

Water & Wastewater Continuing Education

| *Online Course Catalog*



Online Water & Wastewater Course Catalog

With Vector Solutions, water agencies can cost-effectively deliver quality courses to employees designed to increase safety comprehension, achieve compliance and decrease claims. Staying compliant with mandated training and continuing education requirements is critical. Vector Solutions comprehensive catalog offers online, state-approved water and wastewater continuing education.



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Vector Solutions’ Water and Wastewater continuing education courses have been designed to fulfill both the safety and technical recertification requirements for all levels of water industry professionals. Please contact Vector Solutions for details regarding how Vector Solutions’ courses meet requirements for each state. Courses cover the following categories: Environmental Awareness, General Safety, Human Resources, Occupational Health and Technical.



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GENERAL

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Aquifer Remediation (1-hour)

This course is divided into two key chapters. First, we are going to review some of the most common sources of groundwater contamination. And, in the second half, we are going to review some remediation alternatives to help restore the water quality of the impaired underground water resources. Through this course, engineers, architects, planners, and contractors will learn about the most common contamination sources and the industry best practices used for groundwater aquifer remediation.

Backflow Prevention Methods (1-hour)

Backflow is an undesirable flow condition caused by a differential pressure that causes the flow of water and other substances into the distribution pipes of a potable water supply system. This can result in contamination of the potable water supply. Backflow contamination can occur if there are existing cross-connections, backsiphonage or backpressure conditions, and unprotected cross-connection or failure of protection devices. Elimination of cross-connections and prevention of backflow is essential to maintaining the safety and health of the water supply. This course highlights the methods of backflow prevention and describes seven commonly used backflow prevention devices.

Backflow Prevention Overview (1-hour)

Backflow is an undesirable flow condition caused by a differential pressure that causes the flow of water and other substances into the distribution pipes of a potable water supply system. This can result in contamination of the potable water supply. Backflow contamination can occur if there are existing cross-connections, backsiphonage or backpressure conditions, and unprotected cross-connection or failure of protection devices. Elimination of cross-connections and prevention of backflow is essential to maintaining the safety and health of the water supply. This course highlights the methods of backflow prevention and describes seven commonly used backflow prevention devices.

Building Evacuation and Emergencies (1-hour)

In the event of an emergency every second counts. The safe orderly and prompt evacuation or relocation of building occupants depends on good planning and training. The goal of this course is to provide building occupants with information about emergency response plans and procedures in the event of any type of emergency.

Coagulation, Flocculation and Sedimentation (1-hour)

Water quality varies from location to location, and the definition of potable water can vary with locality. Most water treatment facilities use filtration as an important step in their water treatment processes, and some smaller municipalities might use a slow sand filtration as their only treatment method. This course will examine the treatment of water via filtration: what is filtered out of the water we drink, what are the different types of filters available, and how do those filtration methods work? We will also survey the regulatory requirements for potable water as set forth by the EPA, examine some of the most common pollutants, and look at a few case studies regarding specific filtration problems and the unusual solutions that have sometimes been reached.

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Corrosion Control Basics (1-hour)

Every day, hundreds of water main breaks occur throughout North America. Many of these are caused by corrosion. Corrosion can lead to tubercules and scale buildup in pipelines, which can impede the flow of water and damage equipment. Rust and pitting can cause leaks in the system. The cost of repairs and maintenance can strain budgets. Additionally, lead and copper corrosion can also have adverse health effects and both are regulated by the federal and state governments.

Disinfection Basics (1-hour)

This course is designed to provide you with the basic information and safety rules to help you work safely with and around the chemicals that many organizations use in the water disinfection process. This course concentrates on Aqua Ammonia, Sodium Hypochlorite, and Calcium Hypochlorite. We will examine each chemical and the safety procedures necessary for their safe handling and use.

Distribution Service to Customers (1-hour)

Water distribution systems are an integral part of keeping the public healthy and safe. The primary purpose of a water distribution system is the delivery of potable water for drinking and firefighting. To meet that goal, systems are designed by civil engineers and city planners to meet the changing needs of homes, offices, and industries. The water operator plays a key role in the installation of these systems. This course covers the methods of distribution to service customers, the installation of services as well as the maintenance of services. Also covered are the types of customers, the metering of these customers, and proper records to be kept for service customers.

Distribution System Basics, Materials, and Appurtenance (1-hour)

Water distribution systems are a vital part of ensuring public health and safety. The primary purpose of water distribution systems is the delivery of sufficient amounts quantities of potable water at adequate pressure while maintaining state and federal water quality that meets or exceeds State and Federal regulation standards. While drinking water delivery is the most visible part of the distribution system, the system must be built to meet peak hour demands and maximum daily demand, plus fire flow requirements that firefighting can place upon it. Firefighting can require twice the pressure or more of normal delivery pressure. To meet these demands and goals, systems are designed by engineers working closely with water distribution operators. They work closely with city planners to meet residential and industrial needs while maintaining water quality. This course explores the various materials and equipment utilized in installing and maintaining potable water in clean water distribution systems.

Drinking Water Quality - Monitoring & Security (1-hour)

It's understood that drinking water should be suitable for human consumption and for all usual domestic purposes. So, what is suitable drinking water? Ideally, drinking water should not contain any microorganisms known to be pathogenic or capable of causing diseases. It should be free from chemical contamination, and it should have the right physical properties. In this interactive, online course, we will discuss key information regarding drinking water monitoring and security required to ensure the health, safety, and welfare of the general population being served by water supply facilities. We will discuss the minimum parameters recommended for monitoring drinking water, and the surveillance process and products used for monitoring water quality. We will also discuss the types of threats to facilities, and types of physical security elements that may be put into place to help protect these facilities.

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Drinking Water Quality - Water Treatment Technology (1-hour)

Safe drinking water supplies are crucial to the health, safety, and welfare of society. In this interactive, online course, we will discuss key information regarding water treatment technology of drinking water, including characteristics and capabilities of water treatment processes, source water quality, distribution system considerations, and residuals management. Technical personnel in the design, engineering, maintenance and operations areas of facilities will find this information critical to the successful operation of drinking water related facilities. This course addresses critical factors that affect health, safety and welfare of the population being served by the water treatment system.

Effective Groundwater Supply Management (1-hour)

Effective groundwater supply management is essential if groundwater resources are to remain viable for the foreseeable future. Groundwater management is a rapidly evolving discipline. It is incorporating ever more factors into the evaluation of principles that will ensure no harmful effects arise from the utilization of this resource while ensuring that all potential resources that can be maintained are used to satisfy an ever-increasing demand. We'll review some history of Groundwater Management from its beginnings in the mid-20th century through the present day. We'll also cover current parameters and environmental factors of concern.

Effective Meter Reading (1-hour)

Reading a meter is a basic skill every water operator should master. This course covers the proper way to obtain meter readings; including common types of meters, access to meters, how to obtain a direct readout from a meter, and alternative methods of obtaining meter reads.

Excavation (1-hour)

This course will address all the potential hazards one can encounter in an excavation, and how to clearly identify and protect one's self from those hazards. After completing this course, individuals will be able to recognize and eliminate hazardous conditions, be knowledgeable in different soil classifications, and choose the correct protective solution for a specific scope of work.

Filtration Basics (1-hour)

Water quality varies from location to location, and the definition of potable water can vary with locality. Most water treatment facilities use filtration as an important step in their water treatment processes, and some smaller municipalities might use a slow sand filtration as their only treatment method. This course will examine the treatment of water via filtration: what is filtered out of the water we drink, what are the different types of filters available, and how do those filtration methods work? We will also survey the regulatory requirements for potable water as set forth by the EPA, examine some of the most common pollutants, and look at a few case studies regarding specific filtration problems and the unusual solutions that have sometimes been reached.

Groundwater Treatment (1-hour)

Untreated or inadequately treated groundwater poses a serious problem in public water supply systems. The U.S. Environmental Protection Agency (EPA) has estimated that about 70 percent of groundwater systems provide either untreated or inadequately treated groundwater. This means

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that 20 million people receive water that has not been disinfected, 70 million if we include those who receive water that has not been properly treated, log inactivation, or removal of viruses. According to the U.S. Centers for Disease Control and Prevention (CDC), groundwater is responsible for the majority of waterborne disease outbreaks.

Hazardous Waste Treatment (1-hour)

Hazardous waste can exist in liquid, solid or slurry forms. It may originate in a current manufacturing process or from clean-up of an abandoned site. This course will review the background and design considerations for different methods of treating hazardous waste.

Hydraulics (1-hour)

This course covers the concepts, calculations, and operational uses of hydraulics in the water industry, and will examine the physics behind certain operations and processes within the water treatment industry. Subjects included are density and specific gravity, pressure and force, head, head loss, pumping rates and pump heads, flow rates, and flow measuring devices.

Incident Investigation (1-hour)

Thousands of incidents occur throughout the United States every day. The failure of people, equipment, supplies or surroundings to behave or react as expected, causes most of the incidents. Incident investigations determine how and why these failures occur. This course introduces techniques for investigating an incident and documenting the results of the investigation.

Indoor Air Quality (1-hour)

Concerns with Indoor Air Quality (IAQ) have increased since energy conservation measures were instituted in office buildings during the 1970s minimizing the infiltration of outside air and contributing to the buildup of indoor air contaminants. IAQ generally refers to the quality of the air in an office environment. Other terms related to IAQ include Indoor Environmental Quality (IEQ) and “Sick Building Syndrome.” This course highlights the causes and effects of poor indoor air quality. This training course has 6 learning modules with a ten-question exam.

Introduction to Pumps and Motors (1-hour)

Pumps and motors are mainstays of the water industry as almost every water system has them. In a water operator’s career, either at a treatment plant or in distribution, pumps, and motors will be experienced and, in some cases, operated and maintained. This course introduces and provides general information on pumps and motors. The course is not intended to provide how to operate or maintain pumps, as these efforts require more details, knowledge, training, and experience than this course offers. Electrical and mechanical skills and abilities are needed, along with the safety proficiencies to work on pumps, which are outside of this course.

Lead Contamination of Public Water Systems (1-hour)

Potential lead contamination from drinking water presents a significant health risk. Notable examples of lead contamination include a crisis in Flint, Michigan, a city that, for a variety of reasons, failed to protect its citizens from the dangers of this toxin. Other examples are reported far too regularly. Such

an example includes an EPA report that approximately 350 schools and day-care centers across the nation failed 470 lead tests between 2012 and 2015. Even more disturbing was a change in Washington, DC water system disinfection methods that caused a spike in lead levels to thousands of homes — a result that was kept hidden from residents for three years. Another example includes Sebring, Ohio schools, where officials shut down water fountains due to elevated lead levels.

Low Voltage Electrical Safety (1-hour)

Employees who do not have a basic understanding of electrical safety are often exposed to dangers associated with hazardous energy sources. In addition, the servicing and maintenance of equipment may expose employees to these hazardous energy sources. Annual electrical safety training will help prevent an electrical accident from happening at your workplace.

Mathematics Applied (1-hour)

For almost every job within any technical area of public service or general public works, there is a requirement for an understanding of basic mathematics and how to apply such concepts. Within the water industry there are necessary mathematics calculations that must be successfully mastered for the safety and health of the public who utilize domestic and industrial water systems. This course covers beginning applied mathematics as used in the water supply industry. It is structured for beginning-level operators or those who have not had recent experience with mathematics in their jobs. Subjects covered in this course are: average daily flow, overflow rate, filter loading rate, detention time, and well operation calculations.

Mathematics Basics (1-hour)

Water operators must master basic math skills in order to perform the more advanced calculations required day-to-day on the job. This course covers basic mathematical notation, methods, and calculations. Included in the course are powers and scientific notation, dimensional analysis, rounding and estimation, solving for the unknown value, ratios and proportions, percent, averages, linear area and volume measurements, and conversions.

Principles of Debt Collections (1-hour)

On average each year, the U.S. Federal Trade Commission receives more complaints from customers about debt collection practices than any other issue. Nearly 32,000 of these complaints pertain to in-house collectors, such as utility companies and other non-third-party collection agencies. By following key guidelines in their customer communication and service delivery, employees can reduce the number of complaints while also improving their chances of successfully collecting past-due account balances. This course reviews principles of bill collection for water operators that can improve customer retention and boost the chances of success in collections. In addition to other topics, the course also discusses the Fair Debt Collection Practices Act, customer service strategies in the context of collections, and tips for improving collections success.

Protecting Water Systems Through Backflow Prevention (1-hour)

Property owners may turn to Registered Architects or Professional Engineers to determine whether or not a property requires a backflow prevention device. According to the EPA there are approximately 155,000 public water systems in the United States. It is the responsibility of these public water utilities to provide safe drinking water to over 90 percent of the United States. Water main breaks and fire fighting efforts among other events can cause a condition called backsiphonage or backflow. This

creates a condition where non-potable water from a building can contaminate the public water supply system. Anyone associated with the design, construction, maintenance of water systems needs to be aware of the potential for backflow and understand how to prevent it. In this interactive, online course, we will discuss the difference between back pressure and back siphoning, and the conditions where each occur. We will learn how to select the appropriate backflow device given the potential hazard and describe how backflow devices operate. Upon completing this course you will be able to recognize examples of potential backflow situations and how to prevent backsiphonage and/or backpressure. You will also be able to differentiate types of backflow preventers and the importance of regular testing and maintenance.

Pumping Stations - Pumps, Motors and Electrical Systems (2-hour)

Pumping stations are necessary where large amounts of water must be transported through a piped distribution system. Knowing the characteristics of piping and valve materials will allow you to optimize the hydraulic design of your pumping stations. This interactive online course will teach you about the different water distribution station pump classifications. You will also learn about pump designs and motor types. Additionally, you will learn about the electrical systems of pumping stations.

Quality of Water (CA AB-54) (0.5-hour)

Assembly Bill (AB) 54 is aimed at helping California improve the quality of its drinking water in public water systems, particularly in areas where financial investment is needed. To accomplish this, AB 54 contains a number of new regulations and provisions specifically addressing mutual water companies and Local Agency Formation Commissions or LAFCOs in California. It is important for all mutual water company personnel in California, especially board members, to understand the new provisions and regulations contained in AB-54 and how it may affect their operations and job responsibilities. This course provides a general overview of AB-54 with an emphasis on its requirements and provisions for mutual water company personnel.

Rehabilitation of Water Distribution Systems: Current Technologies (1-hour)

Water distribution renewal methods can be divided into three overall categories. They include pipe repair, rehabilitation and replacement. There is some obvious overlap between the technologies used on these three methods, such as the case of sliplining as it can be used for spot repairs and for entire system rehabilitation. The applications of the different technologies will vary per the specifics on each project. However, please note that any systems used need to be approved by the NSF/ANSI 61 standard for use in water distribution project. At the end of this course Contractors, Engineers, Water System Operators and Architects will be able to identify technologies that are used to repair, rehabilitate and replace aging water distribution systems.

Rehabilitation of Water Distribution Systems: Designing Renewal Projects (1-hour)

The average age of water distribution systems within the U.S. is between 50 to 100 years. This is right at the design life cycle of many systems; thus local water agencies are investing more and more in the rehabilitation of existing water distribution systems instead of the construction of new systems. We are going to review some of the key technical guidelines and standards for the design of renewal projects for water distribution systems.

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Rehabilitation of Water Distribution Systems: Selecting Rehab Methods (1-hour)

The average age of water distribution systems within the U.S. is between 50 to 100 years. This is right at the design life cycle of many systems; thus local water agencies are investing more and more in the rehabilitation of existing water distribution systems instead of the construction of new systems. We are going to review some of the key items that need to be considered when selecting a rehabilitation method to maintain the operability of water distribution systems.

Storm Water Management: Storm Water Pollution Prevention Plan (SWPPP) (1-hour)

Proper storm water management is critical to ensure safe drinking water for all of us. In addition, the EPA can levee substantial monetary fines as well as criminal prosecution for violators of EPA storm water regulations. This course will discuss the environmental impacts of storm water runoff, the NPDES storm water program, and the elements of a storm water pollution prevention plan.

Stormwater Pollution Prevention (1-hour)

This course was designed to educate employees on storm water pollution prevention techniques. This course covers the regulations, permits, and authorities that govern storm water pollution. It explains the components of facility-specific storm water pollution prevention plans and describes the fundamentals of storm water sampling. It also covers major ways storm water contributes to water pollution as well as the role of supervisors and employees in preventing storm water pollution.

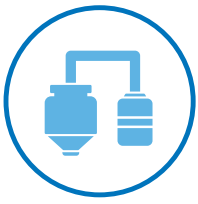
Wastewater Treatment (1-hour)

There are approximately 16,000 municipal wastewater treatment plants in the U.S. Many of these plants use extensive and sophisticated water treatment technologies that require highly-developed operating skills. Such treatment plants face numerous challenges to effective operations and to compliance with federal, state, and local requirements. According to the EPA about 11,000 enforcement actions have been taken against small wastewater facilities around the country. This course reviews the fundamentals of the wastewater treatment process. Various aspects of the process are discussed encompassing each stage of treatment, including primary, secondary, and tertiary or advanced treatments. Additionally, the course reinforces the importance of wastewater treatment to human health and the environment and highlights the federal regulations applicable to wastewater treatment.

Water Main Installation (1-hour)

Water distribution systems are an integral part of keeping the public healthy and safe. The primary purpose of a water distribution system is the delivery of potable water for drinking and firefighting. To meet that goal, systems are designed by civil engineers and city planners to meet the changing needs of homes, offices, and industries. The water operator plays a key role in the installation of these systems. This course will illustrate each step in water main installation, including excavating a trench, inspecting and laying pipe, backfilling a trench, and pressure and leak testing and flushing and disinfecting new pipelines. Safety precautions for all these steps will be made clear as well.

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HUMAN RESOURCES & EMPLOYMENT PRACTICES

- Alcohol-Free Workplace
- Diet & Nutrition
- Drug-Free Workplace
- Health & Wellness
- Office Safety
- Reasonable Suspicion of Alcohol for Supervisors
- Reasonable Suspicion of Drugs for Supervisors
- Sexual Harassment Awareness
- Workplace Diversity
- Workplace Stress
- Workplace Violence



Alcohol-Free Workplace (1-hour)

Alcohol, a very simple molecule, is one of the most widely used drugs in the world. Like other general anesthetics, alcohol is a central nervous system depressant. When alcohol is consumed, it is distributed throughout the body and exerts most of its effects in the brain. In general, its effects are proportional to its concentration in the blood. It is estimated that alcohol abuse costs society an estimated \$116 billion a year and is associated with up to half of all traffic fatalities. In the workplace, the costs associated with alcohol abuse include increased absences, accidents, and errors.

Diet & Nutrition (1-hour)

This training course was designed to provide managers and employees with basic concepts of diet and nutrition. Your job is important to you and your family. Proper nutrition is a means of staying at a job so that one can provide for his or her family. These lessons are designed to give you information so that your life will be healthy.

Drug-Free Workplace (1-hour)

Drug abuse can have dangerous and costly effects in the workplace. This course highlights these impacts, and provides useful information about the different types of drugs that are commonly abused and how to evaluate each element and subsidiary component of a safety and health program.

Health & Wellness (1-hour)

This training course was designed to provide employees with basic concepts of health and wellness. Your job is important to you and your family. Good health is a means of staying at a job so that one can provide for his or her family. These lessons are designed to give you information so that your life will be healthy. Topics include mental health, stress, physical activity, stretching, burning calories and much more.

Office Safety (1-hour)

In today's fast-paced environment, employees are not always aware of the fact that hazards exist in the office setting - hazards that can result in serious injuries. In fact, statistics have shown that a majority of accidents and injuries occur in the office environment. Most employees work in a variety of settings and when they are made aware of the potential hazards that exist, they can then take the appropriate steps to avoid injury and help other employees to do the same.

Reasonable Suspicion of Alcohol for Supervisors (1-hour)

This program is designed to help managers, supervisors, and human resource professionals understand the legal and practical issues associated with testing employees for drugs and/or alcohol use. It will inform designated employees on the "do's" and "don'ts", "why's" and "how's" in making a fair, reliable and reasonable suspicion of alcohol testing referral to cover suspected employees performing safety-sensitive job functions.

Reasonable Suspicion of Drugs for Supervisors (1-hour)

Reasonable Suspicion is a belief, drawn from specific objective facts and reasonable inferences, that an employee is using drugs in violation of work rules or regulations. If drug use is suspected, it is every supervisor's responsibility to proactively assist the employee and protect others who may be affected by erratic behavior due to drug use. This program is designed to help managers, supervisors, and HR professionals understand the legal and practical issues associated with testing employees for drug use. It will inform designated employees on how to make a fair, reliable, and reasonable suspicion for a drug referral to cover suspected employees performing safety-sensitive job functions.

Sexual Harassment Awareness (1-hour)

Sexual harassment is any form of sex discrimination that violates Title VII of the Civil Rights Act of 1964. When sexual harassment occurs, it can affect others in the workplace creating an intimidating, hostile or offensive work environment.

Workplace Diversity (1-hour)

Cultural diversity can strengthen an organization's values and enhance community awareness. Due to our country's rapid growth and ever-changing diverse populations, organizations are realizing strength in the marketplace is linked to their ability to attract a culturally diverse workforce. Unfortunately, discrimination still occurs on many levels. The goals of this program are to promote awareness and encourage acceptance, describe strategies to create a positive and accepting work environment, and to highlight the steps to take should discrimination occur in the workplace.

Workplace Stress (1-hour)

Stress is one of the leading causes for reduced productivity in the workplace. Stress can also cause worker illness to the point of missing days of work, which makes it an important issue for employers as well as employees. Stress is present everywhere decisions are made, it becomes a problem when these decisions conflict. Actions and their consequences cause stress, although not all stress is negative, a certain amount of stress is necessary to survive. As you move through this training course, look for coincidence between the text and your life and you will be on the path to positive stress outlook.

Workplace Violence (1-hour)

Workplace violence is violence or the threat of violence against workers. However, it manifests itself, workplace violence is a growing concern for employers and employees nationwide. Some 2 million American workers are victims of workplace violence each year. The Occupational Safety and Health Act's (OSH Act) General Duty Clause requires employers to provide a safe and healthful workplace for all workers covered by the OSH Act. This course addresses the responsibilities of the workplace and the worker, to recognize, prevent, and protect employees against Workplace Violence.

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OSHA & COMPLIANCE

- Advanced HAZWOPER Awareness (4 modules)
- Asbestos Awareness
- Back Injury Prevention
- Bloodborne Pathogens
- Combustible & Flammable Liquids
- Compressed Gas Safety
- Confined Space Entry
- CPR Academic
- Disaster Preparedness
- Driving Safety
- Eye Safety
- Fall Protection
- Fire Extinguisher Safety
- Fire Prevention Safety
- Flagger and Cone Safety
- Forklift Safety
- General Construction Safety
- General First Aid (2 modules)
- General Office Ergonomics
- Hand & Power Tool Safety
- Hazard Communication
- Hazardous Material Identification and Spill Prevention
- HAZMAT Transportation
- Hearing Conservation
- Industrial Ergonomics
- Laboratory Safety
- Ladder & Scaffolding Safety
- Laser Safety
- Lead Awareness
- Lock-Out / Tag-Out
- Machine Guarding
- Materials Handling, Storage, Use, & Disposal
- Personal Protective Equipment
- Radiation Safety
- Respiratory Protection
- Risk Assessment Analysis
- Slips, Trips, and Falls Prevention
- Trenching & Shoring
- Welding Safety
- Working in Extreme Temperatures



Advanced HAZWOPER Awareness (4 modules) (8-hour)

Employers are required to develop and implement Hazardous Waste Operations (HAZWOPER) training to inform workers (including contractors and subcontractors) performing hazardous waste operations to the level and degree of exposure they are likely to encounter. Training must be conducted initially and annually thereafter.

Asbestos Awareness (1-hour)

The purpose of this course is to educate about Asbestos, what it is, where it is commonly found and dangers it can pose. Also covered is what to do if you come in contact with asbestos.

Back Injury Prevention (1-hour)

The back is the most injury-prone part of the body, but all back injuries are preventable. Back injury incidents rank near the top of all occupational work injuries. These injuries can result in pain, lost work time, inconvenience, and possible disability. This course highlights techniques for protecting and strengthening the back.

Bloodborne Pathogens (1-hour)

Bloodborne pathogen (BBP) exposures occur every day, and you may not even notice. Workers who frequently handle blood, bodily fluids, materials contaminated with blood or bodily fluids, and medical waste are exposed to BBP infections at a higher rate than the general working population.

Combustible & Flammable Liquids (1-hour)

This module covers the two primary hazards associated with flammable and combustible liquids: explosion and fire. In order to prevent these hazards, this course and the standard upon which it is based (29 CFR 1910.106), address the primary concerns of design and construction, ventilation, ignition sources, and storage.

Compressed Gas Safety (1-hour)

This course provides the information employees need to handle and transport these potentially volatile storage containers. The program reminds employees to work safely and avoid injuries when handling compressed air and gas.

Confined Space Entry (1-hour)

During the course of employment, you may be exposed to the hazards associated with confined space operations. This course provides awareness level training for activities related to confined space entry. Additional training at your job site is recommended in order to gain a better understanding of the confined spaces at your place of employment.

CPR Academic (1-hour)

Each year approximately 250,000 people die of sudden cardiac arrest in the United States. Cardiopulmonary resuscitation (CPR) is a combination of rescue breathing and chest compressions delivered to victims thought to be in cardiac arrest. During cardiac arrest, the heart stops pumping blood, blood pressure falls to zero, and the pulse stops. Within 10 seconds a victim may lose consciousness and become unresponsive. CPR helps circulate blood that contains oxygen to the brain and other vital organs and can help “buy time” until help arrives. This course highlights how to recognize the signs of cardiac arrest, how and when to perform CPR, and how to use an AED to help a person in cardiac arrest. This course is meant to supplement CPR training conducted by the American Heart Association. It is not to be used as the primary guide for patient care. Please contact the American Heart Association for the hands-on class information.

Disaster Preparedness (1-hour)

When disaster strikes, the best protection is knowing what to do. Preparedness is everyone’s job. Not just government agencies but all sectors of society -- service providers, businesses, civic and volunteer groups, industry associations and neighborhood associations, as well as every individual citizen -- should plan ahead for disaster.

Driving Safety (1-hour)

Traffic accidents are a leading cause of incidental deaths among US workers. This training course presents information to aid employees in operating vehicles safely.

Eye Safety (1-hour)

The loss of sight can be devastating and is easily preventable. A recent survey found that three out of five workers who suffered an eye injury wore no eye protection. Of those who did, 40% wore the wrong kind. You should wear safety eyewear whenever there is any chance that machines or operations present the hazard of flying objects, chemicals, harmful radiation or a combination of these or other hazards. This course reviews the selection of appropriate eyewear and basic first aid for the eye.

Fall Protection (1-hour)

Each year falls consistently account for the greatest number of fatalities in the construction industry and are a major concern in other industries. Events surrounding these types of accidents often involve a number of factors including unstable working surfaces, misuse of fall protection equipment and human error. Studies have shown that the use of guardrails, fall arrest systems, safety nets, covers and travel restriction systems can prevent many deaths and injuries from falls.

Fire Extinguisher Safety (1-hour)

Hand portable fire extinguishers are considered to be the first line of fire defense for fires of limited size. They represent the most portable fire fighting equipment available and are used primarily to suppress small, incipient stage, accessible fires before these fires have the opportunity to grow in size and intensity.

Fire Prevention Safety (1-hour)

The standards and regulations written by the Occupational Safety and Health Administration (OSHA), and the National Fire Protection Association (NFPA) identify topics that employees must be familiar with in respect to the prevention of fires and what to do when there is a fire. Supervisors are responsible for providing the information employees need to reduce the risk of fire at work and to know what to do if there is a fire. Fire prevention is the term used to take proactive measures to reduce the potential for a fire to start. Every work place will have varying general and unique elements in their fire prevention plan.

Flagger and Cone Safety (1-hour)

This course will teach flagger roles and responsibilities for jobs that are close to traffic, which may include streets, highways, or any place with public motorized vehicle access. After its completion, individuals will be knowledgeable in flagging and will be able to recognize and eliminate hazardous conditions that prevent injuries to employees, motorists, and pedestrians, while safely protecting public property.

Forklift Safety (1-hour)

Many companies fail to realize that all forklift operators must be trained, authorized and certified per OSHA regulations. Failure to properly train and certify employees involved in forklift operations exposes employers to citations and monetary penalties, as well as an increased exposure to incidents caused by untrained operators. This course introduces basic forklift safety.

General Construction Safety (1-hour)

There are many ways to prevent incidents from occurring. Full attention must be given by employees to all aspects of work in order to prevent injuries and illness from occurring. Having a good understanding of basic construction safety is important. Various areas of construction safety will be covered in each of the following lessons.

General First Aid (2 modules) (2-hour)

Module 1 - First aid is the basic medical knowledge that could save a life. The risks involved with daily life may call for immediate action and you may be the only one capable of doing it. First aid will never replace professional medical care, but many injuries will only require first aid care. This course covers basic first aid techniques, including care for childbirth, chest pain, and stroke. This course is Part 1 of a two-part series. Module 2 - First aid is the basic medical knowledge that could save a life. The risks involved with daily life may call for immediate action and you may be the only one capable of doing it. First aid will never replace professional medical care, but many injuries will only require first aid care. This course covers basic first aid techniques, including care for insect bites, injuries, burns, and poisonings. This course is Part 2 of a two-part series.

General Office Ergonomics (1-hour)

Ergonomics, also known as human factors, is the science concerned with understanding the interactions between humans and other parts of a system, in an effort to minimize the physical and psychological stresses which are part of every workplace environment. Ergonomics applies information regarding a worker's capacity and capability to the design of jobs, products, workplaces,

and equipment. This course presents background information on office ergonomics and discusses how to evaluate and control ergonomic hazards, including detailed information on proper computer workstation practices. Employees in an office environment can use this information to help them reduce the risk of injury on the job.

Hand & Power Tool Safety (1-hour)

Tools are such a common part of our lives that it is difficult to remember that they may pose hazards. All tools are manufactured with safety in mind but, tragically, a serious incident often occurs before steps are taken to search out and avoid or eliminate tool-related hazards. In the process of removing or avoiding the hazards, workers must learn to recognize the hazards associated with the different types of tools and the safety precautions necessary to prevent those hazards.

Hazard Communication (1-hour)

Exposure to hazardous chemicals can present numerous dangers to workers. More than 30 million workers are exposed to one or more chemical hazards across various industrial sectors. And with hundreds of new hazardous chemicals being introduced annually in addition to the estimated 650,000 already existing hazardous chemical products, the risk is increasing every year. This poses a serious problem for many workers and their employers. OSHA's Hazard Communication Standard (HCS), sometimes referred to as the Right-to-Know regulation, is designed to ensure that information about these dangers is shared with those who need to know. Chemical manufacturers, distributors, and importers must convey hazard information to downstream employers by means of labels on containers and safety data sheets (SDSs). In addition, all covered employers must have a hazard communication program to get this information to their employees through labels on containers, SDSs, and training. This course covers the HCS with an emphasis on what it is and how to comply, and incorporates recent changes made to the standard in accordance with the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals. HCS provides guidelines to help prevent chemical hazard incidents and the adverse health effects that may result.

Hazardous Material Identification and Spill Prevention (1-hour)

This course covers what composes a hazardous material and presents the requirements for the general handling, storage, and disposal of hazardous materials. It covers what a Safety Data Sheet (SDS) is and how to recognize the information contained in an SDS. It teaches you to recognize the special response procedures necessary to handle hazardous materials spills and covers personal protective equipment (PPE) and why you'd use it. It also identifies the procedures for cleaning up a hazardous material spill.

HAZMAT Transportation (1-hour)

Preventing spills, fires and explosions of hazardous materials during transportation is a major goal of the U.S. Department of Transportation (DOT). In order to protect the environment, the public and employees from such incidents, DOT has developed and adopted rigorous standards for packaging and identifying hazardous materials that are shipped by any mode of transportation. This module will briefly discuss general DOT classifications and requirements for packaging and shipping hazardous materials. The DOT standards must be followed if you ship hazardous chemicals or samples by any means of transportation. DOT standards must also be followed for any chemical, sample, or hazardous material you may take with you (or check in your baggage) on a flight by scheduled or chartered aircraft.

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Hearing Conservation (1-hour)

Noise-induced hearing loss is one of the most common occupational diseases and the second most self-reported occupational illness or injury. The extent of hearing damage depends on the loudness of noise to which you are subjected and the length of time you are exposed. Unprotected, continued exposure to loud noise, defined by OSHA as noise levels over 85 decibels (averaged over an 8-hour time period), can damage the hair cells of the inner ear and result in permanent hearing loss. At these noise levels, a company must have a Hearing Conservation Program. This course outlines the requirements of a Hearing Conservation Program.

Industrial Ergonomics (1-hour)

Human factors/ergonomics is the study of the interaction of the worker and the job in an effort to minimize physical and psychological stress in the workplace. It applies information regarding worker's capacities and capabilities to the design of jobs, products, workplaces and equipment. This course introduces the general principles of occupational ergonomics, as well as how to prevent repetitive stress injuries (RSIs) and how to recognize the warning signs of RSIs.

Laboratory Safety (1-hour)

The Occupational Safety and Health Administration (OSHA), recognizing the unique characteristics of the laboratory workplace, tailored a standard for occupational exposure to hazardous chemicals in laboratories to include approximately 934,000 employees in 34,214 industrial, clinical, and academic laboratories. This course describes the requirements of the Occupational Exposure to Hazardous Chemicals in Laboratories, including the written chemical hygiene plan to ensure employees are protected from all potentially hazardous chemicals in use in their work area(s).

Ladder & Scaffolding Safety (1-hour)

This module covers the activities related to ladders and scaffolding and provides basic safety instructions to protect workers from the hazards associated with ladders and scaffolding. Construction of all ladders and scaffolds should conform to the provisions of the applicable state, provincial or local codes, whichever are most restrictive. Special-use climbing equipment, such as a combination stepladder-work platform, also must comply with the applicable codes.

Laser Safety (1-hour)

Lasers are used everyday. They are used in grocery store scanners, auto repair shops for alignments and laser-point pens. Lasers have made it easier for employees to track inventory, conduct research and enhance presentations. They have become common in the workplace and are used in research, medical and other industries. Most lasers are capable of causing eye injury to anyone who looks directly into the beam or through reflective conditions. This course will introduce you to the basic hazards involved with using lasers and how to prevent potential injuries.

Lead Awareness (1-hour)

Lead overexposure is a leading cause of workplace illness. This course will cover background information about lead and its uses in buildings, health effects, regulations and respiratory protection.

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Lock-Out / Tag-Out (1-hour)

Lock-out/tag-out procedures safeguard employees from hazardous energy while they are performing service or maintenance on machines and equipment. The procedures necessary to shut down and lock-out or tag-out machines and equipment require that employees receive training, conduct periodic inspections and maintain the energy control program.

Machine Guarding (1-hour)

Crushed hands and arms, severed fingers and blindness are just some of the possible machinery-related injuries. There are many hazards created by moving machine parts. Machine guarding and training are essential for protecting workers from needless and preventable injuries.

Materials Handling, Storage, Use, & Disposal (1-hour)

More employees are injured in industry while moving materials than while performing any other single function. In every day operations, workers handle, transport and, store materials. They may do so by hand, by manually operated materials handling equipment, or by power operated equipment. This course highlights basic warehouse safety to prevent employee injury.

Personal Protective Equipment (1-hour)

PPE is designed to protect employees from hazards. Examples of PPE include hard hats, ear plugs, safety glasses, respirators, and hand and foot protection, as well as chemical-protective clothing (CPC) like chemical-resistant gloves and chemical-resistant bodysuits. The selection of appropriate protective equipment should be based on the potential hazards and risks that may be encountered in the workplace. This course describes the different types of PPE, as well as how to select and maintain PPE.

Radiation Safety (1-hour)

This training course was designed to provide managers and employees with basic concepts of radiation and radiation protection. At your job site, part of your job may be to protect people's health and the environment from harmful exposure to radiation.

Respiratory Protection (1-hour)

Workers require respiratory protection when working in environments that contain oxygen-deficient atmospheres and airborne contaminants. In this course, we will discuss respirator program requirements. We will cover some respiratory hazards that workers may encounter and describe various respirators used to protect workers from these hazards. We will also discuss respirator selection and requirements for use. All users of respirators are advised to consult with the manufacturer's information to ensure proper application and understanding of the respirator limitations that are unique to each make and model.

Risk Assessment Analysis (1-hour)

This training program will present and discuss the three basic methods used to evaluate safety and health program effectiveness.

Slips, Trips, and Falls Prevention (1-hour)

Slips, trips and falls constitute the majority of general industry accidents. They cause 15% of all accidental deaths and are second only to motor vehicles as a cause of fatalities. The OSHA standards for walking and working surfaces apply to all permanent places of employment, except where only domestic, mining or agricultural work is performed.

Trenching & Shoring (1-hour)

This course highlights the requirements in the standard for excavation and trenching operations, provides methods for protecting employees against cave-ins and describes safe work practices for employees.

Welding Safety (1-hour)

Welding, cutting and brazing are hazardous activities that pose a unique combination of both safety and health risks to more than 500,000 workers in a wide variety of industries. The risk from fatal injuries alone is more than four deaths per thousand workers over a working lifetime. Even with advances in control technology, welders continue to be exposed to hazardous welding fumes and gases. This course introduces basic techniques for keeping workers safe.

Working in Extreme Temperatures (1-hour)

The body's ability to regulate temperature, an important physiological function, can be impaired under temperature extremes and result in heat or cold related illnesses. As a result, exposure to an excess of heat or cold can cause a medical emergency. Because employees may work under conditions of hot or cold temperature extremes, they must understand the nature of heat and cold stress-related disorders and the keys to the effective management of these types of emergencies: knowing the necessary measures to prevent these problems, and being able to identify and respond to these situations if they do occur.

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