DEFENSE NUCLEAR WEAPONS SCHOOL
Radiological & Nuclear Training

70th Anniversary

ALBUQUERQUE NEW MEXICO

FY 2017

Sponsored by Defense Threat Reduction Agency
https://dnws.dtra.mil
70 Years of Training & Education: A History of the Defense Nuclear Weapons School

1947-1960: Creating the Nuclear Enterprise
Established on 1 January 1947 by General Order Number 1, Manhattan District U.S. Engineers, the Defense Nuclear Weapons School has a rich 70 year history of training and education. Starting as the Technical Training Group under the Armed Forces Special Weapons Project (AFSWP), the school’s initial focus was to train weapons technicians for the early atomic bombs. From 1956 to 1959, the school was known as the Special Weapons Training Group where instructors trained weapons technicians on production bomb designs, the emerging nuclear enterprise, and nuclear accident response with the first nuclear Explosive Ordnance Disposal (EOD) courses taught as early as 1949. In 1950 the Cold War intensified with the Korean War, new bomb designs were rushed into development and early Air Force training missions on earlier bombers led to the first nuclear weapons accidents. With the rapid growth of the nuclear enterprise, the world saw a training mission transition to address logistical concerns. Accidents highlighted the need for significant response training.

1960-1970: The Height of the Cold War
In 1958, the AFSWP transitioned to testing and stockpile centered operations and changed its name to the Defense Atomic Support Agency (DASA). The school continued to focus on nuclear technician and accident response training as thousands of airborne alert missions flown from 1958 to 1968 greatly increased the number of accidents that involved nuclear weapons. Changing its name in 1960 to the Atomic Weapons Training Group, and again, changing to the Nuclear Weapons School in 1966; the mission was at its largest, occupying much of Sandia Base at the south end of Wyoming Boulevard. This large school reflected the size of the Cold War U.S. stockpile which reached its largest size of 31,255 weapons in 1967.

1971-1992: Nuclear Parity with the Soviet Union and Widening Proliferation
Reduction in stockpile size as well as post-Vietnam defense spending cuts under the Nixon Administration led to the end of DASA in 1970. As Field Command DASA transformed into Field Command Defense Nuclear Agency (DNA) in 1971, over 5,000 jobs were cut from the Agency in Albuquerque. The nuclear training mission was transitioned from the joint agency to each service. The Atomic Museum which began under DASA in 1969 was given to the Atomic Energy Commission. The school was renamed the Inter-service Nuclear Weapons School (INWS) and was transferred to the Air Force Training Command in 1973. The INWS continued with a much reduced course load under the Air Force, providing six courses on general nuclear enterprise training as well as remaining the lead for nuclear weapons accident response training for 22 years.

1993-Present Day: Post-Cold War Nuclear Enterprise Support and Counter – WMD Proliferation
In 1993 after the end of the Cold War the INWS was transferred back to the Field Command Defense Nuclear Agency and in 1995 was renamed the Defense Nuclear Weapons School (DNWS). Under the Defense Nuclear Agency as well as the short lived Defense Special Weapons Agency (DSWA), the school rapidly rebuilt its number of courses and added several responder courses to answer the emerging concern over Weapons of Mass Destruction both for the warfighter and the domestic responder. In 1998 Field Command DSWA was disestablished and the school moved under the Defense Threat Reduction Agency. Given the school’s historic support of nuclear weapons accident response, in 2011 it also sent responder augments as part of the DTRA response to the crisis at Fukushima. Today the school has over 30 courses supporting the nuclear enterprise, warfighter force protection, radiological and nuclear response and averages 15,000 students annually from across the services and interagency.
### Table of Contents

#### GENERAL INFORMATION
- DNW Overview .......................................................... 6
- Non-Attribution Policy .................................................. 6
- Defense Nuclear Weapons School Field Training Sites ...... 8
- Federal and State Accreditation ...................................... 8
- College Credits .......................................................... 8
- College and University Partnerships .............................. 9
- Certification Programs ................................................. 11
- Mobile Training Team Courses .................................... 12
- How to Register for Classes ......................................... 14
- Course Registration Form ............................................ 16
- Sandia Badge Request Form ........................................ 17
- Nuclear Weapons Instructional Museum ...................... 19
- Map to DNWS, Kirtland AFB, Albuquerque, NM .......... 20
- Map to DTRA Ft. Belvoir, VA ........................................ 21
- Map to HQ DTRA CBM R M & S Training Center Alexandria, VA . ......................................................... 22

#### DISTANCE LEARNING
- Basic Scientific Calculator Skills (SciCal-101) ................. 24
- DoD Nuclear Weapons Security (NWST) ..................... 24
- DoD Personnel Reliability Program (PPR) .................... 25
- Joint Nuclear Weapons Publications System (JNWPS) .... 25
- Nuclear Safety Studies and Review (NSSR) ................. 26
- Nuclear Weapons Surety (NWS) ................................. 26

#### NUCLEAR WEAPONS
- Advanced Weapons Operators Course (AWOC) .......... 28
- Joint DOD-DOE Nuclear Surety Executive Course (JNSEC) ................................................................. 28
- Nuclear Policy Course (NUCPOL) ............................... 29
- Nuclear Weapons Orientation Course (NWOC) ............. 29
- Nuclear Weapons Technical Inspections Course (NWTC) ................................................................. 30
- Nuclear Weapons Certification Programs ..................... 31
- USAF Security Forces Nuclear Security Certification Training Program .............................................. 32

#### NUCLEAR RESPONSE
- Applied Radiological Response Techniques Level 1 (ARLT-1) ................................................................. 34
- Applied Radiological Response Techniques Level 2 (ARLT-2) ................................................................. 34
- Applied Radiological Response Techniques Level 3 (ARLT-3) .......................... 35
- Introduction to Radiological and Nuclear Incident Response (IBNIR) ......................................................... 35
- Executive Response to Nuclear and Radiological Incident Seminar (ERNRI) ............................................ 36
- Nuclear Emergency Team Operations (NETOPS) ......... 36
- Nuclear Emergency Team Operations Primer (NETOPS Primer) ............................................................... 37
- Nuclear Weapons Incident Response Training, Basic (NWIRT) ................................................................. 37
- NWIRT Executive Course (NWIRTE) .......................... 38
- Nuclear Response Certification Programs ..................... 39
- Incident Command and Control Certificate Program .... 39

#### EXPLOSIVE ORDNANCE DISPOSAL
- Advanced Diagnostic Techniques 1 (ADT-1) ................. 42
- Advanced Diagnostic Techniques 2 (ADT-2) ................. 42
- Joint Nuclear Explosive Ordnance Disposal (JNEOD) .................. 43
- Mitigating the Effects of High-Explosive Blasts on Structures and Personnel (MBSEP) ................ 43

#### PARTNERSHIP TRAINING & EDUCATION PROGRAM
- Partnership Training and Education Program (PTEP) Modules & Courses ........................................... 46
- Basic/Intermediate Radiological & Nuclear Response Training (B/IRRT) Course ................................. 47
- Advanced Radiological & Nuclear Response Training (ARNRT) Course ............................................. 49

#### NUCLEAR WEAPONS INSTRUCTIONAL MUSEUM
- Nuclear Weapons Instructional Museum ..................... 50

#### HOSTED COURSES
- Defense Integration and Management of Nuclear Data Services (DIAMONDS) .................. 54
- Joint Countering Weapons of Mass Destruction Planning Course (JCP) ................................................. 54
- U.S. Army Nuclear and CounterProliferation Officer Course (NCP-52) ................................................. 55
- Theater Nuclear Operations Course (TNOC) ................ 55
- Hosted CBRN Modeling Simulation ........................................... 56
- Advanced System Survivability Integrated Simulation Toolkit (ASSIST) ........................................... 56
- Geospatial Analysis for Consequence Assessment (GACA) ................................................................. 56
- Hazard Prediction and Assessment Capability Level 1 (HPAC-1) ........................................................ 57
- Hazard Prediction and Assessment Capability Level 2 – Chemical, Biological, Radiological (HPAC-2-CHR) ................................................................. 57
- Hazard Prediction and Assessment Capability Level 2 – Nuclear (HPAC-2-N) ........................................ 58
- Hazard Prediction and Assessment Capability Executive Course (HPAC-Exc) ........................................ 58
- Integrated Munitions Effects Assessment Level 1 (IMEA-1) ................................................................. 59
- Integrated Munitions Effects Assessment Level 2 - Conventional (IMEA-2-C) ....................................... 59
- Integrated Munitions Effects Assessment Level 2 - Nuclear (IMEA-2-N) ............................................. 60
- Integrated Weapons of Mass Destruction Toolset – Consequence Assessment (IWMT-DCA) ................. 60
- Intermediate Modeler Course (IMC) ............................. 61
- JEM Operator Course (JEM) .......................................... 61
- Vulnerability Assessment Protection Options Level 1 (VAPO-1) ............................................................... 62
- Vulnerability Assessment Protection Options Level 2 (VAPO-2) ............................................................... 62
- CBRN Military Assistance Team (CMAT) Operations Course ............................................................... 63
- CBRN Military Assistance Team (CMAT) Certification Programs ............................................................... 64

#### AFIT SCHOOL OF AIRPOWER PROFESSIONAL DEVELOPMENT
- Air Force Nuclear Fundamentals Course (Nuclear 200) ................................................................. 66
- Air Force Nuclear Concepts Course (Nuclear 300) ................................................................. 67
- Senior Leader Nuclear Management (Nuclear 400) ................................................................. 68
- Air Force Nuclear Certification Process Course ................................................................. 69
- Air Force Nuclear Certified Equipment (NCE) Users Course ................................................................. 70

#### INFORMATION ANALYSIS RESOURCES
- Defense Threat Reduction Information Analysis Center (DTRIAC) ....................................................... 72
The Defense Nuclear Weapons School (DNWS), in existence since 1947, is located on Kirtland AFB, Albuquerque, New Mexico. This Defense Threat Reduction Agency school is a unique entity that provides training in nuclear weapons; chemical, biological, radiological and nuclear incident command, control and response, chemical, biological, radiological and nuclear (CBRN) modeling for the Department of Defense (DOD), other federal, state, and local agencies.

**Mission:** The mission of the DNWS is to provide nuclear weapons core competencies and response training for weapons of mass destruction and CBRN incidents to DOD, national laboratories personnel, and other federal, state, and local agencies.

**Training Objectives:** The school’s training objectives are to create, develop, and implement professional training through both traditional methods and innovative training technologies. DNWS training helps to ensure that our nation maintains a safe, reliable, and credible nuclear deterrent and a robust incident response capability.

**Courses:** The DNWS delivers instructor-led courses in-residence and via Mobile Training Teams (MTTs) and offers distance learning courses online. The DNWS catalog includes 36 courses and 24 partnership modules. Most courses are taught in-residence at the DNWS, an expanding array of courses is offered via distance learning or MTT. The DNWS also hosts courses presented by the U.S. Army Nuclear and CWMD Agency and the Air Force Nuclear Weapons Center, providing facilities, instructors, subject matter expertise, and administrative support. Additionally, the DNWS provides experts who teach modules within courses taught by other federal entities such as the Department of State and the Federal Bureau of Investigation.

**History:** The Manhattan Engineer District, which developed the world’s first atomic bomb, established the Nuclear Weapons Technical Training Group under the Armed Forces Special Weapons Project in January 1947. The Group’s mission was “to provide training, both resident and non-resident, in support of nuclear weapon training programs worldwide; to be responsive to requests for training services and support required to meet the needs of all DOD components and other cognizant agencies.” The Nuclear Weapons Technical Training Group later became the Special Weapons School located on the U.S. Army’s Sandia Base, today part of Kirtland Air Force Base.

In 1971, the Defense Nuclear Agency (DNA) was directed to transfer the Special Weapons School to the U.S. Air Force, which renamed it the Interservice Nuclear Weapons School. In 1993, the school was transferred back to DNA and was subsequently renamed the Defense Nuclear Weapons School in 1997. DNA is a DTRA legacy organization.

Throughout its history, DNWS has supported the Office of the Secretary of Defense, the Joint Chiefs of Staff, the military Services, and the Combatant Commands by providing training, advice, and services in the field of nuclear weapons.

The DNWS operates DOD’s only radiological training sites. These sites are thorium-seeded fields that DNWS instructors use as an integral part of field training for radiological emergency team members. DNWS conducts a variety of radiological accident exercises at these training sites, providing a realistic environment where students can apply their classroom knowledge. Students receive hands-on instruction and experience in the use of radioactivity monitoring instruments, the proper donning of personal protective equipment, and the collection of airborne radioactivity samples; in procedures for cleaning, inspecting, and proper wear of respirator protection; and in the setup and operation of contamination control stations. Students must integrate various modules of classroom instruction into intricate scenarios and determine what steps and equipment are required.

In addition, this school manages and operates the only DOD classified nuclear weapons instructional museum (NWIM). The NWIM is an irreplaceable repository that traces the history and development of the U.S. nuclear weapons stockpile from its inception to the present and displays examples of all stockpiled U.S. nuclear weapons and their associated components and delivery systems, as well as related training aids. Tours are provided in conjunction with some courses conducted at the DNWS and vary in length from two to four hours depending on the audience. Arrangements can be made for groups and visitors to tour the NWIM on Tuesdays, Wednesdays, and Thursdays only. Classified tours require a DOD Secret security clearance with Restricted Data or Critical Nuclear Weapons Design Information access or a Department of Energy “Q” clearance to participate. An unclassified tour is also available upon request. To solicit a special tour of the NWIM, a written request must be submitted and received a minimum of 15 working days before the scheduled tour date. Download a sample NWIM tour request letter or locate the form in the DNWS print catalog.

---

**Non-Attribution Policy**

The Defense Nuclear Weapons School offers its assurances that presentations and discussions will be held in strict confidence. Without the expressed permission of the speaker, nothing will be attributed directly or indirectly in the presence of anyone who was not authorized to hear or view the presentation. Unclassified information gained during lectures, briefings, presentations, and discussions may be used freely. However, neither the speaker nor any element of the Defense Nuclear Weapons School may be identified as the originator of the information without consent.
Defense Nuclear Weapons School Field Training Sites

The Defense Nuclear Weapons School (DNWS), part of the Defense Threat Reduction Agency (DTRA), is located on Kirtland Air Force Base, Albuquerque, New Mexico. This DTRA school manages several radiological field-training sites at the base.

Description: The DNWS teaches at the Department of Defense’s (DOD) only radiological training sites. These sites are thorium-seeded fields used in DNWS courses as integral field training for radiological emergency team members. DNWS instructors conduct a variety of radiological accident exercises at these training sites, providing a realistic environment for students to apply their classroom knowledge.

The DNWS partnered with the DTRA Technical Evaluation Assessment Monitor Site (TEAMS) Test Facility in developing the three-acre radiological exercise park. The park has two major components, a shipping container farm with integrated capability to seed radioactive sources in the soil and a temporary office building. Additional structures located within the site can be added as necessary to facilitate expanded exercise needs. This valuable teaching asset provides a flexible, realistic environment for search and characterization exercises.

Kirtland AFB maintains three major parks: a shipping container farm with integrated capability to seed radioactive sources in the soil, railroad cars and a temporary office building.

Federal and State Accreditation

The Department of Homeland Security

The Department of Homeland Security has conducted a review, certified, and sponsored four of our courses. The courses have been added to the National Training and Education Division’s standards catalog. Throughout the catalog, courses that contain the DHS logo have the approval rating. This approval means that our students can use the DHS/FEMA grants to attend these courses.

The New Mexico Department of Public Safety

The New Mexico Department of Public Safety has reviewed several of our courses and has accredited these courses. These courses meet the requirements for Continuing Education Program (CEP) for First Responders.

Throughout the catalog, courses that contain the NM Department of Public Safety logo have received the approval rating. This means that this courses are worth continuing education credit hours towards their yearly minimum requirement.

College Credits

American Council on Education (ACE)

The American Council on Education’s College Credit Recommendation Service (ACE CREDIT®) has evaluated and recommended college credit for several DNWS courses. ACE, the major coordinating body for all of the nation’s higher education institutions, seeks to provide leadership and a unifying voice on key higher education issues and to influence public policy through advocacy, research, and program initiatives. ACE CREDIT® connects workplace learning with colleges and universities by helping adults gain access to academic credit at colleges and universities for formal courses and examinations taken in the workplace or other settings outside traditional higher education.

There are several DNWS courses recommended for college credit and are designated by the ACE logo on the respective course page.

For more than 30 years, colleges and universities have trusted ACE CREDIT® to provide reliable course equivalency information to facilitate their decisions to award academic credit. For more information, visit the ACE CREDIT® website at http://www.acenet.edu/acecredit.

For the benefit of its students, DNWS participates in the ACE CREDIT® Transcript Service. The Transcript Service offers a lifelong record for students who have successfully completed DNWS courses that have been evaluated and recommended by ACE CREDIT®. This service enables adult learners to present a nationally recognized transcript to the college or university of their choice for the potential award of academic credit. For more information, visit the ACE CREDIT® Transcript Service website at http://www.acenet.edu/highereducation/topics/Pages/Transcript-Services.aspx.

Joint Professional Military Education Credit

The Joint Staff Directorate for Joint Force Development (J7 JCW) recommends certain joint certified courses offered by DNWS for credit toward Joint Qualified Officer designation through the experience path of the Joint Qualification System. Students in the grades of O-1 through O-6 may self-nominate their experiences and submit course certificates to https://https://www.dmdc.osd.mil/appj/jmis/JQSIndex.jsp to request award of ‘joint experience points,’ where they will be reviewed by the proper administrative channels of their respective service branches to obtain JQS credit.

DNWS courses, recognized by JSJ7 JCW are identified by the Joint Staff logo on their course description page.

College and University Partnerships

Colorado Technical University

Colorado Technical University makes quality education flexible, accessible, and rewarding to active duty military, their spouses and veterans. Our Virtual Campus and 100 percent online associate’s, bachelor’s, master’s, and doctoral degree programs are suited to the mobile military lifestyle.

CTU also offers extensive military education benefits, including a special tuition rate, waived application fee, a military-friendly deployment policy, and the university’s Wounded Warrior Scholarship Program, which awards 50 full scholarships to Wounded Warriors and spouses of Wounded Warriors each year. Founded in 1965 in Colorado Springs, Colorado, CTU has a long military heritage serving students from Ft. Carson, Peterson AFB, the U.S. Air Force Academy, and Buckley AFB.

University of Maryland Forms New Education Alliance with Defense Threat Reduction Agency

University of Maryland University College (UMUC) is proud to announce a new alliance with the Defense Threat Reduction Agency (DTRA). Through this agreement, designated courses offered at the DTRA’s Defense Threat Reduction University (DTRU) will be accepted for transfer credit by UMUC, allowing DTRU students to get a head start toward earning a UMUC associate’s or bachelor’s degree and achieving their career reeducation goals.

UMUC is the largest public university in the United States and a global leader in adult education, providing high-quality academic programs to more than 1.5 million service members, veterans, and military family members since 1947. UMUC’s career-relevant undergraduate and graduate degrees in such in-demand fields as cybersecurity, emergency management, and homeland security can help fulfill the educational objectives of DTRU and support DTRA’s mission of safeguarding America and its allies from weapons of mass destruction by mitigating their threat and effect.

For more information about the DTRA-UMUC alliance and credit transfers, contact (240) 684-2308 or email christopher.palermo@umuc.edu. The Education Alliance between DTRA and UMUC does not constitute an endorsement by the U.S. Department of Defense, DTRA, or any entity of the U.S. Government.
Certification Programs

The DNWS offers a variety of training certification programs to prepare personnel to perform specific functions associated with nuclear weapons, incident response, incident command and control, and CBRN modeling.

These training certification programs are intended to raise professional standards and to recognize and document the achievement of those standards. In most cases, the certifications earned through the DNWS have no expiration date. Certification within a program attests to individuals’ current and future organizations that they have demonstrated competency in a specific subject area related to a corresponding instructional department within the DNWS. Training certifications pertaining to specific organizations (such as Consequence Management Advisory Teams) are developed and managed in close coordination with the proponent organization and in accordance with their requirements.

Personnel who have completed the criteria for a certification program may apply for certification through the DNWS Registrar’s Office. The entire sequence must be completed within three years of initial registration into the first course of the sequence. Upon proper completion of an application for certification, the individual will receive a DNWS Certification of Training in the applicable certification program.

The DNWS does not establish training or certification requirements for any organization external to the School. However, an increasing number of organizations accept DNWS certifications as evidence of professional competence and document completion of these certification programs in individual training records.

For additional information or specific certifications, please visit https://dnws.dtra.mil/ or the following course sections:
• Nuclear Weapons
• Nuclear Response
• Hosted Courses
Memorandum

MEMORANDUM FOR DNWS/J10IES
ATTN: Registrar Office
1680 Texas St SE
Kirtland AFB, NM 87117-5669

SUBJECT: Request for DNWS Training Support/Mobile Training Team (MTT)

1. The following information is provided:
   a. Course/Training Requested: (Name and course number)
   b. Requesting Organization: (Your organization’s name)
   c. Expected Audience: (General background of audience and number of students)
   d. Requested Time Period: (Provide primary and at least two alternate dates, if possible)
   e. Equipment available to support training: (Your home station’s assistance is appreciated)
   f. Point of Contact / Resource Management Liaison: (Provide POC to act as liaison between your organization and the DNWS staff for planning & accounting purposes, etc.)
   g. Other: (Address other specifics as required by the course, such as special clearances)

2. My organization accepts responsibility for ensuring all personnel projected to attend the Training MTT have proper security clearance and access to the MTT course. A consolidated list of students, to include full name, rank, social security number, and security clearance will be provided to the instructor(s) before the course begins.

3. My organization accepts responsibility for all expenses associated with this Training/MTT, including travel expenses/costs/shipping of equipment. Furthermore, we agree to provide administrative support as required. Funding and travel-order authorization letter for Training/MTT will be forwarded to the DNWS NLT 15 working days prior to class start date.

4. We understand that approval of this request is based upon availability of DNWS staff and training schedules.

5. Direct questions regarding the request to (Your organization POC and duty phone).

Signature Block
(O-5/GS-14 or Higher)

Funding Authorization Letter to DNWS for Mobile Training Team Course

MEMORANDUM FOR DNWS/J10IES
ATTN: Registrar Office
1680 Texas St SE
Kirtland AFB, NM 87117-5669

SUBJECT: Funding and Travel-Order Authorization for DNWS Training Support/Mobile Training Team (MTT)

1. Expenses are authorized for (Names of DNWS Personnel) to include but are not limited to transportation, billeting, meals, and rental car, as well as any other expenses authorized by the Joint Federal Travel Regulations.
   a. Fund Cite:
   b. Not-to-exceed amount for travel:

2. DNWS will submit the travel-order authorization, DD Form 1610 Request and Authorization for TDY Travel of DoD Personnel, through the Defense Travel System (DTS) and will cite the requestor funds as outlined in the letter of authorization.

3. Upon return from Temporary Duty Assignment (TDY), the traveler will prepare the DD Form 1351-2, Travel Voucher or Sub-voucher, and send to DNWS Finance who will forward to the requesting agency for payment through DTS.

4. POC is ____________ and duty phone is ______________.

Signature Block
(O-5/GS-14 or Higher)
How to Register for Classes

DNWS Registration and Course Administration Information

General information about DNWS is available on the DNWS web site https://dnws.dtra.mil. The site is available to DOD and other Federal and state agencies, accessible only from .mil or .gov domains.

Course Registration Process

Please read all sections of the course registration process, paying particular attention to security requirements, prerequisites, quota limitations, and requirements for DOE personnel.

DNWS has simplified and automated the course registration process. New students will complete a two-step process to register for DNWS courses. Step 1 requires students to request access to the DNWS Learning Content Management System (LCMS). After receiving access to the LCMS, prospective students will complete Step 2 to register for courses. Returning students need only log in to the LCMS and complete Step 2.

Step 1 (New/Prospective Students)

Prospective students should click the link provided (https://dnws.dtra.mil), select the “Register” tab, complete the “Register for Access to the Portal” form, and click “Submit Credentials for Access.” All fields are required to provide contact information for the students. Upon completion and email will be sent to provided email address with login and password.

Step 2 (Registered and Returning Students)

Students who have received a DNWS LCMS User ID and password may register for courses. Click on the link provided (https://dnws.dtra.mil), enter User ID and password in the spaces provided, and click “Submit Credentials for Access.” A “forgot my password” option is located at the bottom of this page if password is forgotten, all other login issues please call or email DNWS Registrars office. Once logged in, students may review transcripts, update profile information, browse the course catalog, and register for courses. When the course registration process is complete, an email will be sent to the student's provided email address with login and password.

Organization/Service Branch Quotas

Some DNWS courses are subject to organization/service branch quotas; however, many courses have open seats. These non-allocated quotas are considered on a first come, first serve basis, and are open to any authorized student. To ensure that your registration is within your organization’s quota, contact and coordinate your registration with your appropriate Formal Training Manager and Quota Manager.

Classified Course Security Clearance Requirements

Classified course registration requires additional information, including security clearance verification. The DNWS Course Registration Form must be printed and endorsed by your organization’s security manager/office. Please send the completed form(s) to the DNWS Registrar’s Office by email. It is imperative that the DNWS Registrar’s Office receive and verify security clearance information a minimum of 15 working days before the class start date. If the Registrar’s Office does not receive clearance information within that timeframe, the student may not be approved to attend the desired course.

Email: dtra.kirtland.j10.mbx.dnws-registrar@mail.mil
Fax: Comm: (505) 846-9168 DSN: 246-9168
U.S. Mail: Defense Nuclear Weapons School
Attn: Registrar’s Office
1680 Texas St. SE
Kirtland AFB, NM 87117-5669

Registering without Internet Access

Students complete the DNWS Course Registration Form (page 16 of this catalog) and contact their organizational Formal Training Manager and Quota Manager to coordinate a reservation for a DNWS course. If the course is classified, adhere to the requirements found under Classified Course Registration Requirements.

JNEODC and NWTIC Special Requirements

DOD personnel registering for the Joint Nuclear Explosive Ordnance Disposal Course (JNEODC) and Nuclear Weapons Technical Inspections Course (NWTIC) are required to submit a visit request through JPAS using the SMO Code 1Y2R3-SNL and fill out the Sandia Badge Request Form and email it to ml_tr@sandia.gov.

Enrollment Confirmation

The DNWS LCMS will automatically generate and send enrollment confirmation to prospective students by email upon completion of the DNWS course registration process and verification of security clearance information (as appropriate). To ensure receipt of confirmation and other course information, students must provide an unclassified government e-mail address when they register for access to the LCMS.

The DNWS Registrar’s Office, as well as the DNWS web site (https://dnws.dtra.mil/), will apprise students of changes in class dates, times, and/or location. If a student has not received enrollment confirmation by one week prior to the class start date, he or she should call the DNWS Registrar’s Office main line, (505) 846-5666 or DSN 246-5666, Monday–Friday, 0730–1630, Mountain Time or contact them by email, dtra.kirtland.j10.mbx.dnws-registrar@mail.mil.

Security Issues

All personnel entering the DNWS are required to show valid identification at the security desk and receive appropriate security screening. As previously noted, specific courses may require a security clearance and some require special access. Each DNWS course has specific requirements as detailed in its catalog course description. For submission of electronic security clearance, send visit request to:

JPAS SMO Code: GQDD614
ATTN: DNWS Registrar, SSgt. Shijo Abraham

DOD Personnel

DOD personnel attending classified courses submit clearance and access information on the DNWS Course Registration Form. JPAS is the primary verification site for DOD personnel security clearance and Visit Authorization Requests (VARs).

Electronic Equipment

Telephone lines with DSN access, are available for students to make and receive official telephone calls. Internet access at the DNWS is available for students on a limited basis. The Kirtland base library is available Monday through Thursday from 1000 to 1900, Fridays from 1000 to 1700, and Saturdays from 1300 to 1700, and can facilitate Internet access for student convenience.

Security procedures prohibit bringing personal electronic devices (such as but not limited to cellular telephones, pagers, personal digital assistants, computers, thumb drives, laptop computers, fitbits or like devices) into the school.

Other DTRA Courses (Hosted) Specific instructions will be provided in the course invitation message.
Course Registration Form

DEFENSE THREAT REDUCTION AGENCY
COURSE REGISTRATION
** For official use only. Privacy Act of 1974 applies **

GENERAL INFORMATION

Sandia Badge Request Form

Sandia JPAS Code: 1Y2R3-SNL

Visitor’s Information

Rank: ____________________________
First Name: ______________________
Middle Name: ____________________
Last Name: ________________________
SSN: ____________________________
Clearance Level: __________________
Citizenship: _____________________
Organization: ____________________

Meeting Information

Visit/Class Start Date: ____________
Visit/Class End Date: _____________
Classification Level of Meeting/Class: __________
Meeting/Class POC: ________________
Justification/Purpose: ________________________________

Contact Information

Visitor’s Telephone (____)___________
Email address: _____________________

Security Office Telephone (____)_________ E-Mail Address ________________________

When the visit request is submitted into JPAS, fax or e-mail this form to:
Fax - 505-844-3377
ML Registration E-Mail: ml_tr@sandia.gov

DTRA FORM 34 (JUN 10)
The NCR offers a variety of dining options located within a few miles of the instruction sites. Students are responsible for their own meals, and instructors provide ample time during classes for student meals. Dining within the NCR car is highly recommended. Identified instructional site. The NCR has unlimited taxi/transportation services; however, such service is expensive. A rental (IAD). The airports are approximately 10-20 miles from DNWS instruction sites, distance dependent upon the airport and the identified instructional site. The NCR has unlimited taxi/transportation services; however, such service is expensive. A rental car is highly recommended.

Arrival at Kirtland AFB, NM
Visitors without a military I.D. may need to obtain a visitor pass to enter Kirtland AFB. Individuals needing a pass should plan accordingly and, on the first day of class, arrive at one of the two Kirtland AFB Visitors’ Centers located at the Gibson and Truman Gates at least 45 minutes prior to class start time. Please ensure you have a valid driver’s license, proof of insurance, and vehicle registration or rental car agreement.

For your safety, please remember to observe all posted speed limits. Additionally, hands-free cell phone use, seat belt use, and valid driving insurance are required while driving on Kirtland AFB and the surrounding area.

Transportation to Kirtland AFB, NM
Kirtland AFB has limited taxi/transportation services. If staying at Kirtland AFB Billeting, on-base taxi service can be contacted at 505-846-8294. The Albuquerque International Airport is approximately five miles from the DNWS. On-base billeting is approximately three miles from the DNWS. A rental car is highly recommended.

Dining at Kirtland AFB, NM
All students are responsible for their own meals and should come to DNWS under full per-diem. Ample time is afforded to each student for meals. Kirtland AFB has several different options when it comes to meals and they are all located within a few miles of the school. These include an award-winning military dining facility, Main Exchange Food Court, Bowling Alley, Golf Course, McDonald’s, and several other facilities just outside the base.

National Capital Region
Billeting in the National Capital Region (NCR) and Ft. Belvoir, VA
Individuals attending a DNWS course held in the NCR are responsible for their own billeting arrangements. Students should come to the NCR under full per-diem or plan to pay out-of-pocket expenses, as necessary.

Arrival into the NCR
Despite the fact that the majority of courses are taught at facilities outside a military base, students may want to visit one of the local military facilities. Students without a military I.D. may need a visitor’s pass. To obtain a visitor’s pass, proceed to the Visitor Center and please ensure you have a government identification card, a valid driver’s license, proof of insurance, and vehicle registration or rental car agreement.

For your safety, please remember to observe all posted speed limits. Additionally, hands-free cell phone use, seat belt use, and valid driving insurance are required while driving within the NCR and surrounding area.

Transportation within the NCR
Two international airports service the NCR, Ronald Reagan Washington National (DCA) and Washington Dulles International (IAD). The airports are approximately 10-20 miles from DNWS instruction sites, distance dependent upon the airport and the identified instructional site. The NCR has unlimited taxi/transportation services; however, such service is expensive. A rental car is highly recommended.

Dining within the NCR
Students are responsible for their own meals, and instructors provide ample time during classes for student meals. The NCR offers a variety of dining options located within a few miles of the instruction sites.
Map to DNWS, Kirtland AFB, Albuquerque, NM

Large-scale-area map above, close-up map at right.

From the Airport, take Yale north and turn right onto Gibson Boulevard. Head east to Gibson Gate; Gibson Gate is open 24/7. Once past the gate, drive east until you reach the intersection of Gibson Blvd and Wyoming Blvd. Turn right and drive south until you pass Kirtland Federal Credit Union, which will be a small building on your left just past K Avenue. Turn left into the parking lot. The address is 1900 Wyoming Blvd. Please note: the building is labeled 1900, not 20602. There is a sign on Wyoming Blvd.

Map to DTRA Ft. Belvoir, VA

Large-scale-area map at left, close-up map below.

Take Fairfax County Parkway to the intersection of John J. Kingman Road. Turn right off of John J. Kingman Road into the parking lot accessway. Note that there are security guards who will issue you a pass. Park in designated areas only.

DTRA is a secured facility. You will require permission to enter the building; please see Security at the entrance.
Map to HQ DTRA CBRNE M&S Training Center
Alexandria, VA

CBRN Classes taught at DTRA CBRNE M&S Training Center
6361 Walker Lane, Suite C120
Alexandria, Virginia 22310
(517) 303-2171

DISTANCE LEARNING

• Basic Scientific Calculator Skills (SciCal-101)
• DoD Nuclear Weapons Security (NWST)
• DoD Personnel Reliability Program (PRP)
• Joint Nuclear Weapons Publications System (JNWPS)
• Nuclear Safety Studies and Review (NSSR)
• Nuclear Weapons Surety (NWS)
Basic Scientific Calculator Skills (SciCal-101)

Synopsis: Students of the Defense Nuclear Weapons School (DNWS) are expected to use the advanced functions of a scientific calculator in several classes, including Applied Radiological Response Techniques (ARRT), levels 1, 2, and 3. This course, Basic Scientific Calculator Skills (SciCal-101), is now a prerequisite to ARRT-1. Passing this course test satisfies the prerequisite for ARRT-1.

Course Prerequisites: None

DoD Nuclear Weapons Security (NWST)

Synopsis: Designed to introduce the baseline Department of Defense (DOD) nuclear security concepts and strategy framework to security professionals assigned to protect the nation's nuclear force. It addresses nuclear security concepts common to all DOD nuclear weapons and further explains these concepts relative to the various environments where nuclear weapons are stored, maintained, and operated within DOD.

Course Prerequisites: None

DoD Personnel Reliability Program (PRP)

Synopsis: The DOD Personnel Reliability Program (PRP) course is designed to introduce baseline DOD PRP fundamentals and concepts to personnel who are assigned duty involving nuclear weapons or nuclear command and control systems. The course addresses PRP concepts, roles, responsibilities, and processes in support of nuclear surety and further explains these concepts in relationship to real-world scenarios.

Course Prerequisites: None

Joint Nuclear Weapons Publications System (JNWPS)

Synopsis: This course introduces basic concepts and principles related to the Joint Nuclear Weapons Publication System (JNWPS) to professionals supporting the nuclear weapons enterprise. The course goal is to provide clear understanding of the JNWPS and why it exists.

Course Prerequisites: None
**Nuclear Safety Studies and Review (NSSR)**

**Synopsis:** This course is designed to introduce basic concepts and principles related to nuclear safety studies and reviews to professionals supporting the nuclear weapons enterprise. The course goal is to facilitate a clear understanding of what nuclear safety studies and reviews are and why they are conducted.

**Course Prerequisites:** None

**Course Requirements**
- **Classification:** UNCLASSIFIED
- **Security Requirements:** None
- **Format:** Distance Learning
- **Course Length:** 4 Hours

---

**Nuclear Weapons Surety (NWS)**

**Synopsis:** This course is designed to introduce basic concepts and principles related to nuclear surety to professionals supporting the nuclear weapons enterprise. The goal is to explain these concepts to a level that enables clear understanding of what nuclear surety is and how nuclear surety is achieved.

**Course Prerequisites:** None

**Course Requirements**
- **Classification:** UNCLASSIFIED
- **Security Requirements:** None
- **Format:** Distance Learning
- **Course ID:** NW104DL
- **Course Length:** 8 Hours

---

**NUCLEAR WEAPONS**

- Advanced Weapons Operators Course (AWOC)
- Joint DOD-DOE Nuclear Surety Executive Course (JNSEC)
- Nuclear Policy Course (NUCPOL)
- Nuclear Weapons Orientation Course (NWOC)
- Nuclear Weapons Technical Inspections Course (NWTIC)
- Nuclear Weapons Certification Programs
- USAF Security Forces Nuclear Security Certification Training Program
Advanced Weapons Operators Course (AWOC)

AWOC is a two-day course that covers basic nuclear weapons design and effects, the evolution of nuclear policy, and the nuclear enterprise. Students also get S//RD-CNWDI tour of the Nuclear Weapons Instructional Museum (NWIM). The purpose of the course is to assist the nuclear weapons community by educating the next generation of operators in their understanding of nuclear deterrence and the U.S. Nuclear Enterprise.

Course Prerequisites: None

Nuclear Policy Course (NUCPOL)

NUCPol is an overview of U.S. nuclear weapons policy development including issues and challenges facing politicians today. It specifically covers the evolution of U.S. nuclear weapons policy, nuclear deterrence theory, applications of nuclear weapons within the instruments of national policy, factors influencing policy, foreign nation nuclear weapons drivers, and proliferation concerns. A policy-focused tour of the classified Nuclear Weapons Instructional Museum (NWIM) is conducted at the S//RD level of classification.

Course Prerequisites: None

Joint DOD-DOE Nuclear Surety Executive Course (JNSEC)

JNSEC is an executive-level program offering an overview of safety, security, and C3 aspects of the U.S. nuclear weapons program. JNSEC is a 1-day program conducted twice in the Washington D.C. area, and a second iteration is a 2-day version offered at the DNWS to accommodate a Nuclear Weapons Instructional Museum (NWIM) tour conducted at the S//RD-CNWDI level of classification.

Course Prerequisites: None

Nuclear Weapons Orientation Course (NWOC)

NWOC is a 4.5-day course that provides an overview of the history and development of nuclear weapons, management of the U.S. nuclear stockpile, and the issues and challenges facing the program. NWOC focuses on four functional areas: nuclear weapon fundamentals, nuclear weapon effects, nuclear weapons stockpile, and foreign nuclear weapon capabilities/proliferation. In addition to the course materials, students will enjoy a comprehensive tour of the Nuclear Weapons Instructional Museum (NWIM) at the S//RD level of classification.

Course Prerequisites: None
Nuclear Weapons Technical Inspections Course (NWTIC)

NWTIC is a 5-day in-residence course at DNWS in which students are taught common inspection methodology to better baseline and educate Service Inspectors for the nuclear enterprise. The course uses lectures, facilitated group discussions, and realistic inspection scenarios to ensure strict and consistent application of nuclear weapons technical inspection guidance.

Course Prerequisites: DL Course – Nuclear Weapons Surety (NWS); Course Number: NW104DL

Nuclear Weapons Certification Programs

The Nuclear Weapons Certification Programs are designed for personnel with responsibilities dealing with nuclear weapons, nuclear weapons policy, nuclear weapons operations, and nuclear weapons surety. These certifications would be particularly valuable for combatant command staff members, joint staff members, and personnel working within the nuclear weapons enterprise such as: nuclear weapons intelligence, nuclear weapons maintenance, nuclear weapons operations, and nuclear weapons security.

Basic Nuclear Weapons Certificate:
- Introduction to Radiological and Nuclear Incident Response (IRNIR)
- Nuclear Weapons Orientation Course (NWOC) (in residence or MTT)

Intermediate Nuclear Weapons Certificate:
- Basic Nuclear Weapons Certificate
  -- plus --
  Nuclear Policy Course (NUCPOL)

Advanced Nuclear Weapons Certificate—Operations:
- Intermediate Nuclear Weapons Certificate
  -- plus --
  Theater Nuclear Operations Course (TNOC) (in-residence or MTT)

Advanced Nuclear Weapons Certificate—Surety:
- Intermediate Nuclear Weapons Certificate
  -- plus --
  Joint DOD-DOE Nuclear Surety Executive Course (JNSEC)
The USAF Security Forces (SF) Nuclear Security Certification Training Program (NSCTP) is designed for USAF SF personnel with responsibilities dealing with security of nuclear weapons. Level I certification is for SF nuclear security flight leadership such as flight chiefs, flight commanders, convoy commanders, flight security Officers, and similar personnel.

Level II certification is for SF nuclear security group/squadron leadership such as group commanders, squadron commanders, SF operations officers, SF managers, SF operations superintendents, and similar personnel.

Level III certification is for SF nuclear security policy personnel such as Air Staff, Headquarters Air Force Security Forces Center, MAJCOM, and Numbered Air Force nuclear security staff members and similar nuclear security policy personnel.

To become NSCTP certified, you must complete the following collective courses appropriate to your duty position or assigned position.

**Level I, USAF SF Flight Nuclear Certification:**
- DOD Nuclear Weapons Security Training (NWST) (distance learning)

**Level II, USAF SF Group/Squadron Nuclear Certification:**
- Level I + Nuclear Weapons Technical Inspections Course (NWTIC)

**Level III, USAF SF Nuclear Policy Certification:**
- Level II + Joint DOD-DOE Nuclear Surety Executive Course (JNSEC)
Applied Radiological Response Techniques Level 1 (ARRT-1)

A distance learning course exploring the basic theory of radiation sciences and concepts of radiological response field application. Course material covers radioactivity, detection principles, applied calculations, control measures, and survey planning. Completion is required to attend ARRT-2.

Course Prerequisites: Basic Scientific Calculator Skills

Applied Radiological Response Techniques Level 2 (ARRT-2)

ARRT-2 is an applications follow-on course to ARRT-1 theory focusing on applied radiological problem solving methods. Approximately 20 percent of the course is based in detector laboratories while the remaining course time is used to experience actual hands-on radiological experiences and interpretation of survey data. Attendees should bring appropriate dress for outdoor activities.

Course Prerequisites: ARRT-1

Applied Radiological Response Techniques Level 3 (ARRT-3)

A collective team experience where organizations may practice real-world radiological response operations. Unknown radiological problems are presented to allow the unit to practice or test procedures and perform self-evaluation of their techniques. DNWS will design scenarios to meet each client's needs. Capabilities include both contamination and area dose scenarios.

Course Prerequisites: ARRT-1 and ARRT-2

Introduction to Radiological and Nuclear Incident Response (IRNIR)

IRNIR provides a foundation for advanced DNWS courses. It is a two-day awareness-level course that provides instruction on basic radiation science; fundamentals of nuclear weapons and radiological dispersal devices; radiological terrorism; medical and psychological effects of radiation exposure; crisis communication; radiation hazards, detection, personal protective equipment, and decontamination; and Federal incident response. Intended for DOD Active, Guard, and Reserve first and second responders; Federal, state, and local responders and emergency managers.

Course Prerequisites: None
Executive Response to Nuclear and Radiological Incident Seminar (ERNRI)

The ERNRI Seminar is a one-day version of the IRNIR designed to provide senior leadership of both civilian and military response agencies who are limited in time with an abbreviated form of the IRNIR.

Course Prerequisites: None

Nuclear Emergency Team Operations Primer (NETOPS Primer)

Nuclear Emergency Team Operations Primer (NETOPS Primer) is a distance learning course that includes modules on biological effects of radiation and the response processes and capabilities, radiation detection equipment, contamination control stations, surveys, and command and control functions related to nuclear emergencies.

Course Prerequisites: None

Nuclear Emergency Team Operations (NETOPS)

A hands-on course for members of a nuclear emergency response team. Subject matter includes modules on basic nuclear physics, biological effects of radiation, response processes and capabilities, radiation detection equipment, contamination control stations, surveys, and command and control. The course culminates with three daily field training exercises during which students fully dress out in anti-contamination clothing, use RADIAC equipment, and perform realistic nuclear emergency team functions at DNWS live radioactive training sites. We welcome all military personnel and Federal employees occupying EOD, CBRN defense specialties and career fields, or other emergency response force positions.

Course Prerequisites: NETOPS Primer is highly recommended but not mandatory.

Nuclear Weapons Incident Response Training, Basic (NWIRT)

This course is mandatory for Initial Response Force (IRF) and Response Task Force (RTF) Commanders and staff; it is presented by inter-agency instructors in an academic format. The course reviews the following topics: the roles and responsibilities of the DOD during a nuclear weapon incident as mandated by national policy; response by other Federal departments or agencies, including DHS, FBI, and DOE; and legal and public affairs issues specific to a nuclear weapon incident.

Course Prerequisites: None

Course Requirements
Classification: UNCLASSIFIED
Uniform: B
Format: In residence
MTT: By request
Course IDs: USMC F04B0Z1
USN S-140-0010
USA DNWS-R003
USAF J5OZD13B402DA
DNWS NR103DA
Course Length: 3 days
**NWIRT Executive Course (NWIRT-E)**

Executive-level course presented by the interagency instructors in an academic format. The course reviews the following topics: the roles and responsibilities of the DOD during a nuclear weapon incident as mandated by national policy; response by other Federal departments or agencies, including DHS, FBI, and DOE; and legal and public affairs issues specific to a U.S. nuclear weapons incident. Course is taught by a mobile training team (MTT).

**Course Prerequisites:** None

**Course Requirements**

- **Classification:** UNCLASSIFIED
- **Uniform:** B
- **Format:** In residence
- **MTT:** By request
- **Course IDs:** N/A
- **Course Length:** 1 days

---

**Nuclear Response Certification Programs**

The Nuclear Response certification sequence is designed to develop the practical skills required for personnel to conduct an initial evaluation of a incident / accident environment. While appropriate for any personnel requiring skills to respond to a radiological hazard, the nuclear response certification sequence supports and integrates into the overall WMD-CST certification established by the National Guard Bureau (NGB). It is not intended to replace any WMD-CST training otherwise established by the NGB. The NGB recognizes the nuclear response certification sequence as a requirement for WMD-CSTs.

**Applied Radiological Response Techniques (ARRT) Certificate:**
- Applied Radiological Response Techniques Level 1 (ARRT 1) (distance learning)
- Applied Radiological Response Techniques Level 2 (ARRT 2)

**Nuclear Emergency Team Operations (NETOPS) Certificate:**
- Nuclear Emergency Team Operations Primer (NETOPS Primer) (distance learning)
  --or--
- Nuclear Emergency Team Orientation (NETOR) (MTT by request)
  --plus--
- Nuclear Emergency Team Operations (NETOPS)

**Advanced Incident Response Certificate:**
- Applied Radiological Response Techniques (ARRT) Certificate
- Nuclear Emergency Team Operations (NETOPS) Certificate

**Incident Command and Control Certificate Program**

The Incident Command and Control Certificate Programs are designed for personnel with command and control responsibilities in the event of an incident involving WMD. This certificate is particularly valuable for combatant command staff members, joint task force staff members, or personnel working in similar capacities.

**Incident Command and Control Certificate**
- Introduction to Radiological and Nuclear Incident Response (IRNIR)
- Nuclear Weapons Incident Response Training (NWIRT)
In 1969 the Defense Atomic Support Agency (DASA) opened the unclassified atomic nuclear weapons museum at one of the Nuclear Weapons School’s old training buildings on Wyoming Boulevard. In 1971 when DASA was reorganized into the Defense Nuclear Agency (DNA) the museum was transferred to the Atomic Energy Commission, and the DNA instructors would continue to help lead tours at the museum over the years. Today DNWS students and visitors are highly encouraged to visit and see the full size aircraft and displays at the National Museum of Nuclear Science & History at its current location in Albuquerque at 601 Eubank Boulevard SE.

1. October 1979; The front of the National Atomic Museum, Blqg. 20358, on Kirtland Air Force Base.
2. 1969; Looking south in the Sandia Atomic Museum exhibit area.
3. 280mm cannon on display at the Sandia Atomic Museum, Albuquerque NM. The M60 Atomic Cannon was a towed artillery piece.
4. Boeing B52B, K0-20013 “ Stratofortress” on display at the National Atomic Museum in Albuquerque, New Mexico.
5. 1971; Sgt. Gregory and Sgt Bishop view the Palomares Exhibit at Sandia Atomic Museum, Kirtland Air Force Base, Albuquerque, NM. The Palomares B-52 crash (Palomares incident) occurred on 17 January 1966 when a B-52G bomber of the USAF Strategic Air Command carrying 4 MK-28 type hydrogen bombs collided with a KC-135 tanker off the coast of Spain. The KC-135 was completely destroyed killing all four crew members. The B-52G broke apart, killing three of the seven crew members aboard.

EXPLOSIVE ORDNANCE DISPOSAL

• Advanced Diagnostic Techniques 1 (ADT-1)
• Advanced Diagnostic Techniques 2 (ADT-2)
• Joint Nuclear Explosive Ordnance Disposal (JNEODC)
• Mitigating the Effects of High-Explosive Blasts on Structures and Personnel (MEBSP)
Advanced Diagnostic Techniques 1 (ADT-1)

Unclassified five-days course of instruction that focuses on WMD threat awareness, interagency policy, national response architecture, nuclear science, radiation detector theory, and crisis communications. This course meets interagency training standards for national crisis response.

Course Prerequisites: None

Advanced Diagnostic Techniques 2 (ADT-2)

Classified five-day course of instruction for EOD technicians which focuses on steady-state operations threat assessment of Nuclear Materials of Concern. This course also focuses on interagency policy, threat design concepts, nuclear science, tactics, techniques, procedures and crisis communications. This course meets interagency training standards for national crisis response.

Course Prerequisites: ADT 1

Joint Nuclear Explosive Ordnance Disposal (JNEODC)

Classified five-day training evolution that provides a detailed sustainment training for EOD technicians when responding to nuclear weapons accidents as part of the initial response force. The program focuses on nuclear weapons hazards, stockpile safety features and safeguards, weapons development, and response to a nuclear weapon accident/incident.

Course Prerequisites: ADT 1 & ADT 2

Mitigating the Effects of High-Explosive Blasts on Structures and Personnel (MEBSP)

Mitigating the Effects of High-Explosive Blasts on Structures and Personnel (MEBSP) is a distance learning course that describes the destructiveness of explosions and the effects of blasts on structures. This course will include modeling of structures under explosions, physiological effects of blasts, and methodologies for investigating effectiveness of defensive measures and counter-terrorism planning. (DL) This course may contain out of date material.

Course Prerequisites: None
PARTNERSHIP TRAINING AND EDUCATION PROGRAM

- Partnership Training and Education Program (PTEP) Modules & Courses
- Basic/Intermediate Radiological & Nuclear Response Training (B/IRNT) Course
- Advanced Radiological & Nuclear Response Training (ARNT) Course

Out on the New Mexico desert is a concrete blockhouse nicknamed by its GI students "The Kremlin." This is where...

Privates and Generals Study A-Bomb

By William Harrin

THE "VAULT" is windowless. Its single door is threaded with silver burglar-alarms (all). About the entrance to the huge ultramodern structure in the New Mexico desert, armed MPs raise a 24-hour vigil, and a mile-long security fence warms off the invaders.

This desert blockhouse, a honeycomb of classrooms, lecture halls, movie theaters and atomic laboratories, is called the Vault grace more temporarily, by its GI students "The Kremlin." It's the fortress heart of the nation's nuclear-training program for military personnel.

Located in the top-secret, heavily guarded military technical area on Sandia Base, home of the Armed Forces Special Weapons Project in Albuquerque, N. Mex., the building store building in an atom bomb college, a nuclear-weapon institute for privates, corporals, even four-star generals who are learning in short four-day to six-week courses what makes an atom bomb tick. Here, Uncle Sam's military arm of all services are studying the capabilities and limitations, the hazards and precautions of nuclear special weapons. Mission of the Armed Forces Special Weapons Projects at Sandia Base is the training of service people in all atomic weapons: Bombs, artillery shells or any weapon which carries an atomic weapon. AFSPWAP is a partner in a giant inter-service, interagency joint effort aimed at providing the United States with a supply of atom-trained technicians.

Working closely in the program are the Atomic Energy Commission, which builds and develops nuclear weapons, later stockpiles them; the AFSPWAP, which trains personnel, and develops and procures equipment for atom weapons handling; and the Air Force Special Weapons Center at nearby Kirkland AFB which modifies and tests airplanes to transport and deliver nuclear bombs.

Students at the Kremlin, the nation's sole atom bomb school, for the most part volunteers, study toward diplomas in nuclear supervision, atom technology and special weapons mechanics. They wear no distinctive badges or insignias. Many are fresh from high school. Others are college graduates with several degrees. Their average age is 23 to 28. They're young, willing, possess good mechanical aptitudes. They hold one
Overview: Instruction is available at the classified or unclassified level

Format: Classroom, hands-on training, tabletop exercises, distance learning and research documents

Faculty: Subject matter experts

The Partnership Training and Education Program (PTEP) is an integral part of DTRA’s mission to safeguard the U.S. and its allies from weapons of mass destruction (chemical, biological, radiological, and nuclear—CBRN) by providing capabilities to reduce, eliminate, and counter the threat and mitigate its effects.

PTEP provides tailored training and resources to match the needs of the requesting agency, department or unit. This program directly supports the Department of Defense along with Federal, state and local agencies. Subject matter experts conduct lectures, seminars, discussion sessions and hands-on training on a broad range of WMD topics.

Core PTEP modules are available in the following subject areas:

General Nuclear and Radiological Training
- Basics of Radiation
- Biological Effects of Ionizing Radiation (BEIR)
- Nuclear Materials and Production
- Nuclear Reactor Basics
- Nuclear Reactor Accidents
- Fukushima/Operation TOMODACHI Overview
- Dual-Use Technology Overview
- Nuclear and Radiological Response
- Nuclear Weapons Design
- Nuclear Weapons Effects
- U.S. Nuclear Stockpile
- Nuclear Policy and Forces
- Electromagnetic Pulse (EMP) Overview

Countering the WMD Threat
- The Weapons of Mass Destruction Challenge
- DOD Countering WMD Overview
- Terrorist Use of Radiological Materials
- Nuclear Material Smuggling
- WMD Interdiction/Offensive Operations
- WMD Consequence Management
- WMD Elimination
- Domestic Nuclear Event: Reality Brief
- Suicide Bombings
- Pandemic Management Overview
- Chemical/Biological Agent Overview
- The Bioterrorism Threat

B/IRNT is a 1-3 day course suitable for in-residence or MTT delivery built around a Basic or Intermediate core curriculum presented at the unclassified level. The training employs local radiological instrumentation and live radiological sources wherever possible. Practical hands-on labs are built around key learning objectives; basic detection and recognition, differing radiation properties, shielding and HVL’s, inverse square law, stay times, reflection and over-lapping fields. Source and training aid availability coupled with unit training needs factor into actual hands-on training delivered.

A minimum of 3 electives are required for a course certificate, these are selected by the supported command/organization to meet mission needs.

Who Should Take This Course
This course is tailored for the DOD warfighter, concerned with force protection and hazard recognition as well as DOD, National Guard, Federal, state and local responders and emergency managers that have a domestic or foreign radiological and nuclear response mission.

Unclassified Basic/Intermediate Core Curriculum:
- Radiological Fundamentals, Units of Measurement – 1-2 hours
- Exposure Guidance, Biological Aspects of Radiation – 1-2 hours
- Radiation Detection Equipment Overview (Basic Technology) – 1 hour
- PPE and Radiological Decontamination Principles – 1-2 hours
- Detection Lab – 1-3 hours (rad source/training aid dependent)

Program Manager
Mr. Chris Pink

Lead Instructors
Mr. Matt Thompson
Mr. Rick Spanard

For more information on the Partnership Training and Education Program or to request training, please call the Partnership team at (505) 853-4509 / (505) 853-0195 / (505) 846-6524

Course Requirements
Classification: UNCLASSIFIED
(Forcast Electives Optional)
Uniform: Determined by Supported Command/Organization
Format: In-residence
MTT: By request
Course Length: 1-3 Days

For more information on the Partnership Training and Education Program (PTEP) Modules & Courses
Electives: (Tailored by requesting command, see page 46 for additional topics)

- Detector Specific Overview (ADM-300, VDR-2, PDR-77, UDR-13/14/15, RadEye, IdentiFINDER, SE International Inspector, Ludlum-14) each - 5-1 hours depending on detector
- DR/SKO Rad Detection Equipment/DEB Kit Block – 3-5 hours
- Radiological and Nuclear Terrorism Overview (Threat, RED, RDD, Reactor, IND) – 1-3 hours
- Radiological/Nuclear Materials on the Battle Field – 1 hour
- Radiological Materials in Industry & Medicine – 1 hour
- SNM Hazards – 1 hour
- History of Nuclear Weapons Accidents – 1 hour
- Nuclear Fuel Cycle (Facilities & Proliferation) – 1-2 hours
- Reactor Overview and Reactor Accidents – 1-2 hours
- HEMP/EMP Overview – 1 hour
- Psychological Effects of Radiation for the Responder & Public (Radiophobia) – 1 hour
- Risk Communication for Radiological Responders (w/ Practical Exercise) – 1.5 hours
- U.S. Federal Response to a Radiological/Nuclear Event (RDD, IND, Reactor) – 1-2 hours

Mobile Training Team Availability
Mobile Training Teams (MTTs) are available by unit request.

Course Prerequisites: None

Advanced Radiological & Nuclear Response Training (ARNT) Course

The ARNT is a 1-3 day course which is tailored for a more advanced warfighter/responder audience that is comfortable with the BIRNT fundamentals. If refresher training is needed the two courses can be merged into a week long training venue.

A minimum of 3 electives are required for a course certificate, these are selected by the supported command/organization to meet mission needs.

Who Should Take This Course
This course is tailored for the DOD warfighter, concerned with force protection and hazard recognition as well as DOD, National Guard, Federal, state and local responders and emergency managers that have a domestic or foreign radiological and nuclear response mission.

Unclassified Advanced Core Curriculum:
- Inverse Square Law, Stay Time & Calculations – 1-2 hours
- Advanced Radiation Detector Theory/Principles of Operation – 2 hours
- Radiation Interactions and Shielding – 1 hour
- Medical Effects of Ionizing Radiation – 1.5 hours
- Radiation Practical – 5-2 days (rad source/training aid dependent)

Electives: (Tailored by requesting command, see page 46 for additional topics)

- Detector Specific Overview (ADM-300, VDR-2, PDR-77, UDR-13/14/15, RadEye, IdentiFINDER, SE International Inspector, Ludlum-14) each – 5-1 hours depending on detector
- DR/SKO Rad Detection Equipment/DEB Kit Block – 3-5 hours
- Radiological and Nuclear Terrorism Overview (Threat, RED, RDD, Reactor, IND) – 1-3 hours
- Radiological/Nuclear Materials on the Battle Field – 1 hour
- Radiological Materials in Industry & Medicine – 1 hour
- SNM Hazards – 1 hour
- History of Nuclear Weapons Accidents – 1 hour
- Nuclear Fuel Cycle (Facilities & Proliferation) – 1-2 hours
- Reactor Overview and Reactor Accidents – 1-2 hours
- HEMP/EMP Overview – 1 hour
- Psychological Effects of Radiation for the Responder & Public (Radiophobia) – 1 hour
- Risk Communication for Radiological Responders (w/ Practical Exercise) – 1.5 hours
- U.S. Federal Response to a Radiological/Nuclear Event (RDD, IND, Reactor) – 1-2 hours

Mobile Training Team Availability
Mobile Training Teams (MTTs) are available by unit request.

Course Prerequisites: None
The Defense Nuclear Weapons School (DNWS), part of the Defense Threat Reduction Agency (DTRA), is located on Kirtland Air Force Base, Albuquerque, New Mexico. This DTRA school manages and operates the only classified Nuclear Weapons Instructional Museum (NWIM) in the Department of Defense (DOD). The NWIM is a member of the American Alliance of Museums.

The NWIM is an irreplaceable repository that traces the history and development of the U.S. nuclear weapons stockpile from its inception to the present. The NWIM contains displays of all stockpiled U.S. nuclear weapons and their associated components and delivery systems, as well as related training aids.

In addition to preserving artifacts of unique historic significance, the DNWS NWIM serves as an important teaching aid. Tours are provided in conjunction with some courses conducted at the DNWS and vary in length from two to four hours, depending on the nature of the audience. Touring the NWIM display affords students and visitors a rare opportunity to view exhibits and to discuss stockpile issues with experienced instructors.

The NWIM has two major components:

1. An unclassified area where visitors may view a number of different weapon casings and a display of one-tenth scale foreign missile delivery systems.
2. A classified area displaying detailed nuclear weapon models. Arrangements can be made for groups and visitors to tour the NWIM on Tuesdays, Wednesdays, and Thursdays only; Mondays and Fridays the museum is closed to tours for maintenance and upkeep operations. Tours are available for anyone who meets security clearance requirements, has a need-to-know, and submits the required paperwork in accordance with school policy. A DOD Secret security clearance is required to participate in an NWIM tour. To solicit a special tour of the NWIM, a written request must be submitted to and received a minimum of 15 working days before the scheduled tour date. Download a sample NWIM tour request letter or locate the form in the DNWS print catalog. Completed forms may be mailed or faxed to 505-846-5560.

For all tours of the Nuclear Weapons Instructional Museum (NWIM), please contact the Nuclear Weapons Section Coordinator at: (505) 853-7809, or FAX: (505) 846-5560

Mailing Address:
1680 Texas St. SE (Building 20362),
Kirtland AFB, NM 87117-5669

Email:
dtra.kirtland.J10.mbx.dnws-registrar@mail.mil

Nuclear Weapons Instructional Museum

Nuclear Weapons Instructional Museum (NWIM) Tour Request Letter

(Use your letterhead, if possible)

FROM: (Your Organization/Office Symbol)
SUBJECT: Request for Tour of the DTRA Nuclear Weapons Instructional Museum (NWIM)
TO: DTRA/DNWS Registrar’s Office
   Attn: NWIM Tours
   1680 Texas Street SE
   Kirtland AFB, NM 87117-5669

Request a tour of the DTRA NWIM be provided for (number) people on (date) from (time) to (time) AM/PM.

It is understood that approval of our initial request is based upon DNWS course/duty schedules and other requirements. Therefore, our alternative request date would be (date) from (time) to (time) AM/PM.

The purpose of this tour is to: (Provide the reason for the request, type of information desired, and need to know).

Clearance level of tour: Please enter UNCLASSIFIED or SECRET//RD or SECRET//RD-CNWDI for example: SECRET//RD (S//RD) or S//RD-CNWDI; DOE Q.

I understand that my organization will be responsible for ensuring all personnel have a SECRET//RD clearance (CNWDI access for CNWDI tours). We will provide an official signed visit request for all tour attendees to the DNWS Registrar’s Office at Fax number 505-846-5560 no later than 15 working days before the scheduled tour date. This official visit list will include: full name, social security number, date of birth, security clearance/access, and date of clearance.

Our primary point of contact for this request is [Name/Duty Phone/e-mail address]. Please coordinate any changes to this request with this individual.

(Requesting Official)
Telephone Numbers: Commercial/DSN/Mobile
HOSTED COURSES

- Defense Integration and Management of Nuclear Data Services (DIAMONDS)
- Joint Countering Weapons of Mass Destruction Planning Course (JCPC)
- U.S. Army Nuclear and Counter Proliferation Officer Course (NCP-52)
- Theater Nuclear Operations Course (TNOC)

**Hosted CBRN Modeling Simulation**
- Advanced System Survivability Integrated Simulation Toolkit (ASSIST)
- Geospatial Analysis for Consequence Assessment (GACA)
- Hazard Prediction and Assessment Capability Level 1 (HPAC-1)
- Hazard Prediction and Assessment Capability Level 2 – Chemical, Biological, Radiological (HPAC-2-CBR)
- Hazard Prediction and Assessment Capability Level 2 – Nuclear (HPAC-2-N)
- Hazard Prediction and Assessment Capability Executive Course (HPAC-Exec)
- Integrated Munitions Effects Assessment Level 1 (IMEA-1)
- Integrated Munitions Effects Assessment Level-2 - Conventional (IMEA-2-C)
- Integrated Munitions Effects Assessment Level-2 - Nuclear (IMEA-2-N)
- Integrated Weapons of Mass Destruction Toolset – Consequence Assessment (IWMDT-CA)
- Intermediate Modeler Course (IMC)
- JEM Operator Course (JEM)
- Vulnerability Assessment Protection Options Level 1 (VAPO-1)
- Vulnerability Assessment Protection Options Level 2 (VAPO-2)
- CBRN Military Assistance Team (CMAT) Operations Course
- CBRN Military Assistance Team (CMAT) Certification Programs
**Defense Integration and Management of Nuclear Data Services (DIAMONDS)**

This Course is sponsored by the DTRA/J10NL. For more information please contact Diana Kuhn; 703-767-4315; diana.l.kuhn.civ@mail.mil

DIAMONDS Training is a three-day course that provides prospective and current DIAMONDS users hands-on familiarization training with the national nuclear stockpiles sole accountability database. Content of this course outlines current practices for generation, process, and submission of nuclear accountability transactions in the DIAMONDS system, as well as, the incorporation of DOD nuclear weapons accountability policies and procedures. Students should already be familiar with nuclear accountability transactions outside of DIAMONDS.

**Course Prerequisites:** None

**Joint Countering Weapons of Mass Destruction Planning Course (JCPC)**

This Course is sponsored by the DTRA J3/7. For more information please contact LTC Ned Krafchick, Course Director; 703-767-4141; ned.a.krafchick.mil@mail.mil, or Mr. Dave Williams; 703-767-6353; david.d.williams4.ctr@mail.mil

JCPC introduces students to U.S. Government and Department of Defense policy, strategy, doctrine, and planning related to CWMD; teaches students to recognize CWMD equities in and operational context; and demonstrates how to incorporate them into the Joint Operation Planning Process.

The first half of the course focuses on the three lines of effort (prevent acquisition, contain and reduce threats, and respond to crises) and the four CWMD Activities and their supporting tasks identified in the DoD Strategy for Countering WMD and joint doctrine. The second half of the course takes students through select areas of the JOPP and merges CWMD and JOPP concepts through a series of facilitator-led, small-group planning exercises.

**Course Prerequisites:** None

**U.S. Army Nuclear and Counter Proliferation Officer Course (NCP-52)**

For more information please contact USANCA; 703-806-7866; or DSN 656-7866. Also read ALARACT 129/2014 for specific travel guidance.

The Nuclear and Counterproliferation Officer Course (NCP-52) is presented annually at the DNWS by the U.S. Army Nuclear and CWMD Agency (USANCA). The training is primarily limited to U.S. Army officers and serves as the Functional Area (FA 52) qualification course. Army National Guard (ARNG), U.S. Army Reserve (USAR) and sister service officers assigned to the Nuclear or CWMD enterprises may attend on a space available basis. Topics include developing and revising COCOM-level orders, understanding the U.S. nuclear weapons program from inception to present, DOD Homeland Defense organization and doctrine, CBRNE overview, critical-site tours, and current FA52 career field information. For specific information regarding NCP-52, contact USANCA at (703)-806-7866/7854, DSN 656-7866/7854 or email usarmy.belvoir.hqda-dcs-g-3-5-7.mbx.usanca-proponency-division@mail.mil.

**Course Prerequisites:** ARRT-1, NETOPS Primer

**Theater Nuclear Operations Course (TNOC)**

TNOC is a 4.5-day course that provides training for planners, support staff, targeteers, and staff nuclear planners for joint operations and targeting. The course provides an overview of nuclear weapon capabilities, and effects as well as U.S. nuclear policy, and joint nuclear doctrine. TNOC meets U.S. Army qualification requirements for the additional skill identifier 5H. Students will enjoy a tour of the Nuclear Weapons Instructional Museum that is focused on the current stockpile. The tour will be held at the S//RD-CNWDI level of classification.

**Course Prerequisites:** None
Advanced System Survivability Integrated Simulation Toolkit (ASSIST)

This Course is sponsored by the DTRA J9 Information Science and Reachback (ISR) Technical Division. For more information, please contact: dtra.belvoir.j9.mbx.reachback-training@mail.mil

ASSIST is a four-day course that provides students the basic concepts of radiation, radio communications, radio frequency (RF), propagation, and optics modeling tools.

Students trained on the ASSIST tools model the environments of nuclear detonations in and above the earth’s atmosphere. The course includes demonstrations, hands-on familiarization and practice using the ASSIST graphical user interface to apply a suite of models to estimate radiation environments and their effects.

Course Prerequisites: Requires basic computer skills. Requires software user registration on Joint Operation Center, https://opscenter.dtra.mil.

Geospatial Analysis for Consequence Assessment (GACA)

This Course is sponsored by the DTRA J9 Information Science and Reachback (ISR) Technical Division. For more information, please contact: dtra.belvoir.j9.mbx.reachback-training@mail.mil

GACA is a five-day course that provides students with concepts and skills to analyze mass-casualty events using the ESRI ArcMap software in conjunction with DTRA hazard modeling tools. Students will apply learning within the context of modeling, mapping, visualization, and consequence assessment using DTRA hazard modeling and assessment tools.

Course Prerequisites: Requires basic computer skills. Requires software user registration on Joint Operation Center, https://opscenter.dtra.mil.

Hazard Prediction and Assessment Capability Level 1 (HPAC-1)

This Course is sponsored by the DTRA J9 Information Science and Reachback (ISR) Technical Division. For more information, please contact: dtra.belvoir.j9.mbx.reachback-training@mail.mil

HPAC-1 is a five-day course that provides students with a basic level of competency in the modeling of hazardous material releases using the DTRA HPAC software package. Upon completion of the course, students will understand the capabilities and limitations of the program and be able to perform basic hazard predictions and assessments.

Course Prerequisites: Requires basic computer skills. Requires registration on Joint Operation Center, https://opscenter.dtra.mil.

Hazard Prediction and Assessment Capability Level 2 - Chemical, Biological, Radiological (HPAC-2-CBR)

This Course is sponsored by the DTRA J9 Information Science and Reachback (ISR) Technical Division. For more information, please contact: dtra.belvoir.j9.mbx.reachback-training@mail.mil

HPAC-2-CBR is a five-day course that provides students with a higher level of proficiency in modeling and analysis of CBR hazard release using HPAC. Students will learn to apply and demonstrate HPAC source term functionality, computation methodologies, translating, and communicating results.

Course Prerequisites: Requires completion of HPAC-1 and six months HPAC experience. Requires registration on Joint Operation Center, https://opscenter.dtra.mil.
HOSTED COURSES
HOSTED COURSES
HOSTED COURSES

This Course is sponsored by the DTRA J9 Information Science and Reachback (ISR) Technical Division. For more information, please contact: dtra.belvoir.j9.mbx.reachback-training@mail.mil

HPAC-2-N is a five-day course that provides students with a higher level of proficiency in modeling and analysis of nuclear hazard release using HPAC. Students will learn to apply and demonstrate HPAC source term functionality, computation methodologies, translating, and communicating results.

Course Prerequisites: Requires completion of HPAC-1 and six months HPAC experience. Requires registration on Joint Operation Center, https://opscenter.dtra.mil.

Course Requirements
Classification: SECRET/RD/CNWDI
Uniform: B
MTT: By request
Course IDs:
USA DTRA-ALEX-ML2
DNWS CM150
Course Length: 5 days

Integrated Munitions Effects Assessment Level 1 (IMEA-1)

This Course is sponsored by the DTRA J9 Information Science and Reachback (ISR) Technical Division. For more information, please contact: dtra.belvoir.j9.mbx.reachback-training@mail.mil

IMEA-1 is a five-day course that provides students with an initial level of competency in IMEA. Students will experience the capabilities and limitations of IMEA by obtaining target models, creating attack plans, and analyzing and interpreting results.

Course Prerequisites: Requires basic computer skills. Requires software user registration on Joint Operation Center, https://opscenter.dtra.mil.

Course Requirements
Classification: UNCLASSIFIED
Uniform: B
MTT: By request
Course ID: DNWS HPAC-Exec
Course Length: 1.5 days

Integrated Munitions Effects Assessment Level 2 - Conventional (IMEA-2-C)

This Course is sponsored by the DTRA J9 Information Science and Reachback (ISR) Technical Division. For more information, please contact: dtra.belvoir.j9.mbx.reachback-training@mail.mil

IMEA-2-C is a five-day course that provides students with advanced skills in the application of IMEA conventional strike capabilities and limitations. Students will achieve greater proficiency with importing and creating target models, developing attack plans, performing consequence assessment to WMD scenarios, and communicating results.

Course Prerequisites: Requires completion of IMEA-1. Requires software user registration on Joint Operation Center, https://opscenter.dtra.mil.

Course Requirements
Classification: SECRET
Uniform: B
MTT: By request
Course IDs: USA DTRA-ALEX-IL2
DNWS CM 180
Course Length: 5 days
Integrated Munitions Effects Assessment Level 2 - Nuclear (IMEA-2-N)

This Course is sponsored by the DTRA J9 Information Science and Reachback (ISR) Technical Division. For more information, please contact: dtra.belvoir.j9.mbx.reachback-training@mail.mil

IMEA-2-N is a five-day course that provides students with advanced skills in the application of IMEA nuclear strike capabilities and limitations. Students will achieve greater proficiency with importing and creating target models, developing attack plans, performing consequence assessment to WMD scenarios, and communicating results.

Course Prerequisites: Requires completion of IMEA 1. Requires software user registration on Joint Operation Center, https://opscenter.dtra.mil.

Intermediate Modeler Course (IMC)

This Course is sponsored by the DTRA J9 Information Science and Reachback (ISR) Technical Division. For more information, please contact: dtra.belvoir.j9.mbx.reachback-training@mail.mil

IMC is a five-day course that enables students to apply advanced concepts and features of DTRA’s CBRNE modeling in an integrated function-centric approach. This course will build upon previous tool-centric training with demonstrations and hands-on applications using a comprehensive hazard or risk assessment process. The classroom experience will expose students to Incident Commander CBRN decision making.

Course Prerequisites: Requires completion of GACA and HPAC 1. Requires software user registration on Joint Operation Center, https://opscenter.dtra.mil.

Integrated Weapons of Mass Destruction Toolset – Consequence Assessment (IWMDT-CA)

This Course is sponsored by the DTRA J9 Information Science and Reachback (ISR) Technical Division. For more information, please contact: dtra.belvoir.j9.mbx.reachback-training@mail.mil

IWMDT-CA is a five-day course in which the student achieves an initial level of competency in the modeling of hazard releases. Students learn in a collaborative, Net-centric environment by recognizing the IWMDT toolset, understanding and applying graphical user interface operations, and implementing and assessing consequence assessment initiatives to meet the users mission requirements.

Course Prerequisites: Requires moderate computer skills. Requires registration on Joint Operations Center, https://opscenter.dtra.mil.

JEM Operator Course (JEM)

This Course is sponsored by the DTRA J9 Information Science and Reachback (ISR) Technical Division. For more information, please contact: dtra.belvoir.j9.mbx.reachback-training@mail.mil

The JEM Operator Course is a four-day course that gives users basic skills with the Joint Effects Model (JEM) to simulate and assess the effects of CBRN weapon strikes and incidents. JEM is a DoD Program of Record for CBRN modeling and represents the integration of selected current capabilities from existing models into a common operating architecture, interoperable system, and user interface. JEM will provide a capability to overlay hazard areas on a map or Common Operational Picture (COP).

Course Prerequisites: Requires basic computer skills. Requires software user registration on Joint Operation Center, https://opscenter.dtra.mil.
**Vulnerability Assessment Protection Options Level 1 (VAPO-1)**

This Course is sponsored by the DTRA J9 Information Science and Reachback (ISR) Technical Division. For more information, please contact: dtra.belvoir.j9.mbx.reachback-training@mail.mil

VAPO-1 is a five-day course in which students will receive instruction in the full functionality of VAPO to include its capabilities, limitations, and assumptions. Using VAPO functionality, students will assess and analyze a spectrum of threats against assets and develop mitigating strategies with respect to vulnerability assessment and force protection.

**Course Prerequisites:** Requires completion of GACA and HPAC-1. Requires software user registration on Joint Operation Center, https://opscenter.dtra.mil.

**Vulnerability Assessment Protection Options Level 2 (VAPO-2)**

This Course is sponsored by the DTRA J9 Information Science and Reachback (ISR) Technical Division. For more information, please contact: dtra.belvoir.j9.mbx.reachback-training@mail.mil

VAPO-2 is a four-day course designed to enable users to achieve a higher level of understanding of the software’s physics based blast effects models to enhance the application of VAPO for force protection, anti-terrorism and vulnerability assessment modeling against a wide spectrum of real world threats.

**Course Prerequisites:** Requires completion of VAPO-1. Requires moderate computer skills. Requires registration on Joint Operations Center, https://opscenter.dtra.mil.

**CBRN Military Assistance Team (CMAT) Operations Course**

This Course is sponsored by the DTRA CMAT Program. For more information, please contact Mr. Dale Petroff, dale.m.petroff.ctr@mail.mil, 703-767-4849 or SFC Teon Smith teon.l.smith.mil@mail.mil, (703) 767-1668.

The CBRN Military Assistance Team (CMAT) Operations Course is conducted semi-annually in the NCR by J3BPCC Branch of the Defense Threat Reduction Agency (DTRA). The training is limited to those personnel who are assigned to the CMAT programs or Subject Matter Experts that support CMAT operations. After all prerequisites are completed, the CMAT Operations Course serves to qualify CMAT members at the Basic level. Topics include CBRN overview, CMAT exercises, and current CMAT field operational information.

**Objectives:**
- Introduce national crisis response policy
- Develop baseline skills for CMAT members
- Review CBRN mitigation, response, and recovery
- Review consequence management policy and doctrine
- Discuss CMAT missions and lessons learned
- Become familiar with CMAT equipment, including satellite communications
- Discuss current WMD issues
- Conduct assessments and prepare reports for various WMD scenarios
- Prepare and present briefs suitable for general officers and flag officers

**Format:** Facilitated discussions, lectures, and hands-on

**Who Should Take This Course:** DTRA J3BPCC personnel assigned to support CMAT missions, and Subject Matter Experts (SMEs) from organizations that augment or support CMATs.

**Course Prerequisites:** Must gain acceptance from the CMAT leadership to participate. Also, must complete the prerequisites listed in this catalog under Basic CMAT Specialist Certificate.
**CBRN Military Assistance Team (CMAT) Certification Programs**

Certifications are for military, civilian, and contractors assigned to positions within DTRA/SCC-WMD as part of the CBRN Military Assistance Team (CMAT) program. The Basic and Advanced CMAT Certifications fulfill DTRA’s requirement to field qualified CMATs. For more information contact: Mr. Dale Petroff, dale.m.petroff.ctr@mail.mil, 703-767-4849 or SFC Teon Smith teon.l.smith.mil@mail.mil, (703) 767-1668

**Basic CMAT Certification Requirements**

- Hazard Prediction Assessment Capability (HPAC) Level 1
- Geospatial Analysis for Consequence Assessment (GACA)
- Defense Support of Civil Authorities Phase I (DSCA-1)
- FEMA ICS-100, Introduction to Incident Command System
- FEMA IS-200b, ICS for Single Resources and Initial Action Incidents
- FEMA IS-200b, Introduction to Continuity of Operations Planning for Pandemic Influenzas
- FEMA IS-700, National Incident Management System (NIMS)
- FEMA IS-800b, National Response Framework (NRF)
- CM Policy Overview (Requires DTRA SharePoint Access)
- JKO Course: J3O P-US834-Department of State 101 – Interagency Course
- JKO Course: J3O P-US011-Military Response to Domestic CBRNE Attacks Course
- DOCNET Course JP 3-0, Joint Operation Planning
- Completion of the CMAT Operations Course – *Contact J3BPPC Training for registration
- Participation in a one (1) exercise / deployment / mission as a member of a CMAT.

**Advanced CMAT Certification Requirements**

- DOCNET Course: JP 3-08, Interorganizational Coordination During Joint Operations
- DOCNET Courses: JP 3-27, Homeland Defense
- DOCNET Courses: JP 3-57, Civil-Military Operations
- JKO Course: J6S N-US273-Chemical, Biological, Radiological, Nuclear, and High-Yield Explosives Advanced Learning Education (CBRNE - ALERT) Course
- JKO Course: J3O P-US251-Applied Radiological Response Techniques (ARRT) Course
- JKO Course: J3O P-US262-Emergency Preparedness Response Course (EPRC) – Executive / Commander Course
- Joint CWMD Planning Resident Course, (DNWS sponsored classroom course)
- Any DoD recognized Instructor’s Course / or Civilian equivalent
- 1 year of CBRN Incident Management experience

**Examples:**

- Participation in a total of four (4) exercises / deployments / missions as a member of a CMAT
- Basic CMAT Certification
Air Force Nuclear Fundamentals Course (Nuclear 200)

This four and a half day in-residence course is designed to enhance awareness among Airmen of the USAF nuclear mission; the course covers nuclear weapon fundamentals, force structure, nuclear stockpile guidance and planning, the DoD/AF nuclear surety program, the nuclear community, and current issues related to the USAF’s nuclear mission. The focus of this course is an ‘overview’ of the entire nuclear enterprise for individuals that have completed at least one operational nuclear assignment and will stay core nuclear for most of their career or for support function/AFSCs assigned to a nuclear unit/job in a supervisory, command, or decision making position and this is their first nuclear mission assignment.

Objectives:
• Provide a broad overview of the nuclear enterprise and create a standard frame of reference across the Air Force within which to explore the USAF’s nuclear mission, capabilities, and issues
• Describe and discuss the Air Force nuclear mission, force structure, policies, and challenges
• Comprehend the Air Force nuclear surety program
• Explore the relationships between the DoD, Air Force, and DOE/NNSA within the nuclear weapons complex

Who Should Take This Course:
• Airman identified as core nuclear E6-E7, O3- O4
• Airman in support roles/non-core nuclear billets assigned to a nuclear unit/job for the first time in a supervisory or decision making role E7-E9, O3-06
• Attendance is controlled by MAJCOM quota allocations.

Format: Facilitated discussions and lectures supported by video presentations and an NWIM tour at the SECRET//RESTRICTED DATA-CNWDI level.

Registration: For the latest course information, contact the course registrar at the Air Force Nuclear College registrar at DSN 246-7784 or visit the Air Force Nuclear College SharePoint site at https://cs3.eis.af.mil/sites/OO-AQ-MC-95/default.aspx.

Air Force Nuclear Concepts Course (Nuclear 300)

The course provides an in-depth look at key aspects of the Air Force nuclear enterprise to enable better understanding of nuclear deterrence history, theory, and application; nuclear operations policy and strategy; nuclear operations policy and strategy; nuclear incident/accident response; and nuclear surety and effects. The focus of this course is for individuals who are at the 9+ year point working in the nuclear enterprise. They are ‘core nuclear’ and going to a position where they will be setting nuclear policy, procedures, etc. within their functional areas. Normally at the NAF division chief level, MAJCOM branch chief level or HAF/Joint 04 AO level or higher. Also, for nuclear AFSC Sq/CCs who have not attended before selection for command.

Objectives:
• Nuclear History and Lifecycle
• Nuclear Effects and Surety
• Nuclear Policy/Strategy/Doctrine
• The US Nuclear Enterprise
• Nuclear Incident Response
• Stockpile Maintenance
• Nuclear Museum Tour

Who Should Take This Course:
• E8–E9, O4–O6, civilian equivalent core nuclear Airmen assigned to squadron/group leadership positions or occupying HAF, MAJCOM, COCOM, NAF, or joint staff billets at the action officer/branch chief level with nuclear operations, maintenance, logistics, support, or acquisition responsibilities within the nuclear enterprise.
• Attendance is controlled by MAJCOM quota allocations.

Format: Facilitated discussions and lectures supported by video presentations and an NWIM tour at the SECRET//RESTRICTED DATA-CNWDI level.

Registration: For the latest course information, you may contact the Air Force Nuclear College Registrar at DSN 246-7784 or visit the Air Force Nuclear College SharePoint site at https://cs3.eis.af.mil/sites/OO-AQ-MC-95/default.aspx.
Senior Leader Nuclear Management (Nuclear 400)

The purpose of the Senior Leader Nuclear Management course is to provide a forum for senior leaders to discuss deterrence theory, nuclear policy, arms control, and other nuclear issues. The focus of this course is for senior leaders who are either: A) Flag Officers and SESs that have nuclear responsibilities anywhere in their portfolio of responsibilities; B) working internal to the nuclear enterprise and are usually post Sq/ CC command in an O6/civilian equivalent level HAF/ MAJCOM 3 Ltr billet or E9 in similar functional expert billet.

Objectives:
- Nuclear Policy, Doctrine and Deterrence Strategy
- Nuclear Landscape, Arms Control and USAF Nuclear Enterprise
- US Nuclear Weapons Stakeholders Format Facilitated discussions by senior leader in the nuclear enterprise and lectures supported by video presentations and a NWIM tour at the Secret/CNWDI Level.

Who Should Take This Course:
- GO’s/SES with nuclear portfolios
- O-6/civilian-equivalent level HAF/MAJCOM three-letter or wing/group command billet, E-9 in similar functional expert billets

Format: Facilitated discussions and case studies led by senior leader in the nuclear enterprise

Registration:
For the latest course schedule information, contact the course registrar at the Air Force Nuclear College registrar at DSN 246-7784 or visit the Air Force Nuclear College SharePoint site at https://cs3.eis.af.mil/sites/OO-AQ-MC-95/default.aspx.

Air Force Nuclear Certification Process Course

This course provides attendees with an understanding of the Air Force Nuclear Certification Process as prescribed by AFI 63-125, Nuclear Certification Program. It identifies, defines, and explains the four phases of the certification process, the two major elements of Nuclear Certification (Design Certification and Operational Certification) and their components. The course provides a practical discussion on the development, submittal, and approval process for the Nuclear Certification Impact Statement (NCIS) and the Certification Requirements Plan (CRP) (NOTE: An on-site Road Show (Mobile training Team) version of the Certification Process course (6-8 hours) and an executive seminar (3-4 hours) are offered upon request, based on instructor availability and funding.

Objectives:
- Identify, define and explain the Air Force Nuclear Certification Process
- Understand why nuclear certification is important
- Understand how the nuclear certification process works
- Understand the purpose and functions of the Master Nuclear Certification List (MNCL)

Who Should Take This Course:
- This course is open to government personnel who need to understand current nuclear certification process guidance and implementation, to include program managers, system product managers, single managers, equipment specialists, item managers at product and logistics centers, plans, requirements, and logistics personnel, operations and maintenance personnel at field, NAF, MAJCOM and HQs AF levels. All grade levels are welcome, but we recommend that personnel be in grade levels GS-5, E-5, O-1 or higher.

Format: Facilitated discussions and lectures supported by case study exercises and video presentations

Registration:
For the latest course information contact the Air Force Nuclear College Registrar at DSN 246-7784 or visit the Air Force Nuclear College SharePoint site at https://cs3.eis.af.mil/sites/OO-AQ-MC-95/default.aspx. To arrange for a MTT please contact the Air Force Nuclear College Registrar.

For the latest course schedule information, contact the course registrar at the Air Force Nuclear College registrar at DSN 246-7784 or visit the Air Force Nuclear College SharePoint site at https://cs3.eis.af.mil/sites/OO-AQMC-95/default.aspx.
Air Force Nuclear Certified Equipment (NCE) Users Course

The Air Force Nuclear Certified Equipment (NCE) Users Course is designed to enhance Air Force Nuclear Surety by increasing awareness of the responsibilities and requirements for personnel who operate, maintain, and manage NCE. This course is designed to help field users and other personnel become familiar with the basics of handling, managing, and reporting NCE. The course will provide familiarization with elements of the NCE Management Program and enhance attendee's knowledge and understanding of how to use the Master Nuclear Certification List. Primary topics in this course will cover how and why equipment is nuclear certified, requirements and responsibilities for the management of NCE, how to use the Master Nuclear Certification List, determining NCE serviceability and certification status, and the requirements for deficiency reporting on NCE.

(Note: An on-site Road Show (Mobile training Team) version of the Nuclear Certified Equipment Users course is offered upon request, based on instructor availability and funding.)

Objectives:
- Understand the requirements and responsibilities for the management of NCE
- Understand how to use the Master Nuclear Certification List (MNCL)
- Know how to determine NCE serviceability and certification status
- Be knowledgeable of the requirements for deficiency reporting on NCE

Who Should Take This Course:
- Unit/NAF/MAJCOM personnel responsible for handling, managing, or using nuclear certified equipment (NCE), or engaged in managing/monitoring NCE as proscribed in AFI 63-125

Format: Facilitated discussions and lectures supported by class exercises.

Registration:
For the latest course information, you may contact the course registrar at the Air Force Nuclear College Registrar at DSN 246-7784 or visit the Air Force Nuclear College SharePoint site at https://cs3.eis.af.mil/sites/OO-AQ-MC-95/default.aspx.
**Defense Threat Reduction Information Analysis Center (DTRIAC)**

**DTRIAC Core Activities**

Core Activities are fully funded by DTRA to qualified users and includes the following activities:

- Respond to Technical Inquiries
- Provide online access to the DTRA S&T knowledge base using the Scientific & Technical Information Archival and Retrieval System (STARS) - Maintain and grow the DTRA Scientific and Technical (S&T) knowledge base – over 3 million documents, films, videos, photographs, drawings, and engineering data

**Technical Orders (TO)**

TOs provide for timely support to IAC customers who require dedicated efforts which require more depth and specialization (greater than 8 hours) than is available as part of the core activities. TOs include studies, analyses, assembly of data collections, and development of tools and techniques for the collection and analysis of data, as well as other unique scientific and technical activities. TOs require separate funding by the requesting customer.

**Defense Threat Reduction Information Analysis Center Holdings:**

- Nuclear Weapon Effects
- High Yield Explosives and associated Phenomena such as Blast, Shock, and Overpressure
- Types of and Destructive power of various explosives
- Cooperative Threat Reduction Information
- Biological topics such as Agents and Warfare
- Bacteria and Bacterial Toxins, Fungi and Viruses
- Journals, Periodicals and Special Collections include:
  - Armed Forces Radiobiological Research Institute (AFRRI)
  - IEEE Transactions on Nuclear Science
  - Plowshare Project
  - Quick Look reports
- Distribution Products:
  - Effects of Nuclear Weapons
  - Weapons of Mass Destruction Terma Handbook
  - Caging the Dragon, the Containment of Underground Nuclear Explosions
  - Building the Cage
  - Responding to War, Terrorism, WMD Proliferation: History of DTRA, 1998-2008
  - LANL Nuclear Weapons Analysis Tools, Ver 5.5 (CD)
  - EM-1 Chapters [CD’s are classified individually U-SRD; DTRA approval required]

**STARS - Scientific & Technical Information Archival and Retrieval System**

STARS is DTRA’s online searchable database containing information that supports DTRA’s mission, such as documents, photographs, diagrams, numeric data, software, and videos.

STARS is comprised of two systems, each with its own user-id and password. The unclassified system (STARS-U) is a subset of the overall digitized information and is accessible via the SINPIRNet/Internet. Access is possible with the use of a government issued CAC or SecurID token (which is provided upon getting an account). The classified system (STARS-C) contains 100% of the digitized information and is accessible via the SIPRRNet.

DTRIAC’s holdings in STARS include over eight and a half million pages with over 400,000 titles indexed by both author and title. STARS also holds in excess of 46,000 data sets and 3,000 photographs.

DTRIAC is actively adding digital files from its film library as the efforts to preserve and digitize these irreplaceable assets continue. In addition to the documents, databases, films and photographs, STARS has other tools to assist the researcher, such as:

- **Events:** An event is a test event summary of a weapon or high explosive test. It brings all the related information into single screen to allow detailed research.
- **Guides:** Guides provide information on a specific subject area (e.g., special-weapons effects testing, phenomena, test methods, operations, events, facilities, organizations, data systems).
- **Tables:** A table is a set of alphanumeric or numeric data values organized in rows and columns. Examples include data from spreadsheets or databases.
- **Diagrams:** Consist of items such as blueprints, schematics and engineering drawings.
- **Numerics:** Numeric data is a digital representation of engineering or science data. Examples include waveform data recorded from an event or simulation, calibration data, and calculated results.

**Requesting a STARS Account**

To request a STARS account, contact the STARS Account Administrator at (505) 853-0854, DSN 263-0854 or via e-mail, DTRA-DTRIAC@mail.mil. Requirements for an account are: a visit request must be on file with DTRA Security, have a minimum of a SECRET clearance or higher and be briefed in on RD, CNWDI and NATO access, and have a DTRA sponsor (non-DTRA accounts only).

**Who We Serve**

DTRIAC services are available to members of U.S. government organizations with a valid need-to-know. Contractors must have a government contract sponsor. In order to receive export-controlled data, your organization must be registered with the Defense Logistics Information Services (DUS).

**Visiting DTRIAC**

A visit will be most productive if planned. Members of the DoD or DOE should contact DTRIAC directly. Government contractors should contact their contracting officers to coordinate a visit. All other visits require DTRA approval in advance. Be sure to specify your technical query, issue or problem and type of assistance desired in advance of your visit.

E-mail: DTRA-DTRIAC@mail.mil

**STI Support Center**

Located in room 3880 of DTRA at Ft. Belvoir is the STI Support Center that provides ready access to DTRA personnel in the NCR. Access to both STARS systems is available. In addition, Research Assistants are on hand to help direct and refine inquiries.

**Contact Us**

DTRA/DTRIAC
Program Manager / COR
Program Manager (505) 846-8673
COR (703) 767-2758

All public and media inquiries should be directed to the Defense Threat Reduction Agency Office of Public Affairs:

Voice: (703) 767-5870
Fax: (703) 767-4450
Toll-free: (800) 701-5096
DSN: 427-5870
Email: dtra-PA@mail.mil

Use of your STARS account will allow access to these as well as other holdings. If a reference is not yet digitized, DTRIAC will digitize it and provide the requester with an electronic copy of the requested information.