS) visual and ocular symptoms
- Describe factors contributing to CVS
- Describe recommendations for managing CVS
- Describe the principles and properties of lasers
- Describe laser hazards and classification system
- Describe the effects on laser on vision and visual system
- Describe laser eye protection technology and device selection criteria
- Describe laser medical surveillance program and laser

# Online Self-Development, Self-Enroll, Self-Paced Training



## ○ Biohazards Competency

- IH COMPETENCY VERIFICATION: Biohazards
- Introduction to Bio-Safety Cabinets & BSL Labs (0.5 hrs)
  - Describe the concept of bio-safety levels
  - Describe common laboratory safety practices
  - Differentiate between primary and secondary barriers
  - Explain the purpose and function of bio-safety cabinets and chemical fume hoods
  - Identify the different classes & types of bio-safety cabinets & certification requirements
  - Describe general guidelines for laboratory spills

# Online Self-Development, Self-Enroll, Self-Paced Training



## ○ Biostatistics & Epidemiology Competency

- Basic Epidemiology for Industrial Hygienists (1.5 hrs)
  - Define epidemiology terms
  - Discuss the role and application of occupational epidemiology
  - Describe the five measures of occurrence
  - Discuss the main types of study designs used in occupational epidemiology
  - Discuss measures of association
  - Describe the validity and reliability of diagnostic and screening tests
- IH Assessment Statistics (4 hrs)
  - Using descriptive statistics, identify central tendency and spread
  - Calculate statistical problems (i.e. geometric mean, standard deviation, confidence intervals, etc.)
  - Distinguish between logarithmic and normal distributions
  - Identify the statistical test used in DOEHRs-IH
  - Demonstrate the Presentation of data interpretation and evaluation
- Industrial Hygiene Statistics (4 hrs)
  - Using descriptive statistics, identify central tendency and spread
  - Calculate statistical problems (i.e. geometric mean, standard deviation, confidence intervals, etc.)
  - Distinguish between logarithmic and normal distributions
  - Identify the statistical test used in DOEHRs-IH
  - Demonstrate the Presentation of data interpretation and evaluation

# Online Self-Development, Self-Enroll, Self-Paced Training



## ○ Engineering Controls & Ventilation Competency

- Ventilation: Fundamentals of Ventilation (2 hrs)
  - Recognize the properties of air under standard and non-standard conditions
  - Describe airflow behavior in a ventilation system
  - Identify the 3 different, but related pressures associated with a moving air stream
  - Describe basic measurement techniques & calculations to determine airflow and pressure in a ventilation system
  - Recommend and apply ventilation engineering principles and related calculations to control exposures
- Laboratory Construction Basics (6 hrs)
  - Recommend and apply ventilation engineering principles
  - Use related calculations to control exposures
  - Explain engineering design principles for laboratories and the regulations and standards pertinent to laboratory design and laboratory ventilation systems
  - Demonstrate, recommend, and apply ventilation engineering principles and related calculations to control exposures in laboratory work environments
- Ventilation Fans (1.25 hrs)
  - Differentiate between various types of fans
  - Identify criteria for fan selection
  - Demonstrate how to apply the Fan Laws

# Online Self-Development, Self-Enroll, Self-Paced Training



## ○ Engineering Controls & Ventilation Competency

### ○ Ventilation Hoods (2.25 hrs)

- Identify the various types of exhaust hoods
- Perform calculations to determine capture
- Measure velocity based on hood type
- Perform calculations to determine the type of hood needed
- Calculate entry losses based on hood type

### ○ Ventilation HVAC Components & Controls (2.75 hrs)

- Explain the difference between various types HVAC Components and Controls
- Identify criteria for use as general dilution ventilation controls
- Recognize and explain purpose of HVAC systems and components and incorporate knowledge into surveys

### ○ Ventilation Protocols (0.75 hr)

- After completing this course, participants will be able to demonstrate, recommend, and apply ventilation engineering principles and perform the related calculations for the following:
  - Disease Isolation Areas
  - Operating Rooms and Protective Environment Rooms
  - Lab Hoods
  - Paint Booths
  - Vehicle Exhaust
  - Welding Hoods

# Online Self-Development, Self-Enroll, Self-Paced Training



## o Ergonomics Competency

- o Industrial Workplace Ergonomics for DOEHRS-IH Users (Intermediate 0.5 hr)
  - o Name the tool used as a basis for DOEHRS-IH ergonomics assessments
  - o Identify ergonomic risk factors and using the hierarchy of controls, recommend controls
  - o Recognize the medical rationale for ergonomics risk factors
- o Introduction to DOEHRS-IH Ergonomics (1.0 hr)
  - o Explain and use the ergonomics assessment wizard included in DOEHRS-IH
  - o Name the tool used as a basis for DOEHRS-IH ergonomics assessments
  - o Name at least two risk factors that the DOEHRS ergo survey evaluates
  - o Explain the medical rationale for at least one ergonomics risk factor
- o Office Ergonomics (1.0 hr)
- o Applied Ergonomics (40 hr)

# Online Self-Development, Self-Enroll, Self-Paced Training



## ○ Hazard Assessment & Risk Communication Competency

### ○ GHS & HAZCOM UPDATE (1.75 hrs)

- Define GHS
- Describe changes from the old HAZCOM standard
- Recognize implementation dates for GHS
- Describe differences between the old MSDS to the new SDS
- Recognize steps involved in recording HAZCOM Inspection data
- Recognize steps involved in recording HAZCOM Inspection deficiencies

### ○ Public Affairs for the OSH Professional: Communicating With the Media (1 hr)

- Demonstrate knowledge of the media, how they operate, and how you can thrive in an interview situation
- Explain procedures for release of information when a work accident/incident occurs

### ○ Introduction to Risk Communication for OHS Professionals (1.75 hrs)

- Explain how risk communication theory, practices, and knowledge are used to improve overall risk management and operational success
- Explain the skills, tools, techniques and key elements that should be used to effectively communicate risk information
- Describe how effective risk communication processes that involve stakeholders can improve risk management

# Online Self-Development, Self-Enroll, Self-Paced Training



## o IH Sampling Competency

### o Basic Industrial Hygiene Sampling (4 hrs)

- o Determine appropriate sampling strategies
- o Select and describe the advantages and disadvantages of using various types of air sampling instruments
- o Collect full shift tasked based samples  
Recognize the basics of detection analysis principals and instrumentation calibration
- o Explain concepts of particles and particle sampling

### o Direct Reading Gas & Vapor Instrumentation (2.25 hrs)

- o Describe use of PID, FID, and IR equipment
- o Identify which theory/methodology is the basis of PID, FID, and IR instruments
- o List materials needed for calibration/sampling
- o Describe the sampling method/steps
- o Demonstrate entering real time direct reading sampling data into DOEHRS-IH
- o Calculate simple concentration calculations for PID instrument readings

### o IH Gas & Vapor Assessments Using Direct-Reading Sensor Technology (1hr)

- o Explain principals of FTIR gas sampling and analysis quality control
- o Demonstrate knowledge of the FTIR method for gases and vapor samples
- o Demonstrate a basic knowledge of the advantages and disadvantages of FTIR
- o Explain how to enter FTIR data into DOEHRS-IH

# Online Self-Development, Self-Enroll, Self-Paced Training



## o IH Survey Competency

- o DoD Exposure Assessment Model (1hr)
  - o At the end of the course, IH professionals will be able to describe and differentiate between the 8 steps of the DoD IH Exposure Assessment Model
- o IH and Exposure Assessment (2.5 hrs)
  - o list the components of a SEG
  - o explain how to create a SEG and how it is associated with a process
  - o recognize common mistakes when forming a SEG
  - o list types of exposure strategies
  - o discuss the difference between full period and partial period sampling
  - o explain the importance of OEL selection
  - o describe prioritization of survey and sampling tasks
  - o describe and define the workplace monitoring plan
- o Industrial Hygiene Survey and Sampling Etiquette
  - o General Sampling techniques
  - o Helpful sampling tips
- o Introduction to Industrial Hygiene for OHS Professionals (40 hr)

# Online Self-Development, Self-Enroll, Self-Paced Training



- **IH Program/Project Management Competency**

- IH Management and Ethics (0.5 hr)
  - Identify Army Regulations for Ethical Conduct
  - Explain the Industrial Hygiene Code of Ethics
  - Describe several case studies involving IH ethics

# Online Self-Development, Self-Enroll, Self-Paced Training



- **Indoor & Outdoor Air Quality Competency**
  - Environmental and Indoor Air Quality (4 hrs)
    - Identify who to call when you need assistance.
    - Recognize occupant symptoms that pertain to IAQ and Outdoor air hazards
    - Demonstrate ability to perform a comprehensive IAQ evaluation
    - Recommend control strategies to resolve any IAQ problems
  - Introduction to Indoor Air Quality Investigations (2 hrs)
    - identify the health effects and health related terms related to indoor air quality investigations
    - identify ventilation system related causes for poor indoor air quality
    - identify chemical agents and their sources that are related to poor indoor air quality
    - identify indoor pollutant sources related causes for poor indoor air quality
    - identify outdoor pollutant related causes for poor indoor air quality
    - describe standards, guidelines, and procedures of the indoor air quality investigation
    - list recommendations that the IH might make to improve indoor air quality

# Online Self-Development, Self-Enroll, Self-Paced Training



- **Non Engineering Controls Competency**
  - Non-Engineering Control Basics (1.5 hrs)
    - select appropriate non-engineering control based on specific hazards
    - calculate maximum use concentration for respiratory protection
    - identify and explain selection and fit criteria of personal protection equipment

# Online Self-Development, Self-Enroll, Self-Paced Training



## ○ Noise and Hearing Loss Prevention Competency

### ○ Army Noise Measurement and Assessment Course (1.25 hrs)

- Provide examples of potentially noise-hazardous areas
- Provide several facts about ultrasound exposures
- Conduct appropriate measurements to evaluate worker exposure
- Give examples of important Army business practices and assessment techniques used when conducting noise assessments in Army settings
- Discuss aspects of surveying suspected noise-hazardous areas
- Discuss several aspects of noise instrumentation

### ○ Basic Noise Concepts & Math (1.5 hrs)

- Students will be able to explain and identify noise hazard assessment, evaluation, and control of the following:
  - Noise Basics
  - Noise Assessment and Evaluation
  - Noise Control
  - Calculation Practical Exercise

### ○ CIH Noise Math Preparation (1.25 hrs)

- After taking this class students will be able to calculate:
  - Allowable exposure time
  - Maximum acceptable noise levels
  - Noise dose
  - Power Level
  - Adding noise sources
  - Octave band levels
  - Average level of 8-hour exposure
  - Establishment of 140dB contours

# Online Self-Development, Self-Enroll, Self-Paced Training



- **Noise and Hearing Loss Prevention Competency**
  - Industrial Hygiene Noise Instrument Basics (0.25 hr)
    - Select noise instruments
    - Set up noise instruments
    - Calibrate noise instruments
    - properly place noise instruments

# Online Self-Development, Self-Enroll, Self-Paced Training



## ○ Radiation Competency

- Radiation Math Concepts for Industrial Hygienists (4 hrs)
  - Identify sources of radiation & controls
  - Define radiation and radioactivity
  - Explain radiation quantities and units, and apply calculations
  - Identify and describe at least two ways an individual can be exposed
  - Explain radiofrequency radiation concepts
  - Explain electromagnetic field concepts
  
- Ionizing and Non-Ionizing Radiation Sources in the Medical Environment (1.25 hrs)
  - Identify sources of radiation & controls
  - Define radiation and radioactivity
  - Explain radiation quantities and units, and apply calculations
  - Identify and describe at least two ways an individual can be exposed
  - Explain radiofrequency radiation concepts
  - Explain electromagnetic fields

# Online Self-Development, Self-Enroll, Self-Paced Training



- **Standards, Regulations, & Committees Competency**
  - Industrial Hygiene Standards, Regulations and Committees (1.5 hrs)
    - Describe the mandatory IH policies and regulations within the Federal Gov't, DoD & U.S. Army
    - Identify the Army Industrial Hygiene Program Objectives
    - Identify major responsibilities of the Industrial Hygienist
    - Identify how the Industrial Hygiene Program supports other programs

# Online Self-Development, Self-Enroll, Self-Paced Training



- **Thermal Stressors Competency**

- Thermal Stressors (1.25 hrs)
  - Identify thermal stressors in the workplace
  - Demonstrate ability to measure and evaluate thermal stress
  - Identify and recommend methods to prevent and control the onset of thermal stress

# Online Self-Development, Self-Enroll, Self-Paced Training



## o Toxicology Competency

### o General Toxicology (2.25 hrs)

- o Define toxicology, toxicologists, toxicants, toxicity, hazard, potency, dose, concentration, response, and no observed adverse effect level (NOAEL)
- o Identify the primary classifications of toxicants
- o Identify the major routes of entry based on severity and significance
- o Define related terms and toxic effects
- o Discuss dose response relationship
- o Identify the primary chemical interactions associated with exposure to multiple hazardous materials

### o Pesticide Toxicology (1 hr)

- o Describe details of pests, history of pests, and associated diseases
- o Define pesticide toxicology related terms
- o Provide specific examples of pesticides (organophosphate, carbamate, pyrethroid, organochlorine), herbicides, fungicides and rodenticides
- o Describe the mode of action for various pesticides

# Online Self-Development, Self-Enroll, Self-Paced Training



## o Work Environments & Industrial Processes Competency

- o Industrial Hygiene Work Environments: Fire Protective Services (1.75 hrs)
  - o Recognize potential occupational health hazards
  - o Recognize commonly found controls
  - o Describe typical workplace evaluation techniques & industrial hygiene procedures (sampling and workplace monitoring plans)
  - o Describe typical findings and recommendations (controls and medical surveillance)
  - o Describe occupational health standards and regulations that are uniquely applicable to this common process (AR's, DAPAMS, TBMEDs, etc.)
  - o Demonstrate the ability to recognize and record hazards and controls for the Fire Protective Services Similar Exposure Group (SEG) in the Defense Occupational and Environmental Readiness System – Industrial Hygiene
  - o Recommend controls and medical surveillance for Fire Protective Services SEG members
- o Industrial Hygiene Work Environments: Confined Spaces (1hr)
  - o Define IH role and responsibilities in areas with permit-required confined spaces
  - o Identify hazards associated with areas with permit-required confined spaces
  - o Identify deficiencies with areas in areas with permit-required confined spaces
  - o Describe other duties unique to areas with permit-required confined spaces

# Online PHC Environmental Health Training



- Basic Waste Management
- Medical Waste Supplemental Training
- Medical Waste Transport Refresher
- Pharmaceutical Waste Disposal
- Shipping Category B Infectious Substances
- Shipping With Dry Ice
- Transport of Biomedical Material Refresher

\*Registration for the above courses are on the PHC Training website or through the individual course coordinator/instructor

# Other PHC Traditional Classroom Training of Interest



- Risk Communication Course
- Health Physics Workshop
- Laser & Radiofrequency Course
- Tri-Service Vision Conservation

\*Registration for the above courses are on the PHC Training website or through the individual course coordinator/instructor