



CTOS - Counter Terrorism Operations Support Center for Radiological/Nuclear Training

CTOS is the nation's premier Radiological/Nuclear Weapons of Mass Destruction Counter Terrorism training center. The U.S. Department of Energy, National Nuclear Security Administration (NNSA) CTOS—Center for Radiological/Nuclear Training at the Nevada National Security Site (CTOS/NNSS), Las Vegas, Nevada, has trained over 100,000 of America's First Responders since 1998. CTOS develops and delivers resident, mobile, and web-based training in prevention and response to terrorist use of radiological or nuclear weapons of mass destruction.



CTOS/NNSA

CTOS staff includes professional curriculum developers, scientists, researchers, and first responder subject matter experts providing instructional courses that relate directly to the first responder communities radiological and nuclear mission.

CTOS represents the NNSA's Nevada Field Office (NFO) as a charter member of the National Domestic Preparedness Consortium (NDPC). The mission of the NDPC is to enhance the preparedness of federal, state, local, and tribal emergency responders/first receivers and teams, including non-governmental organizations and the private sector, to reduce the nation's vulnerability to incidents involving weapons of mass destruction, terrorism, and all-hazard high-consequence events by providing technical assistance and developing, delivering, and assessing plans, training, and exercises. The NDPC operates under the oversight of the U.S. Department of Homeland Security/Federal Emergency Management Agency/National Preparedness Directorate (DHS/FEMA/NPD) National Training and Education Division (NTED).



WEB CAMPUS [WWW.NTS-CTOS.COM](http://www.NTS-CTOS.COM)

Note: All students who have previously attended a CTOS course (online or instructor led) have an account established in our web campus. Log in assistance: ctosreg@nv.doe.gov

EMAIL

Resident Courses: ctosreg@nv.doe.gov
Mobile Training: ctosmtreg@nv.doe.gov

REGISTRATION DESK

Toll Free: 1.877.WMD.CTOS (1.877.963.2867)
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ADDRESS

U.S. Department of Energy
CTOS-Center for Rad/Nuc Training
at the Nevada National Security Site
P.O. Box 98521, M/S NLV 126
Las Vegas, NV 89193-8521

COST

All training and course materials are provided at no cost to eligible participants. Funding provided by FEMA/NPD/NTED.

CEUs

Participants are eligible to receive continuing education units (CEUs) through the University of Nevada, Las Vegas (UNLV) upon successful completion of certified courses.

DELIVERY METHODS



Mobile Training Team (MTT)



Resident Course Travel to NNSS



Web-based training (WBT)

CTOS FanPage



CTOS Facebook



CTOS Twitter



www.ctosnnsa.org



CTOS Course Catalog





CTOS – Center for Radiological/Nuclear Training

PREVENTION COURSES

Prevention level courses are designed to improve the nation's capability to detect unauthorized attempts to import, possess, store, develop, or transport nuclear or radiological material for use against the nation.



PER-243

Primary Screener/Personal Radiation Detector Course

This instructor-led, exercise-based course is designed to train the Preventive Radiological/Nuclear Detection (PRND) mission using a personal radiation detector (PRD) to perform a preliminary radiological assessment. Responders operate PRDs to detect radiation, verify radiation alarms, localize the source of radiation, measure radiation level, and assess the threat status of a situation. Participants employ the PRD to help adjudicate potential threats regarding situations with people, vehicles, packages, and facilities. Sealed radioactive sources are used during drills and practical exercises. These sources are intended to simulate types of radioactive material that may be encountered in the public domain. Course content includes a primary screener's role in the Global Nuclear Detection Architecture (GNDA) and the National Preparedness Core Capabilities.



Performing a secondary level screening on a vehicle – CTOS/NNSA



PER-243-1

Primary Screener/Personal Radiation Detector Course Train-the-Trainer

This instructor-led, exercise-based course is designed to train law enforcement and public safety officers to instruct the PER-243 Personal Radiation Detector (PRD) Course. This course is requested by regional or statewide programs that have developed a comprehensive plan for future PRD course delivery. Such plans require the jurisdiction to show acquisition of training equipment and sealed radioactive source material for replicating training locally. All requests must be approved through the U.S. Department of Homeland Security. It is the responsibility of the jurisdiction to select course participants. All participants must provide written documentation of instructor certification and be part of the regional or statewide training program. Upon completion of this course, participants are eligible to conduct PER-243 PRD courses for their agency and surrounding jurisdictions. The Train-the-Trainer course is conducted using agency-specific personal radiation detectors. PER-243-1 provides Train-the-Trainer level instruction on instruments, procedures, and legal considerations. This course uses teach back and hands-on practice with sealed radioactive sources.



PER-245

Secondary Screener/Radiation Isotope Identifier Device (SS/RIID) Course

This instructor-led, exercise-based course is designed to train the PRND mission using a Radiation Isotope Identifier Device (RIID) to perform a secondary radiological assessment. Responders operate RIIDs to detect radiation, verify alarms, localize the source of radiation, measure the radiation level, identify radioactive isotopes, and assess the threat status of detected material. Participants employ the RIID to help adjudicate potential threats regarding situations with people, vehicles, packages, and facilities. Sealed radioactive sources are used during SS/RIID drills and practical exercises. These sources are intended to simulate types of radioactive material that may be encountered in the public domain. Additionally, participants gain knowledge working with technical reachback assistance. Training is conducted using radioactive material and agency-specific RIIDs. Course content includes the secondary screener's role in the Global Nuclear Detection Architecture (GNDA) and the National Preparedness Core Capabilities.

PREVENTION COURSES - CONTINUED



PER-297-W

Secondary Screener/Radiation Isotope Identifier Device Refresher Course (WBT)

This web-based training (WBT) is designed to provide refresher training to secondary screeners who have successfully completed the instructor-led PER-245 Secondary Screener/Radiation Isotope Identifier Device (SS/RIID) Course. This course emphasizes crucial training points from the SS/RIID, while reviewing the knowledge and skills required in the operation and employment of a RIID during a radiological incident. Course content also includes information about the Global Nuclear Detection Architecture (GNDA), the National Preparedness Core Capabilities, and lessons-learned topics.



PER-300

Primary Screener/Personal Radiation Detector Refresher Course

This instructor-led, exercise-based course provides refresher training to primary screeners who have successfully completed PER-243 Personal Radiation Detector (PRD) Course. This course emphasizes crucial training points from the PRD course, while reviewing the knowledge and skills required in the operation and employment of a PRD during the initial detection of radioactive materials in varying scenarios.



PER-300-W

Primary Screener/Personal Radiation Detector Refresher Course (WBT)

This web-based training (WBT) course provides refresher training to primary screeners who have successfully completed the instructor-led PER-243 Personal Radiation Detector (PRD) Course. This course emphasizes crucial training points from the PRD course, while reviewing the knowledge and skills required in the operation and employment of a PRD during the initial detection of radioactive materials in varying scenarios.



PRNDOS

Preventative Radiological/Nuclear Detection On-Site Program – Component Suite of Courses (PER-243PER-245, PER-246)

The PRNDOS Program offers three of the prevent mission courses in one week-long training program. It is designed to accommodate responders from agencies unable to host PRND MTT class, or due to attrition, if only a few responders require the training. PRNDOS enables jurisdictions that cannot train a full complement of students at their location, to complete a full suite of PRND courses at CTOS' facility at the NNSS. Students enrolled in this program are required to attend the full suite of courses.



AWR-140

Introduction to Radiological/Nuclear WMD Operations

This instructor-led course presents a WMD radiological/nuclear overview designed for first responders and other personnel who, in the course of their normal duties, are likely to be the first to arrive on the scene of a radiological/nuclear incident. It focuses on the fundamentals of radiation, possible health effects, hazard identification, proper notification procedures, and the radiological/nuclear threat.



AWR-140-W

Introduction to Radiological/Nuclear WMD Operations (WBT)

This web-based training course presents a WMD radiological/nuclear overview designed for first responders and other personnel who, in the course of their normal duties, are likely to be the first to arrive on the scene of a radiological/nuclear incident. It focuses on the basics fundamentals of radiation, possible health effects, hazard identification, proper notification procedures, and the radiological/nuclear threat.

PREVENTION COURSES - CONTINUED



PER-246

Primary Screener/Backpack Basic Course

This instructor-led, exercise-based course is designed to train the PRND mission using portable radiation detection systems (backpacks) to perform a preliminary radiological assessment. Responders operate backpacks to detect radiation, verify radiation alarms, localize the source of radiation, measure radiation levels, and assess the threat status of situation with a higher level of sensitivity than that of a personal radiation detector (PRD). Participants employ the backpacks to help adjudicate potential threats involving people, vehicles, packages, and facilities. Sealed radioactive sources are used during drills and practical exercises. These sources are intended to simulate types of radioactive material that may be encountered in the public domain. Course content includes a primary screener's role in the Global Nuclear Detection Architecture (GNDA) and the National Preparedness Core Capabilities.



AWR-224-W

Secondary Screener/Radiation Detection Kit and Controls (WBT)

This web-based training (WBT) course provides general information on the purpose and operation of the survey meter and probes contained in the Radiation Detection Kit (RDK), and its use in a variety of settings. This WBT is a prerequisite, and prepares participants for, the instructor-led PER-247 course. Prerequisites include PER-243 Personal Radiation Detector (PRD) Course, and PER-245 Secondary Screener/Radiation, Isotope Identifier Device (SS/RIID) Course.



PER-247

Secondary Screener/Radiation Detection Kit Operations and Strategies Course

This instructor-led, exercise-based course focuses on the operation and employment of the Radiation Detection Kit (RDK) in support of the Preventive Radiological/Nuclear Detection (PRND) mission. Responders are taught how to conduct a secondary screener investigation of elevated radiation levels and alarms using the radiation detection instruments and accessories contained in the RDK. Participants learn to detect radiation, verify alarms, localize the source of radiation, identify radioactive isotopes, and assess the threat status of detected material in facilities, packages, and vehicles. Sealed radioactive sources are used during drills and practical exercises. These sources are intended to simulate types of radioactive material that may be encountered in the public domain. Course content includes a secondary screener's role in the Global Nuclear Detection Architecture (GNDA) and the National Preparedness Core Capabilities. Web-based course AWR-224-W is a prerequisite for this course as well as PER-245.



PER-297-W

Secondary Screener/Radiation Isotope Identifier Device Refresher Course (WBT)

This web-based training (WBT) is designed to provide refresher training to secondary screeners who have successfully completed the instructor-led PER-245 Secondary Screener/Radiation Isotope Identifier Device (SS/RIID) Course. This course emphasizes crucial training points from the SS/RIID course, while reviewing the knowledge and skills required in the operation and employment of a RIID during a radiological incident. Course content also includes information about the Global Nuclear Detection Architecture, the National Preparedness Core Capabilities, and lessons-learned topics.



Participants involved in a training exercise – CTOS/NNSA



CTOS – Center for Radiological/Nuclear Training

at the Nevada National Security Site

RESPONSE COURSES

By providing four tiers of response-level training, first responders progressively learn radiological/nuclear response tasks starting with the CTOS Radiological Awareness Level, continuing with the Operations Level, and Technical Level. CTOS is currently developing courses for the fourth level of response, Management and Planning.

PER-241



WMD RADIOLOGICAL/NUCLEAR COURSE FOR HAZARDOUS MATERIAL (HAZMAT) TECHNICIANS

This instructor-led, exercise-based course trains emergency response personnel to respond to radiological weapon of mass destruction incidents while mitigating the health risks to themselves and the public. The course is taught at the Nevada National Security Site, a massive, isolated, and secure one-of-kind outdoor laboratory and national experiment center the size of Rhode Island. Using radiological fundamentals, the course incorporates them into applied radiation theory, radiological health effects, and terrorist use of radiation and radiological material with individual performance skills required for the response to a radiological WMD incident. Participants learn radiation detection instrument and dosimeter characteristics and operation, radiological survey techniques, and operational considerations for the response to a radiological WMD incident. The gained knowledge and skills are reinforced with detailed drills and exercises using radioactive material. The course advances from individual operation and techniques to tactical employment skills in realistic HazMat scenarios. The course challenges the responder, incorporating the individual knowledge, techniques, and tactical skills learned throughout the course with a comprehensive radiological terrorism incident final exercise.

PER-240



WMD RADIOLOGICAL/NUCLEAR RESPONDER OPERATIONS COURSE

This instructor-led, exercise-based mobile training team delivered course trains emergency personnel to respond to radiological weapon of mass destruction incidents while mitigating the health risks to themselves and the public. The course combines individual performance skills required for the response to a radiological WMD incident, with the fundamentals of radiation, radiological health effects, and terrorist use of radiation and radiological material. Participants learn characteristics and operation of radiological instrumentation and dosimeters, radiological survey techniques, and operational considerations for the response to a radiological WMD incident. The gained knowledge and skills are reinforced with detailed drills and exercises using radioactive material. The course advances from basic operation and techniques to tactical employment in realistic scenarios. The course concludes with a comprehensive final evaluation exercise that encompasses all the learned individual knowledge and skills required to respond to a WMD incident involving radioactive material.



Responders check for safe radiation levels after a simulated RDD attack.

RESPONSE COURSES- CONTINUED



PER-307-W

Introduction to Improvised Nuclear Device Effects and Response Strategies (WBT)

This web-based training (WBT) course focuses on command-level responsibilities and functions related to the detonation of an Improvised Nuclear Device (IND) in a major U.S. city. This is the first course in a program for senior personnel in jurisdictions likely to be targeted for an IND attack such as the Urban Area Security Initiative (UASI) regions, jurisdictions surrounding the likely targeted jurisdictions “collar communities”, and other jurisdictions throughout the nation that could provide support to and receive evacuees and casualties from the incident site. The course incorporates the competencies required to respond to a catastrophic radiological incident involving cascading events. The course incorporates the Response Mission Area core capabilities, stresses the importance of multidisciplinary/multiagency operations, and engages the entire community in support of the National Preparedness Goal.