Missouri Emergency Response Commission (MERC) 2019 Hazardous Materials Emergency Preparedness (HMEP) Grant Pipeline and Hazardous Materials Safety Administration (PHMSA) Course Catalog

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Hazardous Materials Awareness (MERC001) (MERC Delivery)

Minimum Class Size: 10
Course length: 8 hours
Prerequisites: None

This course meets the objectives of NFPA 1072: Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents, (2018 Edition), OSHA 29 CFR 1910. 120. Topics will include: First Responder Roles; Identifying Hazardous Materials; Determining Routes of Entry; Understanding Hazardous Materials Regulations and Definitions; Identifying Occupancy Types and Locations where you could find Hazardous Materials; Identifying Container Shapes, Placards, Labels, and Markings, and Colors that could identify Hazardous Materials; Understanding Written Resources such as Shipping Papers and Safety Data Sheets; Understand how to use the Emergency Response Guide (2016); Understanding how using your Senses can harm you; Understand how Monitoring and Detection Devices can help you identify hazardous Materials; and How to identify a Terrorist Attack and Illicit Laboratories. Successful completion will require a score of 70% or greater on the written exam. Successful completion of this course meets the prerequisite for the Missouri Division of Fire Safety certification testing.

Hazardous Materials Awareness (MERC001) (Internal Delivery)

Minimum Class Size: 5
Course length: 8 hours
Prerequisites: None

This course meets the objectives of NFPA 1072: Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents, (2018 Edition), OSHA 29 CFR 1910. 120. Topics will include: First Responder Roles; Identifying Hazardous Materials; Determining Routes of Entry; Understanding Hazardous Materials Regulations and Definitions; Identifying Occupancy Types and Locations where you could find Hazardous Materials; Identifying Container Shapes, Placards, Labels, and Markings, and Colors that could identify Hazardous Materials; Understanding Written Resources such as Shipping Papers and Safety Data Sheets; Understand how to use the Emergency Response Guide (2016); Understanding how using your Senses can harm you; Understand how Monitoring and Detection Devices can help you identify hazardous Materials; and How to identify a Terrorist Attack and Illicit Laboratories. Successful completion will require a score of 70% or greater on the written exam. Successful completion of this course meets the prerequisite for the Missouri Division of Fire Safety certification testing.

Hazardous Materials Operations (MERC002) (MERC Delivery)

Minimum Class Size: 10
Course length: 24 hours
Prerequisites: Successful completion of approved Hazardous Materials Awareness course; and compliant with 29 OSHA 1910.134 and NFPA 1500 7.14.3 (no facial hair shall come in contact with the SCBA mask).

This course meets the objectives of NFPA 1072: Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents, (2018 Edition), and OSHA 29 CFR 1910. 120. Topics will include: Chemical Properties and Hazardous Materials Behavior; Incident Management; Strategic Goals and Tactical Objectives; Terrorist Attacks, Criminal Activities, and Disasters; Personal Protective Equipment; Decontamination; Product Control; Air Monitoring and Sampling; Victim Rescue and Recovery; Evidence Preservation and Sampling; and Illicit Labs. Successful completion will require a score of 70% or greater on the written exam and completion of the State Certified Practical Skills. Successful completion will require a score of 70% or greater on the written exam and successful completion of the State Certified Practical Skills exam. Full Personal Protective Equipment required; Helmet, hood, gloves, boots, bunker pants, bunker coat, and SCBA; or Tyvek suit, boots, hardhat, gloves and SCBA.

Hazardous Materials Operations (MERC002) (Internal Delivery)

Minimum Class Size: 5
Course length: 24 hours
Prerequisites: Successful completion of approved Hazardous Materials Awareness course; and compliant with 29 OSHA 1910.134 and NFPA 1500 7.14.3 (no facial hair shall come in contact with the SCBA mask).

This course meets the objectives of NFPA 1072: Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents, (2018 Edition), and OSHA 29 CFR 1910. 120. Topics will include: Chemical Properties and Hazardous Materials Behavior; Incident Management; Strategic Goals and Tactical Objectives; Terrorist Attacks, Criminal Activities, and Disasters; Personal Protective Equipment; Decontamination; Product Control; Air Monitoring and Sampling; Victim Rescue and Recovery; Evidence Preservation and Sampling; and Illicit Labs. Successful completion will require a score of 70% or greater on the written exam and completion of the State Certified Practical Skills. Successful completion will require a score of 70% or greater on the written exam and successful completion of the State Certified Practical Skills exam. Full Personal Protective Equipment required; Helmet, hood, gloves, boots, bunker pants, bunker coat, and SCBA; or Tyvek suit, boots, hardhat, gloves and SCBA.

Hazardous Materials Technician (MERC003)

Minimum Class Size: 15
Course length: 80 hours
Prerequisites: Hazardous Materials Awareness and Hazardous Materials Operations.

This course meets the objectives of NFPA 1072: Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents, (2018 Edition), and OSHA 29 CFR 1910. 120. Topics will include: Chemical Properties and Hazardous Materials Behavior; Incident Management; Strategic Goals and Tactical Objectives; Terrorist Attacks, Criminal Activities, and Disasters; Personal Protective Equipment; Decontamination; Product Control; Air Monitoring and Sampling; Victim Rescue and Recovery; Evidence Preservation and Sampling; and Illicit Labs. Successful completion will require a score of 70% or greater on the written exam and completion of the State Certified Practical Skills. Successful completion will require a score of 70% or greater on the written exam and successful completion of the State Certified Practical Skills exam. Full Personal Protective Equipment required; Helmet, hood, gloves, boots, bunker pants, bunker coat, and SCBA; or Tyvek suit, boots, hardhat, gloves and SCBA.

Hazardous Materials Technician Refresher Courses (MERC004)

Minimum Class Size: 10
Course length: 8 hours
Prerequisites: Hazmat Awareness or higher.

Satisfies requirements to maintain certification for hazardous material technician. This course will review applicable laws, regulations, and standards, scene management, utilizing relevant technical documents, and review selection of PPE and decontamination methods. This is a lecture and hands on course where the students will be put into scenarios where they will have to research, and solve a variety of problems with a time period given to review and re-familiarize themselves with mitigation methods, techniques, and tools as well monitoring instrumentation. Pre requisites include the following: Hazmat Awareness or higher. Available topics are as follows: site management, identifying the problem, hazard assessment/risk evaluation, selecting personal protective clothing/equipment, information/management/resource coordination, implementing response objectives, decontamination, and terminating the incident

Hazmat IQ (MERC016)

Minimum Class Size: 15
Course length: 8 hours
Prerequisites: None

This training is presented by HazMat IQ, LLC. HazMat IQ is a patented HazMat/WMD response system formulated from years of HazMat emergency response experience. This course describes a response tool that incorporates a series of easy-to-understand job aids called Smart Charts- an integral part of the Hazmat IQ system. These charts enable responders to handle an incident, based primarily on chemical names and associated chemical properties. Topics covered include: 20 Second Above the Line and Below the Line size-up, chemical research in under two minutes, selecting the correct meters, and choosing correct mission-driven Personal Protective Equipment. Target Audience: This course is recommended for response personnel with all levels of experience- especially those who desire a unique field chemistry refresher and an in-depth review of the National Institute for Occupational Safety and Health Guide.

Chemical Suicide for the Emergency Responder (MERC019)

(DNR or MERC Delivery)

Minimum Class Size: 5
Course length: 3.5
Prerequisites: None

Chemical Suicides have taken place in Missouri and continue to grow in numbers across the United States. This method of suicide has grown rapidly in Japan since 2007 and experts agree that it will continue to grow here in the U.S. over the next several years. This form of suicide creates some very dangerous hazards for the emergency responder due to the highly toxic gasses that are created. This three and one-half hour classroom course will provide background on the history of Chemical Suicide in Japan and the US. It will provide a detailed look at the chemicals most commonly used during Chemical Suicide, their effect on the victim and precautions the responder should take to protect themselves during the response. In this course, participants learn how to safely respond to chemical suicide situations. And finally, we will discuss basic emergency response practices that you as a responder should take into consideration when faced with a Chemical Suicide response.

Anhydrous Ammonia Railroad Training (MERC 024)

Minimum Class Size: 5
Course length: 4 hours
Prerequisites: None

Although fairly rare, when incidents occur involving rail transportation of hazardous materials, the immediate response of emergency service personnel should be to prevent loss of life and personal injury, prevent property loss and address environmental concerns. To perform this response safely and effectively, the types and quantities of hazardous materials involved and a knowledge about their properties must be immediately determined. The response methods employed when handling a rail incident will depend upon the properties of the material involved, the condition of the containers and existing conditions at the scene. The safety of each person involved must be considered at all times while developing and carrying out an emergency response. Any response must be consistent with the skills and training of the responders. This course will provide an overview of the following topics as well as an opportunity for hands on review of Railroad equipment and safety equipment: Railroads and Hazardous Materials, Working around Railroads and Equipment, Assessing a Railroad Incident and Implementing Incident Command, Product Identification, and Railroad Equipment. This course does not qualify for Division of Fire Safety Hazardous Materials Awareness certification.

Ignitable Liquids and Class B Foams (MERC032)

Minimum Class Size: 10
Course length: 8 hours
Prerequisites: See description

This flammable liquid program was developed by National Foam and is considered one of the most comprehensive foam firefighting programs in the nation. It is designed to assist with emergency response preparedness and to help increase the technical competence of firefighters. The course starts with a 4-hour classroom session and is followed by live fire evolutions, demonstrating the proper techniques for gaining access and controlling ignited and un-ignited flammable liquids. FULL PERSONAL PROTECTIVE GEAR INCLUDING SCBA IS REQUIRED TO PARTICIPATE IN EVOLUTIONS AND RECEIVE A CERTIFICATE. Full PPE (firefighting turn out gear) includes: helmet, hood, coat, bunker pants, gloves, and boots. It is recommended that PPE meet current NFPA standards for firefighting protective equipment. Please note, you will also be required to be clean-shaven to partake in the live fire evolutions and receive a certificate of completion. Must be 18 to participate in live burn portions of the class. May still attend lecture portion.

Ignitable Liquids and Ethanol Blended Fuels (MERC 033)

Minimum Class Size: 10
Course length: 8 hours
Prerequisites: None

This course is designed to educate emergency response personnel of the principles for handling Ethanol, E85 and E95 fuel emergencies. With the growing national ethanol production, participants must be able to make the correct decision in how to handle assorted ethanol emergencies. In the classroom you will see, discuss and learn about vapor pressure, flash point, upper and lower flammable limits, properties of hydrocarbons and polar solvents (Ethanol, E85 and E95), ethanol plant layout and operation, how foam works and determine foam flow and foam needs for typical incidents, the difference between: Class A foam (wetting agents), AFFF Class B foam for hydrocarbons, alcohol resistant foam (AR-AFFF) for E85, and Emulsifiers. Outside, participants will observe and compare foam longevity from aspirating and fog nozzles; compare regular AFFF and AR-AFFF actions on an E95 fire; compare raindown, backboard and roll-on application techniques for E95; and observe burn back and dry chemical application.

Handling Propane Gas Emergencies (MERC 034)

Minimum Class Size: 15
Course length: 8 hours
Prerequisites: See below description

This comprehensive training curriculum was developed by a group of highly qualified propane product and container specialist from the National Propane Gas Association. This course is about how to safely respond to, mitigate and control an emergency incident involving propane or LP-Gas. Students will learn the physical properties and characteristics of propane and how to properly manage an incident scene. Students will become proficient in their tactical responses by participating as teams in live fire approaches of simulated LP-Gas releases. Students will learn relevant safety features of propane storage devices and other considerations of tank designs. **Must be 18 to participate in live burn portions of the class (**may still attend lecture portion).

Hazmat Victim Decon for EMS (MERC 036)

Minimum Class Size: 5
Course length: 8 hours
Prerequisites: None

In this course, participants will learn how to, recognize and identify hazardous substances, implement a response plan utilizing the incident command system, establish a decontamination corridor, protect themselves by selecting proper personal protective equipment, triage, decontaminate, and treat victims. The course instructor will provide personal protective equipment (PPE) for participants to train with, including boots, chemical-resistant suits, gloves, and sample respiratory protection. Participants are encouraged to bring with them the actual respiratory protection that they would be expected to wear. Participants are also encouraged to dress in casual or athletic attire and should expect to experience mild exertion and thermal stress when performing practical exercises in PPE.

Anhydrous Ammonia Awareness (MERC043)

Minimum Class Size: 5
Course length: 2 hours
Prerequisites: None

This 2-hour course will provide an overview of the chemical and physical properties of Anhydrous Ammonia and how they dictate response options for emergency responders. This course will also cover tactical options for first-due engine companies for mitigation of releases, protecting lives, and performing rescues. Decontamination, PPE and other tactical considerations will also be explored. This course is a 2-hour workshop only and the student does NOT need PPE.

MC306/406 (MERC051)

Minimum Class Size: 15
Course length: 8 hours
Prerequisites: None

This course is designed to educate first responder on the common practices responders may be required to perform while responding to a MC 306/406 incident. Class participants will have the opportunity to develop skills while operating on an overturned MC 306. The eight hour class starts with a three hour classroom session describing the different skill stations with overall discussion of safety procedures and common safe work practices that will be expected during all skill stations, i.e. PPE, eye, hand and foot protection. Skill stations will include: incident command, safety officer hot tapping off loading, grounding and bonding foam application (training foam application for dome clamping and plugging) dome clamp, plugging and patching. All stations will be operated simultaneously in a rotation. Students will have a limited amount of down time. While students will have a different time of completion of skills, instructors will attempt to mirror an incident to give students real-time incident timing.

Air Monitoring for Fire Service Hazardous Materials Response (NEW OFFERING)

Minimum Class Size: 10
Course length: 4 hours
Prerequisites: None

This 4-hour course will provide students with an understanding of the chemical/physical properties associated with various hazardous materials and how to implement an effective air monitoring strategy to address the specific hazards found at a confirmed or suspected hazardous materials release. Students will receive hands-on training using the most common types of monitoring equipment available to first responders including 4-gas meters, photoionization detectors (PID), various radiation detectors, and colorimetric tubes. Information in this course meets the regulatory requirements found in OSHA 29 CFR 1910.120 and 1910.146. In addition, the course meets or exceeds the air monitoring portions found in NFPA 472 Standards for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents and NFPA 1072 Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications. ****Course is offered pending curriculum development. If you request this course, please make sure you have a second choice as a backup**.

Hazmat Basic Life Saver Provider (NEW OFFERING)

Minimum Class Size: 10
Course length: 8 hours
Prerequisites: none

This eight-hour course would address the NFPA 473 competencies for a BLS level medical responder at a hazardous materials incident. Instruction would include analyzing a hazmat incident; collecting hazard information, understanding chemical and physical properties, identifying signs and symptoms of exposure, hazmat patient triage, decontamination methods for patients, hazmat monitoring, and identifying the proper information that needs to be relayed to a receiving hospital. ****Course is offered pending curriculum development. If you request this course, please make sure you have a second choice as a backup.**

Hazmat Advanced Life Saver Provider (NEW OFFERING)

Minimum Class Size: 10
Course length: 8 hours
Prerequisites: Hazmat BLS Provider

This eight-hour course would address the NFPA 473 competencies for an ALS level medical provider at a hazardous materials incident. (PREREQ Hazmat BLS Provider) The competencies include antidotal treatment for multiple classifications of substances, determining the nature of the chemical substance with regard to the signs and symptoms of exposure, understanding multiple toxidromes for several different types of materials, and understanding the pharmaceuticals related to hazmat antidotal treatment. ****Course is offered pending curriculum development. If you request this course, please make sure you have a second choice as a backup.**