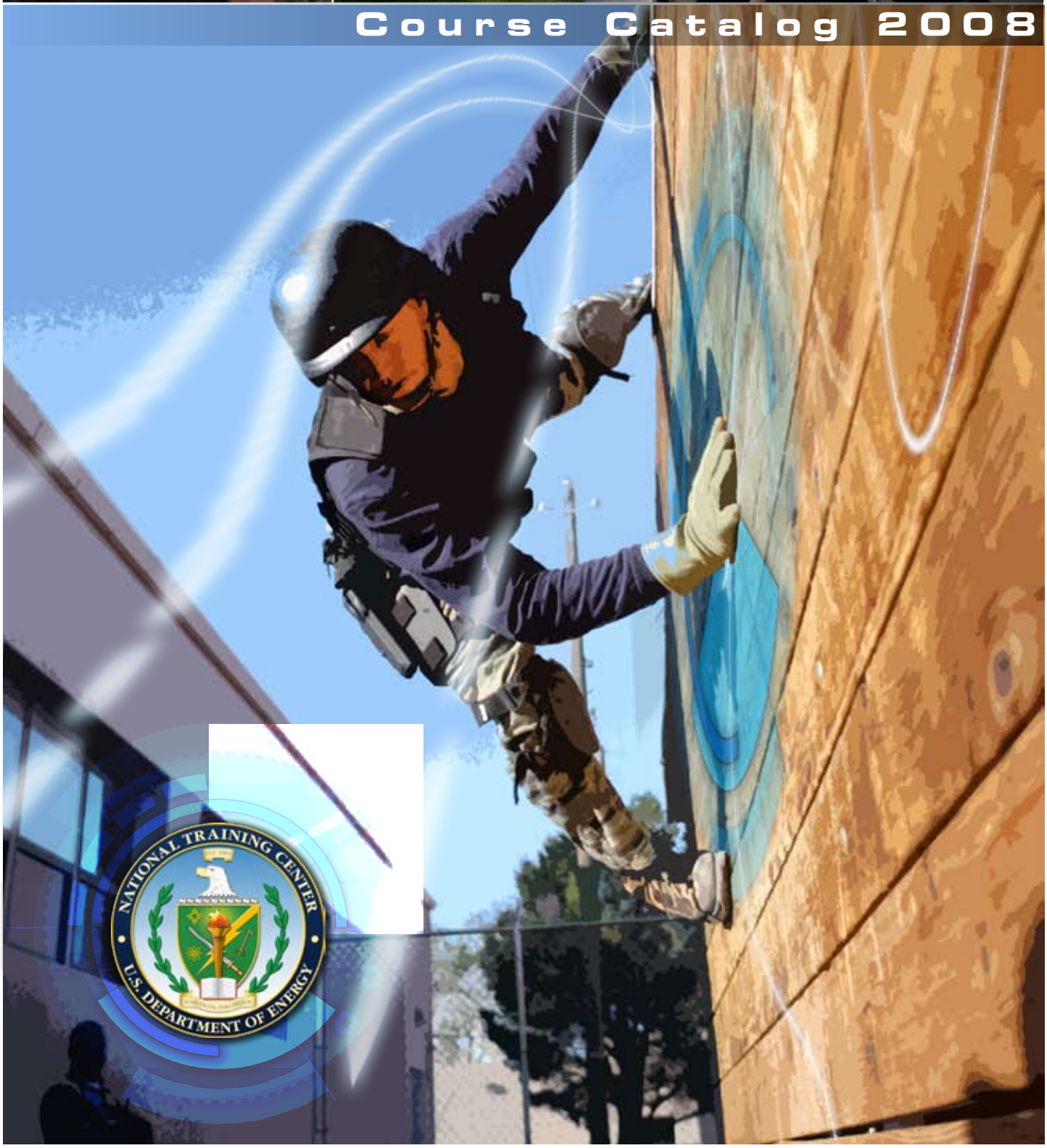
National Training Center

Course Catalog 2008



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CNA-100 Counterintelligence Awareness for the U.S. Department of Energy

Delivery Method: Instructor-Led

Length: 16.00 Hours

Description: This course provides current awareness level information on the threat posed by foreign intelligence and the crime of espionage. In addition, the course provides students with a greater understanding of the continuing threat to the U.S. Department of Energy (DOE)/National Nuclear Security Administration (NNSA) from the trusted insider working for a foreign intelligence service or international terrorist entity. Students will gain an appreciation for the many challenges DOE faces in preventing the loss of national security information and helping to protect DOE personnel, assets and facilities.

Audience: The target audience for this course includes all DOE/NNSA federal and contractor personnel.

Goals & Objectives: Upon successful completion of this course, attendees will:

1) Identify threats, both from foreign intelligence services and international terrorist organizations.
2) Recognize the threat posed by the trusted insider.
3) Know how to reduce the risks associated with those threats.
4) Understand vulnerabilities and how they can be used to compromise DOE/NNSA assets (information, personnel and facilities).
5) Learn about the crime of espionage and its basic elements.
6) Become familiar with counterintelligence reporting requirements and why they are important.

NOTE: DOE/NNSA sites may request a classified version of this course.

Prerequisites: None

Minimum Number of Students: 15

Maximum Number of Students: 30

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CNA-103 Introduction to Counterintelligence Awareness

Delivery Method: Instructor-Led

Length: 8.00 Hours

Description: This course provides current awareness level information on the foreign intelligence threat, international terrorism and the insider threat. The purpose of this course is to provide students with a greater understanding of the continuing threat to the U.S. Department of Energy (DOE)/National Nuclear Security Administration (NNSA). Students will learn how they can help prevent the loss of DOE/NNSA critical assets.

Audience: The target audience for this course includes all DOE/NNSA federal and contractor personnel.

Goals & Objectives: Upon successful completion of this course, attendees will:

1) Increase their awareness of the threat from foreign intelligence services.

2) Increase their awareness of the international terrorism threat.

3) Improve their understanding of the insider threat.

4) Become familiar with counterintelligence reporting requirements and why they are important.

Prerequisites: None

Minimum Number of Students: 10

Maximum Number of Students: 30

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CNA-110 Counterintelligence for Managers

Delivery Method: Instructor-Led

Length: 2.00 Hours

Description: This course provides general awareness regarding the foreign intelligence threat; helps managers decide for themselves how vulnerable they, the U.S. Department of Energy (DOE) and the National Nuclear Security Administration (NNSA) are to the foreign intelligence threat; and provides methods to reduce these vulnerabilities.

The target audience for this course includes all DOE/NNSA federal and contractor personnel filling key "leadership" roles, namely, laboratory/plant directors and mid-level managers who must convey their support of the counterintelligence awareness program to their employees and across the complex. It is also designed for scientists and engineers who comprise the scientific community in DOE/NNSA laboratories and plants. An additional target audience for this training is all DOE/NNSA federal and contractor personnel.

Audience: See course description.

Goals & Objectives: Upon successful completion of this course, attendees will:

1) Understand the foreign intelligence threat.

2) Understand how to reduce the risk to themselves and DOE/NNSA.

3) Identify the differences in collection processes used by key foreign intelligence services.

4) Identify techniques to reduce the foreign intelligence threat.

5) Identify DOE/NNSA organizations that offer assistance in countering the foreign intelligence threat.

Prerequisites: None

Minimum Number of Students: 10

Maximum Number of Students: 30

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CNA-111 Managing the Insider Threat

Delivery Method: Instructor-Led

Length: 2.00 Hours

Description: This course is envisioned as part of the baseline training for mid- and upper-level managers in the U.S. Department of Energy (DOE)/National Nuclear Security Administration (NNSA) community to recognize and encourage attendance at other counterintelligence (CI) awareness training presented by the Counterintelligence Training Academy.

This course enhances student awareness in recognizing the foreign intelligence threat posed by insiders and includes techniques to assist in managing this threat. The importance of making CI awareness a part of the everyday work environment is stressed.

The target audience for this course includes DOE/NNSA federal and contractor personnel filling key "leadership" roles, namely, laboratory/plant directors and mid- and upper-level managers who convey support of the CI awareness program to employees. Attendees should currently occupy or be selected to occupy a management or equivalent position.

Audience: See course description.

Goals & Objectives: Upon successful completion of this course, attendees will:

1) Understand how to identify potential insiders.
2) Understand the threats posed by the insider.
3) Understand how to respond to insider threats.
4) Describe three key elements of the DOE/NNSA CI Program.
5) Describe how the CI program supports the manager.
6) Describe suspicious behavior or actions that should be reported to CI.

Prerequisites: None

Minimum Number of Students: 10

Maximum Number of Students: 30

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CNA-141 Foreign Intelligence Threats to Information Technology

Delivery Method: Instructor-Led

Length: 2.00 Hours

Description: This course defines the risk posed by foreign intelligence activities associated with information technology. It includes informal lectures, local information technology threat issues, student led exercises and case studies. This course also identifies cyber-related counterintelligence (CI) initiatives designed to counter this threat.

The target audience for this course includes all U.S. Department of Energy/National Nuclear Security Administration federal and contractor personnel responsible for the operation and safeguarding of information technology assets.

Audience: See course description.

Goals & Objectives: Upon successful completion of this course, attendees will:

1) Describe the foreign intelligence threat to information technology.

2) Identify cyber CI initiatives to counter the foreign intelligence threat.

Prerequisites: None

Minimum Number of Students: 15

Maximum Number of Students: 30

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CNA-150 The Foreign Intelligence Threat

Delivery Method: Instructor-Led

Length: 4.00 Hours

Description: This course begins with an overview of counterintelligence (CI) in the U.S. Department of Energy (DOE)/National Nuclear Security Administration (NNSA) and then explores the foreign intelligence threat. This fast-paced course allows students to discover the reality of the ongoing foreign intelligence collection threat and its impact on DOE/NNSA. Students will find out how they are an integral part of CI and CI's role in the overall security program for DOE/NNSA. Topics include the real world and evolving threats to DOE/NNSA in the post-Cold War era, foreign intelligence collection techniques and potential threats to travelers overseas and to hosts of foreign visitors. Discussions include personal vulnerabilities, basic personal defensive measures and how foreign espionage harms the interests of the nation, DOE/NNSA and every American.

The target audience for this course includes all DOE/NNSA federal and contractor personnel, cleared and uncleared, who require familiarity with the CI threat.

The critical target audience is those individuals who travel overseas or interact with foreigners.

Audience: See course description.

Goals & Objectives: Upon successful completion of this course, attendees will:

1) Gain an awareness of the reality of the foreign intelligence threat.

2) Understand how this threat can impact every American.

3) Understand their individual role in CI protection as part of the overall DOE Office of Counterintelligence (OCI) program.

4) Understand how their partnering relationship with OCI and their site CI officer (CIO) help provide world class science with world class security for DOE.

Prerequisites: None

Minimum Number of Students: 5

Maximum Number of Students: 25

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CNA-151 Elicitation at Scientific and Business Meetings

Delivery Method: Instructor-Led

Length: 4.00 Hours

Description: This course explores the practical utility of conversation in intelligence collection. While most people are alert to the pitfalls of direct solicitation of information, a skillful "social engineer" can use the polite art of conversation to draw detailed data from a target without alerting the victim that he or she is being "had." This course identifies various elicitation techniques and the kinds of information sought, and discusses methods of deflecting elicitation.

The target audience for this course includes all U.S. Department of Energy (DOE)/National Nuclear Security Administration (NNSA) federal and contractor personnel, cleared and uncleared, who need to know about the foreign intelligence collection threat. Because this topical area is a key to a full understanding and appreciation of the foreign intelligence collection threat to DOE/NNSA, there are no restrictions on the target audience for this course.

Audience: See course description.

Goals & Objectives: Upon successful completion of this course, attendees will:

1) Understand how foreign companies and intelligence services have successfully used elicitation against wary DOE/NNSA travelers at scientific conferences and business meetings.

2) Recognize different elicitation techniques when used in ordinary conversation.

3) Identify elicitation techniques that have been employed against DOE/NNSA attendees at conferences.

4) Identify effective countermeasures to ordinary elicitation and solicitation.

5) Understand the necessity of reporting elicitation attempts to counterintelligence.

Prerequisites: None

Minimum Number of Students: 5

Maximum Number of Students: 25

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CNA-152 Economic Espionage

Delivery Method: Instructor-Led

Length: 4.00 Hours

Description: This course is a dynamic, highly participatory learning experience designed to provide an overview of intellectual property (IP) threats, vulnerabilities, risks associated with scientific interaction (collaboration) and measures each of us can take to protect trade secrets. Analysis of economic espionage cases help development of an effective strategy for use in protecting IP. Discussions include the impact to U.S.-based business, employment and our economy from foreign competitors. The Economic Espionage Act of 1996 (EEA) is explored to demonstrate what elements constitute intellectual property and how the EEA helps to counter future losses. The purpose of this course is to provide students with tools to help the counterintelligence office detect and deter foreign attempts to exploit information and gain competitive advantage, resulting in lost opportunities. Real-life examples and case studies are the foundation of this student-centered course and illustrate that the risks are real and can happen in private industry and national laboratories.

The following topics are among those addressed in class:

1) Economic Espionage Act of 1996
2) What is economic espionage?
3) Who does EEA affect?
4) What is considered IP?
5) What is the threat?
6) What are the targets?
7) Methods of operation
8) Countermeasures
9) Employee and Office of Counterintelligence responsibilities.

The target audience for this course includes all U.S. Department of Energy/National Nuclear Security Administration federal and contractor personnel.

Audience: See course description.

Goals & Objectives: Upon successful completion of this course, attendees will:

1) Know what constitutes intellectual property (IP) and why it needs protection.
2) Know the measures needed to protect IP, licenses and patents in the future.
3) Understand how the Economic Espionage Act of 1996 provides legal protection of IP, especially in CRADAs.
4) Understand when and what to report to counterintelligence about IP exchanges.

Prerequisites: None

Minimum Number of Students: 5

Maximum Number of Students: 25

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CNA-153 Espionage Recruitment and Human Vulnerabilities

Delivery Method: Instructor-Led

Length: 4.00 Hours

Description: This course provides a close look at the most dangerous intelligence collection/espionage threat—the trusted insider. It examines how and why common human weaknesses make ordinary people vulnerable to the temptations of espionage. The course looks at how a foreign intelligence service develops its human sources of information and how the trusted insider can be persuaded to betray their country. A practical exercise looks at actual case histories of Americans who have given in to the "dark side" of collection and committed espionage.

The target audience for this course includes all U.S. Department of Energy (DOE)/National Nuclear Security Administration (NNSA) federal and contractor personnel, cleared and uncleared, who need to know about the foreign intelligence collection threat. Because this topical area is a key to a full understanding and appreciation of the foreign intelligence collection threat to DOE/NNSA, there are no restrictions on the target audience for this course.

Audience: See course description.

Goals & Objectives: Upon successful completion of this course, attendees will:

1) Understand how human weaknesses can make someone vulnerable to recruitment by corporate or national intelligence officers (i.e., spies).

2) Identify how foreign companies and governments use human intelligence collection ("HUMINT") to gain an economic or political edge over competitors.

3) Recognize common behaviors exhibited in the past by Americans who have been involved in espionage against the United States.

4) Recognize the legitimate need to observe and report potential espionage behavior.

Prerequisites: None

Minimum Number of Students: 5

Maximum Number of Students: 25

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CNA-154 Technical Collection Threat to the Traveler

Delivery Method: Instructor-Led

Length: 4.00 Hours

Description: This course draws upon the personal and corporate experience of the U.S. Department of Energy (DOE)/National Nuclear Security Administration's (NNSA) extended family of travelers to reveal the sophisticated and simple ways a traveler's private moments and conversations can be observed and exploited by a foreign business or government. Students will learn how a trusted insider can be part of the problem even at home. A practical exercise challenges students to play the role of a foreign collector intent upon learning everything there is to know about an American traveling abroad.

The target audience for this course includes all DOE/NNSA federal and contractor personnel, cleared and uncleared, who need to know about the foreign intelligence collection threat.

The critical target audience is those individuals who travel overseas or who interact with foreign visitors.

Audience: See course description.

Goals & Objectives: Upon successful completion of this course, attendees will:

1) Understand how both foreign businesses and their governments use technical espionage against travelers.

2) Recognize when and where collection can happen.

3) Understand how the "collector" uses technical means to identify and recruit the unwitting human source of intelligence.

4) Appreciate their own growing vulnerability to technical collection, both at home and abroad.

5) Recognize the need for good personal operations security (OPSEC) when traveling.

Prerequisites: None

Minimum Number of Students: 5

Maximum Number of Students: 25

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CNA-155 Counterintelligence Awareness for the Traveler Abroad

Delivery Method: Instructor-Led

Length: 2.00 Hours

Description: This course helps students gain an awareness of specific foreign intelligence and international terrorist collection capabilities and their potential impact on the U.S. Department of Energy (DOE)/National Nuclear Security Administration (NNSA) traveler abroad.

The target audience for this course includes DOE/NNSA federal and contractor scientists and engineers who travel abroad to attend conferences, attend seminars or conduct other activities in support of U.S. government initiatives.

Audience: See course description.

Goals & Objectives: Upon successful completion of this course, attendees will:

1) Identify collection techniques used by foreign intelligence services and international terrorists.

2) Identify measures that can be taken to protect themselves from foreign intelligence services and international terrorists.

3) Identify suspicious behavior or actions that should be reported to counterintelligence.

Prerequisites: None

Minimum Number of Students: 5

Maximum Number of Students: 25

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CNA-170 Terrorism Awareness in the U.S. Department of Energy/NNSA Community

Delivery Method: Instructor-Led

Length: 2.00 Hours

Description: This course provides general awareness concerning the terrorist threat to U.S. citizens throughout the world. Students will be better able to evaluate the global terrorist threat, identify the U.S. response to terrorism and the U.S. Department of Energy (DOE)/National Nuclear Security Administration's (NNSA) role, and recognize and interpret their personal role in countering terrorism through recognition and reporting indicators of potential terrorist activity.

Audience: The target audience for this course includes all DOE/NNSA federal and contractor personnel.

Goals & Objectives: Upon successful completion of this course, attendees will:

1) Describe terrorism.

2) Identify terrorist goals and objectives.

3) Describe the U.S. "War on Terrorism," including U.S. counterterrorism policy and the DOE role.

4) Identify indicators of possible terrorist activity.

5) Describe individual protective measures.

6) Identify individual responsibilities in the "War on Terrorism."

7) Identify the benefits of reporting suspicious activity.

Prerequisites: None

Minimum Number of Students: 15

Maximum Number of Students: 30

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CNA-225 Counterintelligence Automated Investigative Management System (CI-AIMS)

Delivery Method: Instructor-Led

Length: 16.00 Hours

Description: This course prepares U.S. Department of Energy (DOE)/National Nuclear Security Administration (NNSA) federal and contractor personnel to operate the Counterintelligence Automated Investigative Management System (CI-AIMS). Students will be led through the steps required to open an investigation, create inserts, create lead inserts and close the case.

The target audience for this course includes Senior Counterintelligence Officers (SCIO), Counterintelligence Officers (CIO), managing CIOs, and counterintelligence (CI)-related analysts, technical experts and administrative support staff.

Students must be employed in the DOE/NNSA counterintelligence program and nominated by their respective SCIO or program director to attend this course. DOE Headquarters Counterintelligence Directorate, Training and Awareness Division written approval is required to enroll in this course. DOE "Q" clearance with a passed CI Evaluation is a solid requirement for this course.

Audience: See course description.

Goals & Objectives: Upon successful completion of this course, attendees will:

1) Navigate through CI-AIMS using Netscape as the browser.

2) Create a counterintelligence administrative investigation file using CI-AIMS.

3) Create a counterintelligence administrative investigative file insert using CI-AIMS.

4) Document a lead using CI-AIMS.

5) Operate the program using a complex case study and perform specified tasks.

Prerequisites: None

Minimum Number of Students: 1

Maximum Number of Students: 10

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CNA-230 Counterintelligence Analytical Research Database System (CARDS)

Delivery Method: Instructor-Led

Length: 16.00 Hours

Description: This course provides counterintelligence (CI) personnel with basic skills necessary to use the Counterintelligence Analytical Research Database System (CARDS) in the accomplishment of their assigned duties. CARDS is utilized to report, store and evaluate CI data collected during the conduct of CI-related activities. This system is a fundamental tool utilized by CI personnel to analyze foreign intelligence and international terrorism information used to develop appropriate threat documents.

The target audience for this course includes Senior CI Officers (SCIO), CI Officers (CIO), managing CIOs and CI-related analysts, technical experts and administrative support staff.

Students must be employed in the U.S. Department of Energy/National Nuclear Security Administration counterintelligence program and nominated by their respective SCIO or program director to attend this course. DOE Headquarters Counterintelligence Directorate, Training and Awareness Division written approval is required to enroll in this course. DOE "Q" clearance with a passed CI Evaluation is a solid requirement for this course.

Audience: See course description.

Goals & Objectives: Upon successful completion of this course, attendees will:

1) Understand the purpose of CI-EA and how the CARDS module fits into the CI-EA.

2) Understand how to use the CARDS software application to facilitate creation and modification of records for counterintelligence-related activities.

3) Apply the skills learned to perform the basic functions required to input data, conduct a criteria search and generate the appropriate CARDS report.

Prerequisites: None

Minimum Number of Students: 1

Maximum Number of Students: 10

Safeguards and Security

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CTA-101DC Introduction to Safeguards and Security

Delivery Method: Other

Length: 5.00 Hours

Description: This computer-based training (CBT) self-study course provides an introduction to the purpose and organization of the DOE Safeguards and Security (S&S) Program through a broad overview of key program elements including Program Planning and Management, Information Security, Personnel Security, Nuclear Materials Control and Accountability, Physical Protection and Protective Force. It serves as a prerequisite for many other courses.

Audience: DOE and DOE contractors.

Goals & Objectives: Through successful completion of this course, students will be

1) Introduced to basic aspects of the S&S program, including the program's structure, purpose, and primary elements

2) Familiar with the five S&S key program elements

Prerequisites: None

Minimum Number of Students: 0

Maximum Number of Students: 0

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CTA-110 Safeguards and Security Awareness Coordinators Training

Delivery Method: Instructor-Led

Length: 36.00 Hours

Description: This course provides students with a fundamental understanding of the duties and responsibilities of a DOE safeguards and security (S&S) awareness coordinator as specified in DOE M 470.4-1, Chg 1, Section K, S&S Awareness Program. Emphasis is placed on knowledge of relevant DOE directives, communication and presentation proficiency, briefing development and methods, target population analysis, program enhancement methods, and S&S Awareness Program administration skills.

Audience: DOE and DOE contractors appointed as S&S awareness coordinators.

Goals & Objectives: Upon successful completion of this course, students will

1) Understand the essential job requirements of a S&S awareness coordinator

2) Know the four basic types of DOE security awareness briefings

3) Be familiar with and able to apply various communication techniques

4) Recognize and be able to apply the concept of analyzing target populations

5) Identify various methods to enhance and promote an effective security awareness program

6) Understand methods to efficiently administer an S&S awareness program

Prerequisites: None

Minimum Number of Students: 14

Maximum Number of Students: 24

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PPM-151 Foreign Ownership, Control, or Influence

Delivery Method: Instructor-Led

Length: 25.00 Hours

Description: This course focuses on DOE directives establishing the Foreign Ownership, Control, or Influence (FOCI) program; responsibilities and authorities in implementing the FOCI program; the phases of the FOCI process; the types of business structures; and criteria to be considered in determining whether companies or individuals are under FOCI.

REQUIREMENT: Current assignment to job responsibilities requiring implementation or knowledge of the FOCI program.

Audience: DOE personnel whose job responsibilities require implementation or knowledge of the FOCI program.

Goals & Objectives: Upon successful completion of the course, attendees will be able to

1) Determine when FOCI submissions are required.
2) Evaluate FOCI submissions.
3) Understand requirements for and the basis of the FOCI program.
4) Understand the process of rendering and verifying FOCI determinations.
5) Write/recommend FOCI analyses and recommendations.
6) Plan and manage an effective FOCI program.
7) Understand methods of negating or reducing FOCI risks.

Prerequisites: None

Minimum Number of Students: 8

Maximum Number of Students: 15

Program Planning and Management

Foreign Interaction

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FIT-110 Foreign Access Central Tracking System Training

Delivery Method: Instructor-Led

Length: 16.00 Hours

Description: This course provides training for new or inexperienced users of FACTS (Foreign Access Central Tracking System). The course covers the major tools of FACTS and incorporates instructor-led, practical applications and review/practice activities designed to improve users competency level in FACTS.

Topics covered in each lesson are as follows:
Lesson 1: Introduction and Overview of FACTS
Lesson 2: FV&A Management and Tracking
Lesson 3: Reports
Lesson 4: Other Links of the FACTS Workstation

AUDIENCE: DOE and DOE-contractor personnel authorized to use FACTS to enter biographical and request information, provide review and approval input, and fulfill reporting requirements regarding foreign nationals on visits or assignments to DOE facilities.

REQUIREMENT: FACTS account established with HS-72 (username and password).

Audience: See description.

Goals & Objectives: Upon successful completion of the course, attendees will have the following information:

1) Basic knowledge of the main features of the FACTS system.

2) How to use the Foreign Visits and Assignments (FV&A) Management Tools and FV&A Request Tools to create requests, addendums, approvals/inputs, and close out requests in FACTS.

3) How to generate a variety of reports from FACTS data, using an array of parameters.

4) How to use the remaining links of the FACTS Workstation not covered in detail in the first three lessons.

Prerequisites: None

Minimum Number of Students: 10

Maximum Number of Students: 12

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FIT-130DE Foreign Visits and Assignments Host Training

Delivery Method: Online Item

Length: 1.50 Hours

Description: NEW FORMAT: FIT-130DE has been redeveloped in a new format and is now available on the OLC².

This eLearning course focuses on the responsibilities and requirements for hosting foreign nationals under DOE's Unclassified Foreign Visits and Assignments (FV&A) Program. The training is designed to provide timely information using a delivery method that can be accessed on demand and completed within a short timeframe.

Topics are divided into the major areas of host activities and responsibilities in the following phases: Prior to the visit/assignment, during the visit/assignment, and after the visit/assignment. Three lessons are included, with each lesson followed by interactive review questions and the NTC Student Feedback Form. Links to downloadable forms, job aids, and additional resources are provided.

Please note that this course is to be used as a training resource only. Completion of the course does not qualify or certify you as an FV&A host; your site has its own requirements for FV&A hosts that you must also fulfill. Please consult your site Unclassified FV&A coordinator for further information on host qualifications.

Audience: DOE/DOE-contractor who will host foreign nationals on visits or assignments at DOE facilities.

Goals & Objectives:

Prerequisites: None

Minimum Number of Students: 0

Maximum Number of Students: 0

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FIT-150 Exchange Visitor Program Training

Delivery Method: Instructor-Led

Length: 16.00 Hours

Description: In attempting to further the foreign policy objectives of the U.S. through educational and cultural exchanges, the Department of Energy (DOE) sponsors thousands of individuals each year from many countries as specialists, research scholars, short-term scholars, and government visitors to study, teach, and exchange knowledge at many DOE facilities throughout the U.S. DOE has requested a comprehensive program of training for Responsible Officers (ROs) and Alternate Responsible Officers (AROs) to equip them for their duties and to help them fulfill all the legal mandates for comprehensive advising and monitoring of foreign visitors who come to DOE sites to study, work, and do research. The training is also intended to help ROs and AROs fulfill the reporting and record keeping requirements of the law.

Audience: Intended for those persons designated either RO or ARO by the various DOE entities.

Goals & Objectives: Upon completion of this course, ROs and AROs will know the following:

1) Have a thorough and comprehensive understanding of their many responsibilities in advising and monitoring all the foreign visitors that come to the United States through the DOE Exchange Visitor Program (EVP).

2) Know their responsibilities concerning record keeping for the EVP.

3) Know the requirements for reporting on the EVP to the Department of State.

Prerequisites: None

Minimum Number of Students: 10

Maximum Number of Students: 16

Program Planning and Management

Management and Instructional Training

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LDI-400 Leadership Development Institute

Delivery Method: Instructor-Led

Description: The Leadership Development Institute (LDI) is designed for high-performing, mid-level DOE executives. Selection of participants for the LDI is by invitation from senior executive leadership of DOE, and enrollment for each iteration is limited. Participants selected must demonstrate a successful track record in management within the organization and should show a pronounced interest in acquiring advanced leadership skills and a penchant for leading people.

Mirroring the aim of a majority of the Office of Personnel Management's Executive Core Qualifications or ECQs, the LDI emphasizes "leadership vs. management." The Institute is a week-long "in residence" event held at the NTC in Albuquerque and is designed to assist students in developing their leadership skills and abilities through participation in educational sessions presented by a variety of training professionals. These will include Federal experts, industry leaders in management and leadership fields, professional showcase speakers, and seasoned veterans from the Department of Energy who will provide insights and advice from the standpoint of those who have "lived the process."

Specific opportunities for improvement will be addressed by student attendees through projects, case studies, facilitated conversations, and "think-tanks," or solutions teams. The specific goals and objectives for each session will vary depending on the makeup, professional affiliation, and background of the student audience.

Prerequisites: Restricted Enrollment

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MDI-300 Management Development Institute

Delivery Method: Instructor-Led

Description: The Management Development Institute (MDI) is designed for Safety and Security managers who have contractor oversight responsibilities.

Using a combination of safety and security themed lectures, practical exercises, discussions, and problem solving techniques, the Institute will provide participants with an opportunity to learn from leading management experts (to include DOE experienced managers).

The curriculum will include Performance Management, Finance/Budgeting, Risk Management, Communications/Interfaces, and Teambuilding as they relate to contract oversight responsibilities.

Topics that will be covered include:

1) Selecting and using performance indicators, developing and setting goals.

2) Focusing on performance management including traditional "monitoring," both financial and non-financial

3) Making decisions about risk levels and management risk

4) Using active listening and delivering effective feedback

5) Managing interfaces between contractor and end users of the contractor services

6) Building and managing Federal-contractor teams

The Institute will conclude with a micro-game session where participants will have the opportunity to practice the acquired skills. The emphasis of the micro-game will be on problems, situations, and dilemmas in the safety and security arenas.

Prerequisites: Restricted Enrollment

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MIT-111 Basic Instructor Training

Delivery Method: Instructor-Led

Length: 40.00 Hours

Description: This program gives attendees the basic tools necessary to conduct an effective training session.

NOTE: Attendees are expected to spend an average of two hours of their own time, each evening, preparing for class.

Audience: DOE, DOE-contractors and other government personnel who are responsible for conducting training.

Goals & Objectives: Upon successful completion of the course, attendees will

1) Demonstrate the instructor's role in effective classroom communication, including effective use of questions.

2) Know the various teaching methods for enhancing learning.

3) Understand the relationships among instructional objectives, content presentation, student practice, and student evaluation.

4) Effectively produce and use training aids to reinforce lessons.

5) Deliver a lesson over two days, using a lesson plan and training aids provided by NTC.

6) Through presentation of an instructional lesson, apply teaching methods, use training aids, and administer a test.

Prerequisites: None

Minimum Number of Students: 10

Maximum Number of Students: 16

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MIT-119DB Introduction to Job Analysis (Correspondence Course)

Delivery Method: Online Item

Length: 8.00 Hours

Description: NEW FEATURE: This course is now available as a .pdf download in the OLC². Please launch the course contents, download, print, and complete the course per instructions.

This self-directed, introductory correspondence course provides participants with basic knowledge about the nature, process, and purposes of job analyses (JAs).

AUDIENCE: DOE and DOE-contractor and other government personnel whose work requires involvement with JAs, whether as managers, practitioners, or users, and who have little or no knowledge of the JA process.

Audience: See course description.

Goals & Objectives: Upon successful completion of this course, participants will have basic understanding of

1) JA terminology
2) How analysis fits into the Instructional Systems Development process
3) Benefits of JAs
4) Fundamental JA techniques
5) How to plan for a JA
6) JA products

Prerequisites: None

Minimum Number of Students: 0

Maximum Number of Students: 0

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MIT-120 Job Analysis

Delivery Method: Instructor-Led

Length: 40.00 Hours

Description: This course provides attendees with the basic knowledge and skills needed to conduct a job analysis (JA) at their respective sites. The course focuses on terminology and procedures, and culminates in the development of task statements. Each attendee has an opportunity to work through the entire JA process and apply practical skills.

AUDIENCE: DOE and DOE-contractor and other government personnel who are responsible for accomplishing JAs within the safeguards and security community.

REQUIREMENT: Students must bring their completed prerequisite workbook from MIT-119DB Introduction to Job Analysis correspondence course.

Audience: See course description.

Goals & Objectives: Upon successful completion of the course, attendees will be able to

1) List and explain the JA process.
2) State how a JA benefits an organization.
3) Develop a JA.
4) Write task statements and develop a task inventory questionnaire.
5) Apply various JA data-collection techniques.
6) Analyze JA data.
7) State how the JA fits into the instructional systems development process.

Prerequisites: MIT-119DB
MIT-209DW

Minimum Number of Students: 12

Maximum Number of Students: 20

Management and Instructional Training [Return to Top]

MIT-200 Supervisor Development Program

Delivery Method: Instructor-Led

Length: 39.00 Hours

Description: This course provides attendees with a working concept of the behavioral principles and techniques of supervision. The course includes discussions of the critical information and tools necessary for effective leadership of personnel, as well as skills necessary for effective supervision. Additional subject matter addresses labor/management relations, recognition and reward power, empowerment, motivation, training, and decision-making.

AUDIENCE: DOE and DOE-contractor and other government personnel in the safeguards and security community who have less than a year of supervisory experience, or have supervisory experience but lack formal training in leadership or managerial positions.

Audience: See course description.

Goals & Objectives: Upon successful completion of the course, attendees will

1) Understand the need for effective supervisory responsibilities.
2) Understand the need for accurate interpretation of DOE policies and programs.
3) Better comprehend leadership principles.
4) Comprehend the importance of effective communication.
5) Understand the basic principles of security organizational management.
6) Comprehend the concepts of problem solving and decision-making.
7) Appreciate the need for personnel recognition and evaluation instruments as motivators.
8) Understand the supervisor's role in labor/management relations.

Prerequisites: None

Minimum Number of Students: 12

Maximum Number of Students: 24

Management and Instructional Training [Return to Top]

MIT-209DW Introduction to Instructional System Design

Delivery Method: Other

Length: 1.00 Hours

Description: This course provides a basic understanding of the instructional systems development (ISD) model, focusing on ISD as a process that can lead to development of effective training.

AUDIENCE: DOE, DOE-contractors and other government personnel who are responsible for conducting curriculum development and training.

Audience: See course description.

Goals & Objectives:

Prerequisites: None

Minimum Number of Students: 0

Maximum Number of Students: 0

Management and Instructional Training [Return to Top]

MIT-210 Curriculum Development Training

Delivery Method: Instructor-Led

Length: 36.00 Hours

Description: This course provides attendees with the tools necessary to develop effective instruction. The course, which is specifically patterned after the instructional systems development (ISD) model, is a hands-on course covering both the theory and practice of curriculum design and development. The course focuses on the coordination of the training analysis document, the instructional objectives, the student evaluation instruments, and the lesson content; on applying the Accelerated Learning (AL) model to lesson development; and on the principles of evaluating instruction for continual course improvement.

AUDIENCE: DOE and DOE-contractor and other government personnel who are responsible for conducting curriculum development and training.

REQUIREMENT: Students must bring their completed prerequisite workbook from MIT-119DB Introduction to Job Analysis correspondence course.

RECOMMENDED: Students may bring a relevant course or lesson from their site to revise or develop, and the associated analysis document(s) and design memos from their site.

In addition to the course prerequisites, successful completion of MIT-120 Job Analysis course is strongly recommend,

Audience: See course description.

Goals & Objectives: Upon successful completion of the course, attendees will be able to do the following:

1) Describe how the five ISD phases relate to each other.

2) Using a training analysis document, write a coordinated course design document.

3) Describe key components of the accelerated learning (AL) design model.

4) Create or revise an effective two-hour block of instruction.

5) Describe how the principles of instructional evaluation contribute to course improvement.

Prerequisites: MIT-111
MIT-209DW
MIT-119DB

Minimum Number of Students: 12

Maximum Number of Students: 20

Management and Instructional Training [Return to Top]

PPM-112DB On-the-Job Trainers (OJT) (Correspondence Course)

Delivery Method: Other

Length: 16.00 Hours

Description: This course is designed to develop competent on-the-job trainers (OJT) by addressing both general and site-specific OJT- trainers knowledge and skills. (The course does not address development of OJT course materials or evaluation of OJT students.) The course includes an overview of OJT, steps in the OJT process, site-specific procedures, and information about how to master the OJT process. The course consists of two components: a standardized component and a site-specific component. The standardized component includes information that is basic for any OJT trainer. The site-specific component, which presents necessary information about local OJT programs, must be developed by individual sites and inserted electronically and in hardcopy into the student workbook. Sites accomplish this by requesting the electronic version of the course from the NTC course manager, then augmenting this document with site-specific materials. Upon completion of this process, this becomes a site-administered course, with all course responsibilities transferred to the site. Student must pass with 80% or better.

Audience: DOE and DOE-contractor personnel who will be conducting OJT.

Goals & Objectives: Upon successful completion of the course material, participants will be able to state

1) The purpose, training process, and key concepts of OJT
2) The various elements that constitute an OJT program
3) The philosophy and concepts of the OJT process as applied at participants' sites
4) How to use the OJT process effectively to train site personnel.

Prerequisites: None

Minimum Number of Students: 0

Maximum Number of Students: 0

Program Planning and Management

Survey

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PHY-128DB Introduction to Basic Survey (Correspondence Course)

Delivery Method: Online Item

Length: 40.00 Hours

Description: NEW FEATURE: This course is now available as a .pdf download in the OLC². Please launch the course contents, download, print, and complete course per instructions. If preferred, printed materials may still be requested from NTC Registration.

This self-directed, introductory correspondence course provides basic knowledge about the survey process (planning, conduct, and post-survey activities). The following topical areas are addressed: information security, materials control and accountability, protection program operations, program management, and personnel security.

NOTE: Students will need access to orders and other pertinent documents to learn about these topical areas.

All manuals related to this course can be found in their most current state at the following Web site: http://www.directives.doe.gov

Audience: DOE/DOE contractors whose duties include planning, development, implementation, and survey analysis.

Goals & Objectives:

Prerequisites: None

Minimum Number of Students: 0

Maximum Number of Students: 0

Survey

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PHY-130 Basic Survey

Delivery Method: Instructor-Led

Length: 40.00 Hours

Description: This basic course prepares personnel to participate and assist members of designated safeguards and security (S&S) survey or self-assessment teams. The course includes instruction on the survey process (planning, conduct, and post-survey activities); topical-area overviews; and skills training (performance test planning, interview techniques, root-cause analysis, and report writing.

Each attendee should bring the following documents to class: a copy of DOE G 470.1-2, Survey and Self-Assessment Guide; and the prerequisite course materials from PHY-128DB Introduction to Basic Survey correspondence.

Audience: New DOE employees who will be participating in surveys and self-assessment of S&S programs.

Goals & Objectives: Upon successful completion of this course, attendees will be able to participate and assist members of S&S survey or self-assessment teams.

Prerequisites: PHY-128DB
MCA-101DC

Minimum Number of Students: 14

Maximum Number of Students: 24

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PHY-202 Survey of Physical Security Systems

Delivery Method: Instructor-Led

Length: 32.00 Hours

Description: This course focuses on the knowledge and skills DOE survey personnel need to conduct effective and accurate compliance and performance evaluations on facility security systems, installations, and operations. It emphasizes knowledge and skills associated with physical security-related survey functions, and focuses only briefly on more general survey functions (e.g., survey planning and report writing).

AUDIENCE: DOE and DOE-contractor personnel who perform or participate in surveys, self-assessments, and other types of evaluations that include the physical security systems topical area.

REQUIREMENTS: Familiarity with the Office of Health, Safety & Security Physical Security Systems Inspector's Guide; DOE O 470.4A, Safeguards and Security Program; applicable DOE manuals; and applicable policy directives. Thorough understanding and working knowledge of physical security systems (i.e., access control, intrusion detection and display, barriers, communications, testing and maintenance, etc.).

Audience: DOE and DOE-contractor personnel who perform or participate in surveys.

Goals & Objectives: Upon successful completion of this course, attendees will

1) Be able to participate effectively and productively as members of safeguards and security survey teams.

2) Understand key principles involved in surveys for determining system effectiveness based on performance and on compliance with DOE requirements.

3) Understand key techniques for successfully completing a survey of physical security systems.

Prerequisites: PHY-130
PHY-100DB

Minimum Number of Students: 14

Maximum Number of Students: 20

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PHY-230 Facility Survey Team Leader

Delivery Method: Instructor-Led

Length: 40.00 Hours

Description: This course prepares experienced safeguards and security (S&S) professionals to perform successfully as team leaders and topical area leads during all phases of the survey process. Included are lecture/discussion and practical exercises in developing and leading survey teams, as well as survey leadership skills. Focus is placed on the leader's role in survey planning, conduct, and post-survey activities. Plan development, data-collection techniques, application of vulnerability assessment (VA) concepts, the ratings process, integration issues, report writing, situational leadership, team building, dealing with difficult people, and conflict resolution are specifically addressed.

NOTE: This course does not examine in depth any specific survey topical areas (e.g. program management, protection program operations, information security, nuclear materials and accountability, and personnel security).

AUDIENCE: DOE and DOE-contractors engaged in S&S activities with either facility survey team experience.

REQUIREMENT: Experience as a facility survey team member.

Audience: See course description.

Goals & Objectives: Upon successful completion, attendees will be able to

1) Assume leadership roles and responsibilities on DOE facility survey teams.

2) Conduct and administer facility surveys, to include planning and conducting survey activities as well as controlling the activities of the team.

3) Prepare and provide concise survey briefings and reports.

Prerequisites: PHY-130

Minimum Number of Students: 14

Maximum Number of Students: 20

Program Planning and Management

Vulnerability Assessment

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CTA-140 Vulnerability Assessment Fundamentals

Delivery Method: Instructor-Led

Length: 40.00 Hours

Description: This entry-level course introduces attendees to the fundamental concepts of the safeguards and security vulnerability assessment (VA) process. The course is designed NOT to produce qualified VA team members, but to reinforce fundamental concepts and tasks. The course includes four quizzes (requiring passing grades of at least 80%) and multiple practical exercises.

AUDIENCE: DOE and DOE-contractor personnel who are directly involved in the actual conduct, review, or verification of VAs and who have little or no previous experience in the VA area, and VA trainers.

RECOMMENDED: Basic familiarity with safeguards and security systems and terminology.

EQUIPMENT: Pocket calculator.

Audience: See course description.

Goals & Objectives: Upon successful completion of this course, attendees will

1) Be able to identify the critical steps in the VA process.

2) Understand the philosophy, concepts, and terminology associated with the process.

3) Be able to apply the new knowledge and skills as productive members of VA teams.

Prerequisites: None

Minimum Number of Students: 14

Maximum Number of Students: 25

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CTA-240 ASSESS-ATLAS

Delivery Method: Instructor-Led

Length: 40.00 Hours

Description: The ASSESS and ATLAS software programs comprise a systematic approach for evaluating safeguards and security effectiveness against theft or sabotage of SNM by different adversaries (e.g., insiders, outsiders, collusion). This course will include components of the existing ASSESS course as well as addressing new features of ATLAS that are lacking in ASSESS. This course provides instruction about specific program features and modules and how they function.

AUDIENCE: DOE/DOE-contractor personnel who are directly responsible for conducting vulnerability assessments and VA trainers.

REQUIREMENTS: Computer literacy with ability to use Windows and a mouse.

Audience: See course description.

Goals & Objectives: Upon successful completion of this training package, students will

1) Successfully navigate the fundamental functions in the ASSESS and ATLAS programs.

2) Perform a basic analysis of a simple facility using a combination of both software programs.

Prerequisites: CTA-140

Minimum Number of Students: 14

Maximum Number of Students: 20

Vulnerability Assessment [Return to Top]

CTA-315 Advanced Vulnerability Assessment Baseline Course

Delivery Method: Instructor-Led

Length: 50.00 Hours

Description: This course presents an overview of the entire VA process, emphasizing adversary threat and capabilities; MC&A material categorization, accountability and measurements; barriers, alarm systems (alarms, assessment, and communications); protective force operations; and assigning figures of merit from a VA perspective.

NOTE: This initial course is a prerequisite for the other advanced VA courses.

IMPORTANT: To register for this course, prospective students must have access authorization at an L or higher level; must provide their SSN or DOE clearance number for clearance verification; have a current assignment as a VA analyst, VA specialist, VA performance tester, or VA trainer; and have basic algebra skills.

Recommended as an additional prerequisite: Intermediate Physical Security Systems (PHY-120).

EQUIPMENT: Pocket calculator

Audience: DOE and DOE-contractor VA analysts, VA specialists, and VA trainers.

Goals & Objectives: Upon successful completion of the course, attendees will gain an overview of

1) The entire VA process;

2) Adversary threat and capabilities;

3) MC&A material categorization, accountability, and measurements;

4) Barriers;

5) Alarm systems (alarms, assessment, and communications);

6) Protective force operations and;

7) Assigning figures of merit from a VA perspective.

Prerequisites: CTA-140
CTA-240
PHY-100DB

Minimum Number of Students: 14

Maximum Number of Students: 20

Vulnerability Assessment [Return to Top]

CTA-320 VA Facility Characterization and VA Software Modeling

Delivery Method: Instructor-Led

Length: 22.00 Hours

Description: This classroom and computer laboratory course provides a comprehensive treatment of characterizing the facility, identifying targets/assets, validating the ASSESS facility description, ASSESS modeling and workarounds, integrating performance test results into the ASSESS modules, ATLAS software utilization, and scenario development. Software model strengths and weaknesses will also be covered.

IMPORTANT: To register for this course, prospective students must have access authorization at an L or higher level, must provide their SSN or DOE clearance number for clearance verification, and have a current assignment as a VA analyst, VA specialist, VA performance tester, or VA trainer.

Audience: DOE and DOE-contractor VA analysts, VA specialists, and VA trainers.

Goals & Objectives: Upon successful completion of the course, attendees will utilize personal computer-based programs to accurately characterize a fictitious facility's protective system, identify targets, and identify system effectiveness.

Prerequisites: CTA-315
CTA-325

Minimum Number of Students: 14

Maximum Number of Students: 20

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CTA-325 VA Explosive Effects Modeling

Delivery Method: Instructor-Led

Length: 40.00 Hours

Description: This classroom and computer laboratory course provides a comprehensive treatment of predicting explosive effects, structural response, and human hazards from explosive materials being detonated near DOE facilities or protective barriers. It also provides a review of explosive terminology, principles, and effects; construction methods; design details and limits; and interpreting construction drawings.

IMPORTANT: To register for this course, prospective students must have access authorization at an L or higher level; must provide their SSN or DOE clearance number for clearance verification; have a current assignment as a VA analyst, VA specialist, structural engineer, or VA trainer; and possess basic algebra skills.

EQUIPMENT: Pocket calculator

Audience: DOE and DOE-contractor VA analysts, VA specialists, and VA trainers.

Goals & Objectives: Upon successful completion of the course, attendees will utilize state-of-the art personal-computer-based programs to calculate explosive loadings and predict the terminal effects on fictitious buildings and personnel within the area of the explosion.

Prerequisites: CTA-315

Minimum Number of Students: 14

Maximum Number of Students: 20

Vulnerability Assessment [Return to Top]

CTA-330 Chemical/Biological Weapons and Radiological Sabotage VAs

Delivery Method: Instructor-Led

Length: 32.00 Hours

Description: This course provides participants with the methods and processes for conducting analyses of radiological sabotage and chemical/biological effects. It provides insight into the radiological sabotage VA process, which includes plume and puff software modeling. Also covered are methods for evaluating the effects of chemical and biological attacks, including protective measures.

IMPORTANT: To register for this course, prospective students must have access authorization at an L or higher level, must provide their SSN or DOE clearance number for clearance verification, and have a current assignment as a VA analyst, VA specialist, VA performance tester, or VA trainer.

NOTE: Safety risk-analysis plume-modeling personnel are NOT required to take CTA-315 or its prerequisites.

Audience: DOE and DOE-contractor VA analysts, VA specialists, and VA trainers.

Goals & Objectives:

Prerequisites: CTA-315

Minimum Number of Students: 14

Maximum Number of Students: 20

Vulnerability Assessment *[Return to Top]*

CTA-335 LSPTs, Exercises, and Protocol Documents

Delivery Method: Instructor-Led

Length: 32.00 Hours

Description: This course is tailored to the VA process phase, providing methods of identifying critical system elements, establishing a performance testing program plan, and a force-on-force exercise protocol document. Mathematical probabilities and risk equations are also taught.

IMPORTANT: To register for this course, prospective students must have access authorization at an L or higher level, must provide their SSN or DOE clearance number for clearance verification, and possess basic algebra skills.

EQUIPMENT: Pocket calculator

Audience: DOE and DOE-contractor VA analysts, VA specialists, and VA trainers.

Goals & Objectives:

Prerequisites:
CTA-315
CTA-320
CTA-325
CTA-330

Minimum Number of Students: 8

Maximum Number of Students: 12

Vulnerability Assessment [Return to Top]

CTA-340 Tabletop VAs, JCATS, and Neutralization

Delivery Method: Instructor-Led

Length: 32.00 Hours

Description: This course addresses the later phases of the VA process, involving comprehensive tabletops and neutralization analyses. It presents methods for conducting tabletop analyses and the process through which comprehensive tabletop VAs are conducted. The course also includes conduct of neutralization modeling using ASSESS, BATLE, and JCATS.

IMPORTANT: To register for this course, prospective students must have access authorization at an L or higher level; must provide their SSN or DOE clearance number for clearance verification; have a current assignment as a VA analyst, VA specialist, VA performance tester, or VA trainer; and possess basic algebra skills.

EQUIPMENT: Pocket calculator

Audience: DOE and DOE-contractor VA analysts, VA specialists, and VA trainers.

Goals & Objectives:

Prerequisites:
CTA-315
CTA-320
CTA-325
CTA-330

Minimum Number of Students: 8

Maximum Number of Students: 12

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CTA-345 Integration of All VA Tools, Processes, and Outputs

Delivery Method: Instructor-Led

Length: 24.00 Hours

Description: This course addresses the final phase of the VA process-identifying and documenting assumptions, determining risk, conducting sensitivity analyses, implementing compensatory measures, risk acceptance, and upgrade analyses. Also covered are how to conduct VA validations and independent VA verification evaluations. Included are a sensitivity analysis exercise, a compensatory measures exercise, and an upgrades analysis exercise. The final lesson addresses the SSSP process and, more specifically, completion of the Vulnerability Analysis Report (VAR).

IMPORTANT: To register for this course, prospective students must have access authorization at an L or higher level,; must provide their SSN or DOE clearance number for clearance verification; and possess basic algebra skills.

EQUIPMENT: Pocket calculator

Audience: DOE and DOE-contractor VA analysts and VA specialists, and VA trainers.

Goals & Objectives:

Prerequisites:
CTA-315
CTA-320
CTA-325
CTA-330
CTA-335
CTA-340

Minimum Number of Students: 8

Maximum Number of Students: 12

Nuclear Material Control and Accountability

Nuclear Material Control and Accountability *[Return to Top]*

MCA-101DC Introduction to Nuclear Materials Control and Accountability

Delivery Method: Other

Length: 5.00 Hours

Description: This computer-based training's (CBTs) course topics include the properties and characteristics of nuclear materials that are important to safeguards; their categorization and attractiveness levels; current and historical diversity of nuclear materials in the DOE complex; the basic requirements for planning, implementing, and evaluating a nuclear materials control and accountability (MC&A) program; the generation, collection, and utilization of nuclear materials accountability data; and the control mechanisms used in the detection and timely prevention of unauthorized activities in storing, processing, and transferring nuclear materials. Test questions are incorporated into the CD-ROM package (nominal passing score of at least 80%).

NOTE: This course is currently being updated to be placed as an eLearning course on the DOE Online Learning Center (OLC²). The updated version will reflect guidance from current DOE directives found at the following Web site: http://www.directives.doe.gov/

REQUIREMENT: Before taking this CBT course, participants should have read DOE Order 470.4A Safeguards and Security Program and DOE Manual 470.4-6 Chg.1, Nuclear Material Control and Accountability.

Audience: DOE and DOE contractors.

Goals & Objectives: Upon successful completion of the course, participants will be familiar with the fundamentals of MC&A policy and system operations.

Prerequisites: None

Minimum Number of Students: 0

Maximum Number of Students: 0

Nuclear Material Control and Accountability [Return to Top]

MCA-101RC Introduction to Nuclear Materials Control and Accountability —Russian Version

Delivery Method: Other

Length: 5.00 Hours

Description: (Russian-Language Version)
This computer-based training's (CBTs) course topics include the properties and characteristics of nuclear materials that are important to safeguards; their categorization and attractiveness levels; current and historical diversity of nuclear materials in the DOE complex; the basic requirements for planning, implementing, and evaluating a nuclear materials control and accountability (MC&A) program; the generation, collection, and utilization of nuclear materials accountability data; and the control mechanisms used in the detection and timely prevention of unauthorized activities in storing, processing, and transferring nuclear materials. Test questions are incorporated into the CD-ROM package (nominal passing score of at least 80%).

AUDIENCE: Russian-speaking personnel (entry-level or reassigned) who work with MC&A programs and who have less than three years of MC&A experience. For more experienced personnel, this course can provide a "test-out" opportunity with immediate remediation.

Audience: See course description.

Goals & Objectives: Upon successful completion of the course, participants will be familiar with the fundamentals of MC&A policy and system operations.

Prerequisites: None

Minimum Number of Students: 0

Maximum Number of Students: 0

Nuclear Material Control and Accountability [Return to Top]

MCA-103DC Transaction Data System

Delivery Method: Other

Length: 5.00 Hours

Description: This computer-based training (CBT) course covers the completion of all lines of DOE/NRC F 741, Nuclear Material Transaction Report, and DOE F DP-740, automated data processing transaction sheet-nuclear material transaction journal. The method of instruction is to step through the reporting of simple transaction scenarios. Test questions are incorporated into the CD-ROM package (nominal passing score of at least 80%).

AUDIENCE: DOE and DOE-contractor, NRC and NRC-licensee personnel requiring introductory instruction in completion of 741 and 740 forms.

Audience: See course description

Goals & Objectives: Upon successful completion of the course, participants will be able to complete 741 and 740 forms for simple transactions.

Prerequisites: MCA-101DC

Minimum Number of Students: 0

Maximum Number of Students: 0

Nuclear Material Control and Accountability [Return to Top]

MCA-104DB Introduction to Measurement Programs (Correspondence Course)

Delivery Method: Other

Length: 24.00 Hours

Description: This self-directed, introductory correspondence course provides participants with basic knowledge about MC&A measurement programs. It describes the elements of measurement programs, the generic measurement process, and the role of measurements in MC&A. It addresses the basic DOE requirements and guidance for measurements and it introduces students to the properties of nuclear materials relevant to nuclear material measurements, and the metrology and statistics concepts and terminology used in measurement activities. Written tests and exercises are incorporated into course material. Student must pass with 80% or better.

AUDIENCE: DOE and DOE-contractor personnel whose work requires involvement with MC&A nuclear material measurements in any capacity.

Audience: See course description.

Goals & Objectives: Upon successful completion of this course, participants will

1) Understand the rationale for and elements of measurement programs

2) Be sufficiently familiar with the physical and chemical properties of nuclear materials to understand measurement principles

3) Understand the basic elements of three types of measurement methods used in MC&A

4) Understand the basic concepts and terminology of statistics used in measurement control, measurement error and uncertainty, and the calibration of measurement systems

5) Be familiar with the specific DOE requirements imposed on MC&A measurements

Prerequisites: MCA-101DC

Minimum Number of Students: 0

Maximum Number of Students: 0

Nuclear Material Control and Accountability [Return to Top]

MCA-110 Basics of Nuclear Materials Accountability

Delivery Method: Instructor-Led

Length: 32.00 Hours

Description: Course topics include "Generally Accepted Accounting Principles (GAAP)," accounting systems, calculations of accountability values, external and internal transactions, inventory requirements and physical inventories, measurement uncertainties, and reporting principles. Applicable department guides are also addressed. Included are written tests requiring passing scores of at least 80%.

Familiarity with DOE M 470.4-6 Chg.1, Nuclear Material Control and Accountability.

AUDIENCE: DOE and DOE-contractor personnel who work in or are responsible for nuclear materials accountability functions

Audience: See course description.

Goals & Objectives: Upon successful completion of this course, attendees will understand

1) The fundamentals of accounting systems as they relate to MC&A

2) Concepts of GAAP as they relate to nuclear materials accounting

3) The relationship of general and subsidiary ledgers as they concern nuclear materials accounting

4) Accounting requirements of external and internal transactions

5) Inventory requirements and conduct of physical inventories

6) Calculations of accountability values from nuclear measurement results

7) The effect of measurement uncertainties on inventory differences; statistical tools and data analysis associated with inventory differences

8) Reporting of inventory data; general overview and the DOE NMMSS system; DOE documentation and document-retention requirements

Prerequisites: MCA-101DC

Minimum Number of Students: 14

Maximum Number of Students: 20

Nuclear Material Control and Accountability [Return to Top]

MCA-111 Materials Accounting for Nuclear Safeguards

Delivery Method: Instructor-Led

Length: 36.00 Hours

Description: NOTE: This course is conducted at Los Alamos National Laboratory (LANL). To apply for admission to this course or obtain information, contact Los Alamos National Laboratory, Safeguards Technology Training Group.

The course covers methods for designing and implementing conventional and near-real-time accounting systems for safeguarding nuclear material. Lecture topics include basic materials accounting concepts, the structure of safeguards systems, measurement technology, measurement control, statistical basis of materials accounting, nuclear material holdup, materials accounting at specific types of facilities, materials control and accountability (MC&A) system decision analysis, detection sensitivities, and international safeguards. Short workshops are conducted on topics such as NDA measurement technology, measurement statistics, simulation of materials accounting, measurement control, and error propagation. The course includes written tests that require passing scores of at least 80%.

AUDIENCE: DOE employees, contractors, and facility personnel who operate, manage, or evaluate materials accounting systems. Employees of other organizations are accepted on a space-available basis.

REQUIREMENT: Familiarity with the nuclear fuel cycle and experience in nuclear facility operations.

Audience: See course description.

Goals & Objectives: Upon successful completion of this course, attendees will be able to

1) Provide the basic concepts of nuclear materials accounting systems.

2) Identify the roles of the associated technologies and the techniques for operating such a system.

3) Provide the basic criteria for a successful and compliant system, how to evaluate its performance, and how to identify improvements in such systems.

Prerequisites: MCA-101DC
MCA-104DB

Minimum Number of Students: 10

Maximum Number of Students: 25

Nuclear Material Control and Accountability [Return to Top]

MCA-112 Nuclear Materials Management and Safeguards Systems I (NMMSS I)

Delivery Method: Instructor-Led

Length: 32.00 Hours

Description: This is an NTC-sponsored course conducted by NAC International, Inc., P.O. Box 922088, Norcross, GA 30092. To register or obtain further information, contact the NTC registrar at (505) 845-5170, at extensions 310 or 333.

This course focuses on the content of the facility-supplied information to the Nuclear Materials Management & Safeguards System (NMMSS), the proper documentation for the typical types of nuclear materials transfer activity, tools to assist with interpreting the requirements, and the usefulness of the NMMSS report products to the nuclear materials accounting organization. Included are exercises and a test following each lesson, requiring a passing score of at least 80%.

NOTE: This course does not include and is not intended to provide data-entry or computer training experience.

AUDIENCE: DOE and DOE-contractor personnel who have less than two years of experience in the preparation and distribution of the nuclear material reporting source documents and data-processing forms as required by DOE. This course is also useful as a refresher for personnel who occasionally report to NMMSS.

REQUIREMENTS: Knowledge of the inventory and transaction-reporting procedures of attendees' respective facilities, and of the personnel responsible. Knowledge of how to use a calculator.

EQUIPMENT: Each attendee should bring to the course a scientific calculator and a copy of DOE M 470.4-6, Chg. 1, Nuclear Material Control and Accountability.

RECOMMENDED: Successful prior completion of MCA-110 Basics of Nuclear Materials Accountability.

Audience: See course description.

Goals & Objectives: Upon successful completion of this course, attendees will be able to work with the NMMSS, including the mechanics of nuclear materials accounting and reporting procedures. Attendees will also understand

1) Use of DOE M 470.4-6, Chg. 1, Nuclear Material Control and Accountability, and other reference tools

2) Procedures necessary for proper documentation of nuclear material transactions and inventories,adjustments to inventories, programmatic transfers within facilities, on-site gains and losses, and changes in financial responsibility

3) Other specialized topics, such as the procedures for performing reconciliation between the NMMSS and a facility's records

4) Various NMMSS report products

Prerequisites: MCA-101DC
MCA-103DC

Minimum Number of Students: 10

Maximum Number of Students: 25

Nuclear Material Control and Accountability [Return to Top]

MCA-114 Local Area Network Accounting System (LANMAS) Administrators Course

Delivery Method: Instructor-Led

Length: 32.00 Hours

Description: This NTC-sponsored course provides a hands-on learning experience with the Local Area Network Material Accounting System (LANMAS) Administration Program. This course provides LANMAS, TID configurations and setting up global parameters that are required to operate the LANMAS Administration.

AUDIENCE: DOE and DOE-contractor personnel who are responsible for system administrator duties related to the LANMAS software.

REQUIREMENT: Windows NT experience.

RECOMMENDED: Microsoft SQL Server and completion of MCA-214 LANMAS Users course.

Audience: See course description.

Goals & Objectives: At the conclusion of this course, students will be able to utilize the LANMAS Administration Program to establish and review site-specific parameters and access authorizations for the LANMAS application, including:

1) Define the "roles" used in LANMAS, and provide an overview of the LANMAS Admin program.

2) Use the LANMAS Admin program to establish and revise site-specific parameters.

3) Use LANMAS Admin to establish and revise the security and authorizations required within the LANMAS application.

Prerequisites: MCA-101DC

Minimum Number of Students: 4

Maximum Number of Students: 20

Nuclear Material Control and Accountability *[Return to Top]*

MCA-120 Basics of Nuclear Materials Control

Delivery Method: Instructor-Led

Length: 20.00 Hours

Description: This course describes the basic elements of materials control programs, including administrative controls, access controls, materials surveillance, materials containment, and detection/assessment mechanisms. Also presented are specific DOE materials control policy requirements and guidance for implementing these elements. The course includes exercises (requiring active participation) and written tests.

AUDIENCE: DOE or DOE-contractor personnel who have Nuclear Materials Control (NMC) programmatic responsibilities. The course is also recommended for security personnel who have responsibilities for integration with NMC. The target population includes personnel who are responsible for developing, maintaining, and evaluating NMC programs; who perform NMC functions at a program level; and who provide oversight/assessment of NMC programs.

Audience: See course description.

Goals & Objectives: Upon successful completion of the course, attendees will understand the following as they relate to nuclear materials control:

1) Source of requirements/policy/guidance

2) Concepts of the actual requirements/policy/guidance

3) Program element requirements and implementation

4) Security/safeguards/safety interface

5) Nuclear materials control systems and hardware

6) Detection and response procedures

7) Compliance and performance assessments

8) Identified training issues

Prerequisites: MCA-101DC

Minimum Number of Students: 14

Maximum Number of Students: 20

Nuclear Material Control and Accountability [Return to Top]

MCA-130 Statistical Concepts in Material Control and Accountability

Delivery Method: Instructor-Led

Length: 25.00 Hours

Description: Although few MC&A professionals have substantial statistical backgrounds, statistical techniques play critical roles in many aspects of MC&A. These roles range from basic functions (e.g., calibration) that are integral to most measurement systems to higher-level decision-making functions (e.g., assessment of the significance of inventory differences). Although most MC&A professionals do not need statistical mastery, they do need to understand how statistical technology supports MC&A, when statistical analysis is needed, and how to assess the results of statistical studies. Without formal training, these professionals may find it difficult to pick up the necessary statistical concepts and jargon on the job. Worse yet, they may misunderstand key ideas. This overview of MC&A statistical applications is intended to provide non-statisticians with a general understanding of how statistics are applied to MC&A. The course develops statistical concepts without using mathematical derivations. Participants learn the applicable requirements for statistics as detailed in DOE M 470.4-6, Chg.1, Nuclear Material Control and Accountability. The requirements are explained in nontechnical terms and illustrated with relevant MC&A examples. Also addressed are applicable DOE guides.

AUDIENCE: DOE and DOE-contractors who have MC&A responsibilities and need an understanding of basic statistical concepts, as they apply to MC&A.

REQUIREMENTS: The ability to understand elementary algebraic concepts and graphical presentations of data in the form of bar charts, line graphs, and x-y charts. An understanding of the basics of the Normal Distribution and its parameters including the Mean and the Standard Deviation are necessary prerequisites for students taking this course. Knowledge of this material is assumed in the course materials.

RECOMMENDED: Completing the MCA-104DB Introduction to Measurement Programs correspondence course for participants not familiar with MC&A measurements.

Audience: See course description.

Goals & Objectives: Upon successful completion of this course, participants will have knowledge of the following:

1) Statistical vocabulary sufficient to communicate effectively with statisticians and to understand technology and concepts in the MC&A DOE orders, guidance, reports, Standards and Criteria, etc.

2) Application of several elementary statistical techniques and concepts such as “box plots,” without concern for how the techniques are carried out in detail.

3) The manner in which statistical technology is applied to MC&A problems, so participants can recognize situations that demand a statistician’s skills.

4) Which particular statistical techniques apply to specific areas of MC&A.

Prerequisites: MCA-101DC

Minimum Number of Students: 14

Maximum Number of Students: 20

Nuclear Material Control and Accountability [Return to Top]

MCA-132 Sampling Plans for Material Control and Accountability

Delivery Method: Instructor-Led

Length: 30.00 Hours

Description: This course gives each attendee the knowledge and skills required to participate as a member of a team that writes and executes sampling plans for MC&A.

AUDIENCE: DOE and DOE-contractor personnel who are involved in performing MC&A functions that require the use of statistical sampling plans, i.e., audits, assessments, and performance tests; nuclear material physical inventories; and nuclear material measurements.

REQUIREMENTS: Basic familiarity with elementary algebra and the ability to operate a scientific calculator.

EQUIPMENT: Each attendee must bring a scientific calculator.

RECOMMENDED: Successful prior completion of MCA-130 Statistical Concepts in Material Control and Accountability course, is strongly recommended.

Audience: See course description.

Goals & Objectives: Upon successful completion of the course, attendees will be able to

1) State the rationale and authority for sampling in MC&A.

2) Define basic terms and compute elementary statistical measures dealing with populations and their parameters.

3) Define basic terms associated with a sample, and compute elementary sample statistics.

4) Describe a confidence interval for a population mean and proportion, and describe the meaning of the term “degree of confidence” related to these intervals.

5) Identify methods of sampling appropriate for a population.

6) Determine fundamental sampling considerations as they apply to MC&A applications.

7) Write and execute a simple random sampling plan for an MC&A problem.

Prerequisites: MCA-101DC

Minimum Number of Students: 14

Maximum Number of Students: 20

Nuclear Material Control and Accountability [Return to Top]

MCA-150 Material Control and Accountability Survey Procedures

Delivery Method: Instructor-Led

Length: 40.00 Hours

Description: This course provides attendees with the knowledge and skills they need to function as team members during compliance and performance-based MC&A surveys, audits, and assessments. It includes basic techniques for reviewing functional areas of the MC&A program. The course includes written tests and evaluated performance in team exercises.

NOTE: As a reference aid, students should bring their copy of the student workbook from the prerequisite to this course-PHY-128DB Introduction to Basic Survey correspondence course.

AUDIENCE: DOE personnel (entry-level or newly assigned) who are responsible for conducting surveys, audits, internal reviews, or assessments of the MC&A program at DOE facilities.

REQUREMENTS: Familiarity with DOE M 470.4-1, Chg.1, DOE M 470.4-6, Chg. 1, OA MC&A Inspector's Guide, (June 2004), and Protection and Control of Safeguards and Security Interests.

RECOMMENDED: Strongly recommend successful prior completion of at least one of the following courses: MCA-110 Basics of Nuclear Materials Accountability or MCA-120 Basics of Nuclear Materials Control.

Audience: See course description.

Goals & Objectives: Upon successful completion of the course, attendees will understand the

1) Purpose, regulations, responsibilities, and techniques for MC&A inspections.

2) Distinction between a compliance approach and a performance approach when conducting surveys.

3) Compliance and performance approaches used during the survey of MC&A program administration, accounting systems, nuclear material measurements and measurement-control programs, nuclear material inventory programs, and material-control programs.

4) Process of validating data and closing out the survey.

5) Process of analyzing the data and preparing a report with survey rating.

Prerequisites: MCA-101DC
PHY-128DB

Minimum Number of Students: 14

Maximum Number of Students: 20

Nuclear Material Control and Accountability [Return to Top]

MCA-153 Introduction to Performance Testing for Material Control and Accountability

Delivery Method: Instructor-Led

Length: 32.00 Hours

Description: This course presents an overview of MC&A components that can prevent, deter, or detect nuclear material losses (detection elements); and an overview of the process of planning, conducting, and evaluating performance tests of MC&A components. Applicable department guides are also addressed. Early modules include written tests; the remainder of the course includes evaluated performance in team exercises.

AUDIENCE: DOE or DOE-contractor personnel who implement performance testing programs and conduct performance tests to validate vulnerability analyses, to demonstrate performance of MC&A system elements, and to support audits and assessments.

REQUIREMENTS: Familiarity with the OA MC&A Inspector's Guide (June 2004), DOE M 470.4-6, Chg. 1, and DOE M 470.4-1, Chg. 1.

Audience: See course description.

Goals & Objectives: Upon successful completion of the course, attendees will understand

1) DOE policy, standards, and responsibilities for the conduct of MC&A performance tests.

2) MC&A detection elements and how to determine critical system elements.

3) Development of performance test plans and scenarios for the MC&A program elements: Program Administration, Containment/Control, Accounting, Measurements/ Measurement Control, and Inventory.

4) Process for conducting tests, collecting the data and information, evaluating the information and drawing conclusions, identifying possible facility impacts, and reporting test results.

Prerequisites: MCA-101DC

Minimum Number of Students: 14

Maximum Number of Students: 20

Nuclear Material Control and Accountability [Return to Top]

MCA-212 Nuclear Materials Management and Safeguards Systems II (NMMSS II)

Delivery Method: Instructor-Led

Length: 24.00 Hours

Description: This is an NTC-sponsored course conducted by NAC International, Inc., P.O. Box 922088, Norcross, GA 30092. To register or obtain further information, contact the NTC registrar at (505) 845-5170, extensions 310, 333.

This training course (a follow-up to NMMSS I) addresses advanced topics and report products associated with nuclear materials accounting as they apply to NMMSS.

AUDIENCE: Individuals within DOE and DOE-contractor sites who interact with the NMMSS as data suppliers, auditors, or users, and who have more than two years of experience.

REQUIREMENTS: Recent review of the DOE documents listed below. Knowledge of the inventory and transaction-reporting procedures for attendees' respective facilities, and the personnel responsible.

EQUIPMENT: Scientific calculator and one copy of DOE M 470.4-6, Chg. 1, Nuclear Material Control and Accountability.

Audience: See course description.

Goals & Objectives: Upon successful completion of this course, attendees will have gained an understanding of

1) Facility data reporting issues including Normal Operational Losses/Measured Discards and Accidental Losses (NOL/MD/AL), Dept. of Defense (DOD) and Mutual Defense (91C), calculating weight percent ranges applicability, and explanation of inventory differences.

2) Financial implications associated with the data.

3) Interpreting the DOE reporting requirements.

4) Audit implications of data supplied to the system.

5) The annual reconciliation process.

6) Fiscal year project number conversion and monitoring.

Prerequisites: MCA-112

Minimum Number of Students: 10

Maximum Number of Students: 25

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MCA-214 Local Area Network Accounting System (LANMAS) Users Course

Delivery Method: Instructor-Led

Length: 32.00 Hours

Description: This course provides a hands-on learning experience with the Local Area Network Material Accounting System (LANMAS) software. Each lesson addresses a single menu-bar heading, as well as all the related functions on that heading's pull-down menu. Using computers, instructors demonstrate how to use each LANMAS function. Students then practice the same function (or series of functions) through one or more short activities or exercises. On the final day of class, students work in pairs to complete a final exercise that simulates a real-life materials-accountability situation. This final exercise incorporates all the major LANMAS functions.

REQUIREMENTS: Working knowledge of the Microsoft Windows-based operating systems and Microsoft Access software.

RECOMMENDED: Recommended but not required are MCA-110 Basics of Nuclear Materials Accountability and MCA-112 Nuclear Materials Management and Safeguards System I (NMMSS I) courses.

Audience: DOE and DOE-contractor personnel who control functions for a site's accounting system.

Goals & Objectives: Upon successful completion of this course, attendees will have hands-on experience using LANMAS software (version 2.5).

Prerequisites: MCA-101DC

Minimum Number of Students: 4

Maximum Number of Students: 20

Nuclear Material Control and Accountability [Return to Top]

MCA-224 Local Area Nuclear Material Accountability Software (LANMAS) Advanced User's Training

Delivery Method: Instructor-Led

Length: 0.00 Hours

Description: This 2-day NTC-sponsored course provides a hands-on learning experience with the Local Area Nuclear Material Accountability Software (LANMAS), version 3.2 Advanced Features. Using their own computers, instructors demonstrate how to use LANMAS functions. Students then practice the same function (or series of functions) through one or more short activities or exercises. Exercises will simulate real life materials-accountability situations and incorporate all the major LANMAS functions. Functions covered will include: Peer/Transaction Review, Calculations, Obligations, Offsite Shipping and Receiving, Closing and IAEA.

AUDIENCE: DOE and DOE-contractor personnel who control functions for a site's MC&A accounting system or who need an understanding of advanced functions of the LANMAS software (version 3.2).

RECOMMENDED: In addition to course prerequisites, MCA-112 Nuclear Materials Management and Safeguards Systems I (NMMSS I), is also recommended.

Audience: See course description.

Goals & Objectives: Upon successful completion of the course, attendees will have hands-on experience using LANMAS shipping/receiving, closing and IAEA functionality.

Prerequisites:
MCA-101DC
MCA-110
MCA-214

Minimum Number of Students: 4

Maximum Number of Students: 20

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MCA-230 Statistical Concepts in Safeguards

Delivery Method: Instructor-Led

Length: 20.00 Hours

Description: NOTE: This course is conducted at Los Alamos National Laboratory (LANL). To apply for admission to this course or obtain more information, contact Los Alamos National Laboratory, Safeguards Technology Training Group; P.O. Box 1663, MS E540, Los Alamos, NM 87545. Telephone 505/667-5258; fax 505/665-5055.

The course is designed around a processing facility and a storage facility. Realistic simulated data are used for the throughputs and inventories. The instruction emphasizes the proper statistical treatment of sampling plans and detection probability in the storage facility. Topics addressed for the processing facility include near-real-time accountancy with small and large material balance areas (MBAs), propagation and analysis of variance, quality control for measurements, sample exchange programs, shipper-receiver differences, measurement challenges with heterogeneous materials, and statistical concepts in designing NDA methods. Additional topics include statistical difficulties from poorly estimated error variances, fluctuating holdup, and assessment of the possibility of undeclared activities. There will be a brief review (as needed) of basic statistical concepts including hypothesis testing, regression, and making inferences about population parameters using sample statistics.

AUDIENCE: DOE and NRC employees, contractors, and licensees who are involved in the control and accountability of nuclear materials as a part of an Overall safeguards program and who have some responsibility for implementing the statistical concepts in the analysis of safeguards data.

Audience: See course description.

Goals & Objectives: Upon successful completion of this course, attendees will be able to

1) Describe a wide range of statistical techniques for analyzing materials accounting data.

2) Identify methods to monitor the quality of materials accounting data.

3) Identify procedures to assure that materials accounting data are statistically sound and consistent.

4) Describe the use of statistical techniques to address difficult measurement problems, poor statistical data, and undeclared activities.

Prerequisites: MCA-101DC

Minimum Number of Students: 8

Maximum Number of Students: 25

Nuclear Material Control and Accountability [Return to Top]

MCA-241 Nondestructive Assay (NDA) Techniques for Safeguards Practitioners

Delivery Method: Instructor-Led

Length: 36.00 Hours

Description: NOTE: This course is conducted at Los Alamos National Laboratory (LANL). To apply for admission to this course or obtain more information, contact Los Alamos National Laboratory, Safeguards Technology Training Group; P.O. Box 1663, MS E540, Los Alamos, NM 87545. Telephone 505/667-5258; fax 505/665-5055.

Course topics include introduction to the nondestructive assay (NDA) of nuclear materials using gamma rays and neutrons, measurements on both uranium- and plutonium-bearing materials, gamma-ray and neutron interactions with matter, transmission-corrected gamma-ray assays, and active and passive neutron coincidence counting.

AUDIENCE: DOE or DOE-contractor personnel and NRC or NRC-licensee personnel who are experienced safeguards practitioners and who manage or perform nuclear material assays for material accounting and process control. Employees of other organizations are accepted on a space-available basis.

REQUIREMENT: Some experience with nuclear radiation measurement equipment, familiarity with nuclear radiation and associated mathematics.

Audience: See course description.

Goals & Objectives: Upon successful completion of this course, attendees will have gained

1) First-hand experience with neutron and gamma-ray assay methods.

2) Acquaintance with the NDA instrumentation available for needed measurements.

3) Knowledge needed to apply appropriate measurement techniques to various NDA problems.

Prerequisites: MCA-104DB

Minimum Number of Students: 6

Maximum Number of Students: 20

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MCA-243 Nondestructive Assay (NDA) of Special Nuclear Materials Holdup

Delivery Method: Other

Length: 40.00 Hours

Description: NOTE: This course is conducted at Los Alamos National Laboratory (LANL). To apply for admission to this course or obtain more information, contact Los Alamos National Laboratory, Safeguards Technology Training Group, P.O. Box 1663, MS E540, Los Alamos, NM 87545. Telephone 505/667-5258; fax 505/665-5055.

Course topics include basic nondestructive assay (NDA) techniques using field portable instruments to measure nuclear holdup, calibration and use of gamma-ray instruments and generalized geometry, measurements on simulated deposits using SNM standards, equipment attenuation and self-attenuation effects, and passive neutron coincidence counting.

AUDIENCE: DOE or DOE-contractor personnel and NRC or NRC-licensee personnel who are experienced safeguards practitioners and who manage or perform nuclear material assays for material accounting and process control. Employees of other organizations are accepted on a space-available basis.

REQUIREMENT: Experience with nuclear radiation measurement equipment and practical experience with nuclear radiation and associated mathematics.

Audience: See course description.

Goals & Objectives: Upon successful completion of this course, attendees will have gained

1) First-hand measurement experience with portable nondestructive assay equipment under in-plant conditions.

2) Acquaintance with measurement strategies and techniques that minimize measurement uncertainties.

3) Knowledge of the generalized-geometry approach to calibration and data analysis for the varied measurement geometry encountered in holdup measurement campaigns.

Prerequisites: MCA-104DB

Minimum Number of Students: 6

Maximum Number of Students: 20

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MCA-244 Plutonium Calorimetric Assay Training

Delivery Method: Other

Length: 24.00 Hours

Description: NOTE: This course is conducted at DOE sites, upon request. For information, contact Los Alamos National Laboratory, Safeguards Technology Training Program, (505) 667-5258.

This course provides a comprehensive background in the theory and application of calorimetric assay of plutonium-bearing materials. Lectures and laboratories provide personalized instruction and hands-on experience. Topics include the principles and applications of heat flow calorimeters, high-resolution gamma-ray measurement for determining the plutonium effective specific power for both homogeneous and heterogeneous materials, automated systems, and measurement control.

AUDIENCE: Individuals who perform accountability measurements of plutonium, develop instrumentation, and review measurements; and the managers of these individuals.

Audience: See course description.

Goals & Objectives: Upon successful completion of this course, attendees will be able to

1) Select appropriate calorimetric assay systems for specific needs.

2) Select the method of operation best suited for specific measurement requirements.

3) Conduct calorimetric assay measurements according to available consensus standards.

4) Develop and conduct an effective measurement control program.

Prerequisites: MCA-104DB

Minimum Number of Students: 6

Maximum Number of Students: 20

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MCA-246 Calorimeter Operator Training School

Delivery Method: Other

Length: 16.00 Hours

Description: NOTE: This course is conducted at DOE sites, upon request. For information, contact Los Alamos National Laboratory, Safeguards Technology Training Program, (505) 667-5258.

This course provides calorimeter operators with a better understanding and knowledge of the operation of heat-flow calorimeters. Attendees learn how to analyze and interpret calorimeter results and how to troubleshoot some common calorimeter system problems. Upon completion of the course, attendees will be able to use knowledge gained from the school, as applicable, to increase the quality of NDA calorimetric measurements.

Audience: DOE/DOE-contractor personnel who use heat-flow calorimeters for the assay of radioactive materials.

Goals & Objectives: Upon successful completion of this course, attendees will be able to operate and troubleshoot heat-flow calorimeters according to standard practices.

Prerequisites: MCA-104DB

Minimum Number of Students: 6

Maximum Number of Students: 20

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MCA-248 Waste and Residue Nondestructive Assay (NDA) Measurements

Delivery Method: Instructor-Led

Length: 36.00 Hours

Description: NOTE: This course is conducted at Los Alamos National Laboratory (LANL). To apply for admission or obtain for more information, contact Los Alamos National Laboratory, Safeguards Technology Training Group.

The course provides plenary lectures on waste assay requirements for safeguards, waste characterization requirements to meet waste acceptance criteria, and neutron and gamma-ray based waste and residue NDA techniques. Three major course modules provide hands-on training with actual instruments used to assay radioactive isotopes in 55-gallon drums, as follows: 1) Segmented Gamma-Ray and Tomographic Gamma-Ray Scanners. 2) Neutron Coincidence Counting with Add-a-Source, and the Californium Shuffler. 3) The Differential Dieaway Technique, Combined Thermal Epithermal Neutron Interrogation, and Real Time Radiography. Each module covers topics including calibration procedures and use of standard reference materials; matrix effects, limitations, corrections; response variation due to radioactive material distribution within the waste drum; sensitivity; lump effects (gamma)/self-shielding (neutron) corrections; isotope identification/ratios (gamma) and their importance for neutron assay; and scope of the techniques with respect to waste forms and limitations. The course concludes with an instructor-student workshop session addressing the waste problems of particular interest to students.

AUDIENCE: DOE and DOE-contractor personnel and NRC or NRC-licensee personnel who are experienced radioactive measurement technicians and who operate waste assay instruments, and the technical supervisors of these personnel. Also designed for auditors and regulators who must judge the results of waste measurements and make declarations on the hazardous material documents.

REQUIREMENT: Previous experience with nuclear radiation measurement equipment and techniques.

Audience: See course description.

Goals & Objectives: Upon successful completion of this course, participants will have gained

1) Understanding of current DOE safeguards and characterization issues associated with waste and measurements.

2) Hands-on training in the operation and use of major waste and residue NDA systems.

3) Knowledge needed to apply appropriate measurement techniques to the waste and residue materials present in their facilities.

Prerequisites: MCA104DB

Minimum Number of Students: 6

Maximum Number of Students: 20

Nuclear Material Control and Accountability [Return to Top]

MCA-260 Physical Inventories for Material Control and Accountability

Delivery Method: Instructor-Led

Length: 32.00 Hours

Description: This course addresses the policy and process of conducting physical inventories of nuclear material.

AUDIENCE: Personnel who support nuclear material physical inventories. This includes MC&A MBA custodians with oversight of nuclear material, and all other personnel involved in the inventory process.

RECOMMENDED: Successful prior completion of MCA-120 Basics of Nuclear Materials Control.

Audience: See course description.

Goals & Objectives: Upon successful completion of the course, participants will

1) Understand the purpose and policy for conducting physical inventories and identify the major steps.

2) Be able to identify the essential programmatic considerations in developing and documenting an inventory program.

3) Identify the essential steps in preparing for a physical inventory.

4) Identify the essential steps in conducting a physical inventory.

5) Identify the essential steps in the physical inventory reconciliation and reporting process.

Prerequisites: MCA-101DC
MCA-110

Minimum Number of Students: 14

Maximum Number of Students: 20

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MCA-342 Advanced Neutron Nondestructive Assay (NDA) Techniques

Delivery Method: Instructor-Led

Length: 36.00 Hours

Description: NOTE: This course is conducted at Los Alamos National Laboratory (LANL). To apply for admission to this course or obtain more information, contact Los Alamos National Laboratory, Safeguards Technology Training Group; P.O. Box 1663, MS E540, Los Alamos, NM 87545. Telephone 505/667-5258; fax 505/665-5055.

The course covers neutron-based methods for the NDA of nuclear materials. Topics include 1) Passive and active coincidence counting techniques and data corrections. 2) Passive multiplicity counting calibration and data correction procedures. 3) Californium shuffler-based delayed neutron counting. 4) Neutron-generator-based multiplicity analysis and pulse-arrival-time recording electronics. Lectures cover the underlying principles of these techniques. Hands-on laboratory exercises illustrate these techniques with appropriate nuclear material samples in an interactive workshop format. Activities involve the use of radioactive materials.

AUDIENCE: Experienced nuclear safeguards practitioners who are responsible for materials accounting measurements using neutron-based NDA techniques. The course is open to DOE and NRC employees, contractors, and licensees who manage or perform nuclear materials assays for these purposes. Employees of other organizations are accepted on a space-available basis.

REQUIREMENT: Experience with nuclear radiation measurement equipment is assumed, as is familiarity with nuclear radiation and associated mathematics.

Audience: See course description.

Goals & Objectives: Upon successful completion of this course, attendees will be able to

1) Provide in-depth information on major neutron-based NDA techniques

2) Identify neutron NDA techniques appropriate for various nuclear measurement problems

3) Describe the various corrections to neutron assay data that improve precision and accuracy

Prerequisites: MCA-104DB

Minimum Number of Students: 6

Maximum Number of Students: 20

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MCA-343 Gamma-Ray Spectroscopy for Nuclear Materials Accounting

Delivery Method: Instructor-Led

Length: 28.00 Hours

Description: NOTE: This course is conducted at Los Alamos National Laboratory (LANL). For registration or information, contact Los Alamos National Laboratory, Safeguards Technology Training Program.

Course topics include high-resolution gamma-ray spectroscopy instruments, uranium and plutonium isotopic measurements, transmission-corrected gamma-ray assays, including segmented gamma scans, absorption-edge densitometry, and x-ray fluorescence.

AUDIENCE: DOE or DOE-contractor and NRC or NRC-licensee personnel who are experienced safeguards practitioners and who manage or perform nuclear material assays for material accounting and process control. Employees of other organizations are accepted on a space-available basis.

REQUIREMENT: Previous experience with nuclear accounting instrumentation and familiarity with nuclear radiation and associated mathematics.

Audience: See course description.

Goals & Objectives: Upon successful completion of this course, attendees will have gained

1) First-hand measurement experience with advanced, high-resolution gamma-ray assay methods.

2) Acquaintance with the advanced NDA instrumentation available for needed measurements.

3) Knowledge of measurement physics and data-analysis techniques for application to various NDA problems.

Prerequisites: MCA-104DB

Minimum Number of Students: 6

Maximum Number of Students: 20

Personnel Security

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PER-100DE Introduction to DOE Personnel Security

Delivery Method: Online Item

Length: 3.00 Hours

Description: NEW FEATURE: This course is now available online from the OLC². You may launch and complete the course per course instructions.

NOTE: You do not need to contact the NTC Registration Department to take this course. A completion will be automatically added to your Learning History. You will print a completion certificate from your Learning History and should provide a copy of your certificate to your training administrator or supervisor.

This online course provides a broad overview of the DOE Personnel Security Program. Topics include a program history; the roles and responsibilities of a personnel security program specialist/analyst; an introduction to applicable criteria and procedures as specified in Title 10, Code of Federal Regulations, Part 710 (10 CFR 710); and an overview of the DOE Administrative review process.

NOTE: This eLearning course replaces PER-100DB correspondence course, previously available as a PDF download on the OLC².

Audience: DOE and DOE-contractors newly assigned to perform duties within the DOE Personnel Security Program.

Goals & Objectives:

Prerequisites: None

Minimum Number of Students: 0

Maximum Number of Students: 0

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PER-101 Personnel Security Specialist Adjudication Training

Delivery Method: Instructor-Led

Length: 40.00 Hours

Description: This program provides the basic foundation for knowledge and skill training in the Department of Energy (DOE) security clearance process. Attendees will receive training in the overall DOE Personnel Security Program (PSP) as it relates to DOE Manual 470.4-5, Personnel Security and Title 10 Code of Federal Regulations, Part 710 (10 CFR 710). Students will learn to analyze a case and evaluate factors that lead to an adjudicative decision on individual eligibility for DOE security clearance.

AUDIENCE: The course is designed for newly assigned personnel (both DOE and DOE contractor) with duties as a Personnel Security Specialist and who are responsible for initial and subsequent DOE security clearance processing and adjudication.

REQUIREMENT: Current performance of duties as a federal employee or contractor in the DOE Personnel Security Program.

Audience: See course description.

Goals & Objectives: Upon successful completion of this course, students will

1) Become familiar with the DOE Personnel Security File (PSF)

2) Understand the variety of administrative and adjudicative documents contained within the DOE PSF

3) Understand the types of background investigations used to determine eligibility for DOE access authorization

4) Understand agency information associated with a background investigation

5) Understand the DOE criteria and Adjudicative Guidelines used for determining eligibility for an access authorization

6) Understand the purpose and the process associated with screening a Report of Investigation (ROI)

7) Understand the analysis and adjudicative guidelines associated with determining eligibility for DOE access authorizations

8) Understand the additional actions employed in the DOE adjudication

9) Understand the purpose of the case summary and will demonstrate how to prepare one

10) Understand the purpose, requirements, and procedures associated with the DOE PSI and will conduct an interview

Prerequisites: PER-100DE

Minimum Number of Students: 10

Maximum Number of Students: 12

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PER-200 Advanced Personnel Security Training

Delivery Method: Instructor-Led

Length: 32.00 Hours

Description: This course provides advanced training in analyzing complex personnel security issues as they relate to determining security clearances. The course will include discussion of major issues of concern throughout the personnel security arena with emphasis on the criteria found in 10 CFR 710.8. Additionally, it will cover the personnel security interview appropriate for use in resolving concerns about derogatory information.

This course is intended for experienced DOE federal and DOE-contractor employee personnel security specialists who are responsible for processing personnel security cases that involve substantially derogatory information and multiple issues.

REQUIREMENT: At least one year of experience within the DOE Personnel Security Program as a DOE Personnel Security Specialist or equivalent contractor position.

Audience: Personnel Security Specialists processing cases with substantially derogatory info/multiple issues.

Goals & Objectives: Through successful completion of this course, the following instructional goals will be met. Students will

1) Become familiar with processing access authorization requests for dual citizens

2) Become familiar with processing access authorization requests for foreign nationals

3) Understand the fundamentals associated with the DOE Administrative Review (AR) process

4) Understand how to analyze a substantially derogatory case and develop questions to address the security concern

5) Become more proficient in conducting a DOE personnel security interview (PSI) involving substantial derogatory information

6) Understand how to prepare a notification letter/information creating a substantial doubt concerning the individual's eligibility for access authorization

Prerequisites: PER-101

Minimum Number of Students: 10

Maximum Number of Students: 12

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PER-201 Introduction to Interviewing Techniques Seminar

Delivery Method: Instructor-Led

Length: 16.00 Hours

Description: As an integral part of NTC Personnel Security course curriculum, Introduction to Interviewing Techniques Seminar is specifically intended to develop and enhance the techniques and skills necessary to effectively execute one of the most critical functions of the Personnel Security Specialist (PSS), namely the conduct of Personnel Security Interviews (PSI).

AUDIENCE: Introduction to Interviewing Techniques Seminar is designed for the DOE and DOE contractor PSS who will conduct PSIs and has attended PER-101. In addition this seminar is open to other Federal agency employees with personnel security responsibilities.

REQUIREMENTS: Experience within the DOE Personnel Security Program as a DOE Personnel Security Specialist or equivalent contractor position.

Audience: See course description.

Goals & Objectives: Through successful completion of this seminar, attendees will

1) Identify the purpose, authority, and process of conducting a PSI

2) Use questioning techniques to prepare questions for a PSI

3) Learn to recognize what body movements and gestures communicate during the interviewing process

4) Learn how to apply interviewing techniques while conducting a PSI

Prerequisites: PER-101

Minimum Number of Students: 14

Maximum Number of Students: 20

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PER-300 Administrative Review Hearing Procedures

Delivery Method: Instructor-Led

Length: 24.00 Hours

Description: This course provides students with a Comprehensive understanding of the DOE administrative review (AR) hearing process as specified in Title 10, Code of Federal Regulations, Part 710 (10 CFR 710), Criteria and Procedures for Determining Eligibility for Access to Classified Matter or Special Nuclear Material. Through a series of in-class exercises, students gain a degree of practical experience in successfully preparing for and participating in a DOE AR hearing.

REQUIREMENT: Extensive experience within the DOE Personnel Security Program as a DOE personnel security specialist or equivalent contractor position.

Audience: Designed for the DOE and DOE-contractor employee PSS who has successfully completed PER-200.

Goals & Objectives: Upon successful completion of this course, students will

1) Become familiar with the role OCC plays in the AR process and hearing procedures

2) Become familiar with preparing a Notification Letter from an interview transcript

3) Become familiar with the role of OHA and observe a mock hearing

4) Become familiar with the concepts involved in determining the types of evidence used in preparing for an AR hearing

5) Understand the importance of presenting appropriate testimony during an AR hearing

Prerequisites: PER-200

Minimum Number of Students: 10

Maximum Number of Students: 12

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PER-310DE Personnel Security Annual Refresher Training

Delivery Method: Online Item

Length: 4.00 Hours

Description: This online course satisfies, in part, professional education requirements for Personnel Security Specialists within the Department and serves as an annual mandatory training to update and refresh personnel on policies and procedures.

The course is written at a level that assumes Personnel Security Specialists have taken and are familiar with the content of five courses:

PER-100DE Introduction to DOE Personnel Security
PER-101 Personnel Security Specialist Adjudication Training
PER-200 Advanced Personnel Security Training
PER-201 Introduction to Interviewing Techniques Seminar
PER-300 Administrative Review Hearing Procedures

Topics include a program history; the roles and responsibilities of a personnel security program specialist/analyst; an introduction to applicable criteria and procedures as specified in Title 10, Code of Federal Regulations, Part 710 (10 CFR 710); Adjudicative Guidelines issued on December 29, 2005; and an overview of the DOE Administrative Review process. Tests and interactive exercises are based on mission critical competencies of Personnel Security.

NOTE: You do not need to contact the NTC Registration Department to take this course. A completion will be automatically added to your Learning History. You will need to print a completion certificate from your Learning History and should provide a copy of your certificate to your training administrator or supervisor.

Audience: DOE and DOE-contractors who perform duties within the DOE Personnel Security Program

Prerequisites: None

Minimum Number of Students: 0

Maximum Number of Students: 0

Protective Force Training

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LFR-102 Armorer Certification Course

Delivery Method: Instructor-Led

Length: 80.00 Hours

Description: This course provides the knowledge necessary to maintain, repair, and function test the standard DOE duty firearms. It includes a troubleshooting exercise for each firearm and written examinations each requiring a minimum passing score of 80%. Upon successful completion of the course, students will be familiar with firearm characteristics, disassembly, reassembly, function testing, nomenclature and the cycle of operation.

SPECIAL NOTE: This new course combines the old Basic Armorer Certification and Advanced Armorer Certification courses and meets both requirements in DOE manual 470.4-3.

Audience: DOE and DOE-contractor staff responsible for armorer duties

Goals & Objectives: Upon successful completion of this course, students will:

1) Identify firearms characteristics
2) Perform disassembly/reassembly
3) List function testing requirements
4) Identify weapons nomenclature
5) Perform the cycle of operations
6) Demonstrate proper gauging and measurements

Prerequisites: LFR-102R
PFT-106DE

Minimum Number of Students: 6

Maximum Number of Students: 12

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LFR-102R Armorer Certification Lessons 1-2 (Required Pre-Course Content)

Delivery Method: Online Item

Length: 4.00 Hours

Description: This pre-course reading and written testing is required prior to attendance at LFR-102 Armorer Certification Course. Two lessons are supplied on a CD covering 1) firearms safety and 2) DOE orders and requirements that guide DOE armorers in performing their jobs. Students registered for LFR-102 should launch the online content to download and complete Lessons 1 and 2. Completion of this prerequisite should take the student approximately 4 hours.

Audience: DOE and DOE-contractor staff responsible for armorer duties

Goals & Objectives:

Prerequisites: PFT-106DE

Minimum Number of Students: 1

Maximum Number of Students: 1

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LFR-104 Armorer Recertification

Delivery Method: Other

Length: 8.00 Hours

Description: This certification process provides firearms performance testing and compliance with DOE Manual 470.4-3. It is designed for active DOE Armorers holding current DOE Armorer Certification that is approaching the expiration date. Armorers must have current factory certification for the firearms used for duty or contingency at their respective site. Recertification should be scheduled with the NTC Armory at least 3 months prior to the expiration date. The process itself usually takes 1 to 8 hours depending on the number of armorers and weapon systems being taught.

Audience: DOE armorers holding current DOE Armorer Certifications approaching their expiration date

Goals & Objectives: Upon successful completion of the process, students will receive a certificate covering duty firearms for which they have received previous factory training.

Prerequisites: LFR-102
LFR-102R

Minimum Number of Students: 1

Maximum Number of Students: 20

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LFR-105 Armorer Certification Specialty Course

Delivery Method: Instructor-Led

Length: 8.00 Hours

Description: This course will address the components, function, and repair of a different weapon system with each iteration. The content will change with each delivery based on specialized material for the specific weapon system(s) being taught although the basic goal and objectives will remain the same. The student will have completed the Armorer Certification Course (LFR-102) prior to being allowed to enroll in any of the specialty offerings held at the NTC. NOTE: In-class hours may vary between 8 and 24 depending on the weapon system(s) being taught.

Audience: DOE Armorers and other personnel with armorer responsibilities

Goals & Objectives: Course objectives will be based on the specific weapon system(s) being taught however students will be able to:

1) Disassemble, inspect, and reassemble the weapon
2) Perform a function check of the weapon
3) Repair or adjust the weapon as necessary
4) Identify the steps in the cycle of operations
5) Name the functions of internal components
6) Identify characteristics of the weapon

Prerequisites: LFR-102
LFR-102R

Minimum Number of Students: 2

Maximum Number of Students: 12

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LFR-201 Live-Fire Range Operations

Delivery Method: Instructor-Led

Length: 32.00 Hours

Description: This course addresses live-fire range operations and management, DOE requirements applicable to range operations, range safety and risk analysis, medical considerations, human factors and stress in training, and an overview of range design and construction. The course is designed to meet the requirements in 10 CFR 851, Worker Health and Safety Program and DOE M 470.4-3 and the target audience includes firearms instructors and safety officers.

SPECIAL NOTE: Participants should have seasonally-appropriate clothing. Course includes a 1-hour block during which the class takes a walking range tour.

Audience: DOE and DOE-contractor staff with range operations responsibilities

Goals & Objectives: Upon successful completion of this course, students will:

1) Understand general contents of DOE firearms safety and training directives.

2) Comprehend general requirements for range management, including firearms safety, range design criteria, SDZs, firearms risk analysis, and range risk analysis.

3) Understand DOE requirements for a medical program and for handling medical emergencies and evacuations.

4) Understand OSHA requirements regarding lead hazards, hearing protection, and other OSHA issues related to range operations.

5) Understand EPA requirements regarding environmental issues at live-fire ranges.

6) Possess a general understanding of human factors and stress in the training environment.

Prerequisites: None

Minimum Number of Students: 12

Maximum Number of Students: 25

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LFR-301 Performance Testing Controller/Evaluator

Delivery Method: Instructor-Led

Length: 16.00 Hours

Description: This course is designed to familiarize participants with the duties and responsibilities of a controller/evaluator during performance testing with the emphasis on force-on-force exercises. Topics covered will include controller/evaluator duties and responsibilities, exercise rules of engagement, engagement simulation systems, performance testing, and after action reviews.

SPECIAL NOTE: Course is designed for personnel assigned as controllers or evaluators during DOE and site-directed performance tests with responsibilities for controlling, evaluating, and verifying the effectiveness of protective force programs.

MANDATORY EQUIPMENT: Seasonally-appropriate outdoor clothing and boots that provide ankle protection.

Audience: DOE and DOE-contractor staff with controller/evaluator duties

Goals & Objectives: Upon successful completion of the course, students will:

1) Understand performance testing as used by DOE

2) Identify the contents of performance testing and training activity plans

3) Understand the command and control system used during force-on-force activities

4) Understand specific safety considerations for conducting performance tests

5) Conduct personnel and vehicle safety searches

6) Identify Engagement Simulation Systems (ESS) used by DOE and their characteristics

7) Control and evaluate participants in DOE performance testing exercises

8) Identify the purpose and types of an After Action Report and techniques used to develop them

Prerequisites: None

Minimum Number of Students: 7

Maximum Number of Students: 14

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PFT-106DE Firearms Safety

Delivery Method: Online Item

Length: 2.00 Hours

Description: This course is now available online from the OLC². You may launch and complete the course per course instructions.

NOTE: You do not need to contact the NTC Registration Department to take this course. A completion will be automatically added to your Learning History. You will print a completion certificate from their Learning History and should provide a copy of your certificate to your training administrator or supervisor.

This course covers general firearms safety. The course ends with a comprehensive final examination that requires a minimum passing score of 80%.

Audience: DOE and DOE-contractor staff

Goals & Objectives: Upon successful completion of this training package, students will have demonstrated their understanding of general firearms safety requirements.

Prerequisites: None

Minimum Number of Students: 0

Maximum Number of Students: 0

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PFT-112 Safety Officer Practical Training Program

Delivery Method: Instructor-Led

Length: 40.00 Hours

Description: Using lecture and practical application, this course provides participants with fundamental knowledge of federal regulations and DOE orders, policies, and procedures that pertain to DOE protective-force training.

SPECIAL NOTE: Students should have current or anticipated assignments related to safety considerations in DOE protective-force operations.

MANDATORY EQUIPMENT: Students must bring brimmed hat, sunglasses, long pants (jeans/BDU), belt, clothing appropriate to the season, and boots or shoes with rubber soles.

Audience: DOE and DOE-contractor safety personnel who oversee protective-force operations

Goals & Objectives: Upon successful completion of this course, students will:

1) Understand safety requirements equipment used during protective-force training and operations

2) Recognize DOE standard weapons and their safety features

3) Discuss applicable DOE directives that establish safety requirements for protective-force training

4) Understand the purpose of protective-force firearms and tactics training

5) Recognize OSHA regulations covering DOE training facilities

Prerequisites: None

Minimum Number of Students: 10

Maximum Number of Students: 20

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PFT-215 Basic Security Police Officer Training

Delivery Method: Instructor-Led

Length: 360.00 Hours

Description: This is the foundational course for new Security Police Officers (SPOs) entering the DOE protective force community. Using scenario-based training methods, it addresses the knowledge and skills necessary to perform the duties of an SPO. Topics covered include DOE-specific policies and procedures, legal requirements of the SPO and use of intermediate force, firearms training, post and patrol operations, and tactical operations.

MEDICAL RELEASE: Site medical clearance forms MUST be on file with the NTC prior to attendance. DOE personnel must meet fitness standards as mandated in 10 CFR 1046. A valid driver's license is required for participation in the driving portion of the course.

MANDATORY EQUIPMENT: Students must bring seasonal uniforms and outdoor gear plus duty equipment to include: protective mask w/ carrying pouch, tactical flashlight, handcuffs, Nomex gloves, elbow and knee pads, billed cap or hat, boots that provide ankle support, and seasonally-appropriate physical training gear.

Audience: DOE and DOE-contractor staff with responsibility for site safeguards and security

Goals & Objectives: Upon successful completion of this course, students will:

1) Perform all order-required limited scope performance tests to a minimum passing score of 100%

2) Demonstrate the core skills necessary to function within the DOE and Contractor protective force environment and to provide response and containment capabilities

Prerequisites: None

Minimum Number of Students: 16

Maximum Number of Students: 24

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PFT-310 Security Police Officer III Certification

Delivery Method: Instructor-Led

Length: 160.00 Hours

Description: Using scenario-based training methods, this course teaches the basic level skills needed by SPOs to become Special Response Team members. Participants receive training in tactical firearms, individual and team movement techniques, covert searching, close quarter battle techniques, and vehicle assaults. The skills are applied in live-fire problem-solving exercises, which prepare attendees for tactical operations used to resolve crisis situations. The course includes written and practical exams and extensive physical training occurs throughout the program.

SPECIAL NOTE: Candidates must be a site designated SPO-II or SPO-III.

MEDICAL RELEASE: Site medical clearance forms MUST be on file with the NTC prior to attendance. DOE personnel must meet fitness standards as mandated in 10 CFR 1046.

MANDATORY EQUIPMENT: Students must bring seasonal uniforms and outdoor gear plus duty equipment to include: protective mask w/ carrying pouch, tactical flashlight, handcuffs, Nomex gloves, elbow and knee pads, billed cap or hat, boots that provide ankle support, Level IIIA body armor, tactical/load bearing vest, and seasonally-appropriate physical training gear.

Audience: DOE and DOE-contractor safeguards and security personnel who will be assigned to SRTs

Goals & Objectives: Upon successful completion of the course, attendees will:

1) Perform all order-required limited scope performance tests to a minimum passing score of 100%

2) Demonstrate the core skills necessary for Level-III SPO to join the site SRT as an assaulter and to provide interdiction, interruption, neutralization, and recovery capabilities.

Prerequisites: PFT-215

Minimum Number of Students: 12

Maximum Number of Students: 20

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PFT-320 Precision Rifle/Forward Observer Team

Delivery Method: Instructor-Led

Length: 80.00 Hours

Description: Using lecture and practical application, this course familiarizes participants with the philosophy, operational techniques, and procedural guidelines necessary to fulfill the precision rifle role in a special response team (SRT). To successfully complete this course, attendees must complete the following with the indicated scores: Mental Stress Test at 100%, Physical Stress Test within a five minute overall time, DOE Day Precision Rifle Course at 80%, and written examination at 80%.

MEDICAL RELEASE: Site medical clearance forms MUST be on file with the NTC prior to attendance. DOE personnel must meet physical standards as mandated in 10 CFR 1046.

MANDATORY EQUIPMENT: Students must bring seasonal uniforms and outdoor gear plus duty equipment to include: protective mask w/ carrying pouch, tactical flashlight, handcuffs, Nomex gloves, elbow and knee pads, billed cap or hat, boots that provide ankle support, and seasonally-appropriate physical training gear.

Audience: Personnel who are or will function as PRFOT team members

Goals & Objectives: Upon successful completion of this course, students will demonstrate the core skills necessary to join an SRT and operate as a precision rifle/forward observer.

Prerequisites:
PFT-215
TRF-100
TRF-100D

Minimum Number of Students: 10

Maximum Number of Students: 20

PFT-320A Fieldcraft

Delivery Method: Instructor-Led

Length: 40.00 Hours

Description: Using lecture and practical application, this course familiarizes participants with techniques of camouflage, field movement, route selection, hide construction, hide selection, and shooting from a hide. All these techniques are taught from the perspective of a precision rifleman.

MEDICAL RELEASE: Site medical clearance forms MUST be on file with the NTC prior to attendance. DOE personnel must meet physical standards as mandated in 10 CFR 1046.

MANDATORY EQUIPMENT: Students must bring seasonal uniforms and outdoor gear plus duty equipment, including camouflage BDUs, camouflage booney hat, camouflage face paint, garnish material, gloves, elbow and knee pads, heavy subdued boots, and OD duct tape.

OPTIONAL EQUIPMENT: Gillie suit, sniper smock, sniper veil, rifle support materials, and camel back-type container.

Audience: Personnel who are or will function as precision rifle/forward observer team (PRFO) members of special response teams.

Audience: See description.

Goals & Objectives:

Prerequisites:
TRF-100
PFT-215
TRF-100D
PFT-310
TRF-200
PFT-320

Minimum Number of Students: 8

Maximum Number of Students: 16

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PFT-321 Precision Rifle/Forward Observer Team Instructor Certificate

Delivery Method: Instructor-Led

Length: 40.00 Hours

Description: This course addresses methods for teaching the philosophy, operational techniques (marksmanship, observation, and crisis site information gathering/reporting skills), and procedural guidelines necessary for members of precision rifle/forward observer teams.

SPECIAL NOTE: Candidates must be SPO III certified.

MEDICAL RELEASE: Site medical clearance forms MUST be on file with the NTC prior to attendance. DOE personnel must meet fitness standards as mandated in 10 CFR 1046.

MANDATORY EQUIPMENT: Students must bring seasonal uniforms and outdoor gear plus duty equipment to include: protective mask with carrying pouch, tactical flashlight, handcuffs, Nomex gloves, elbow and knee pads, billed cap or hat, and boots that provide ankle support.

Audience: DOE and DOE-contractor staff who run precision rifle qualifications and in-service training

Goals & Objectives: Upon successful completion of this course, students will demonstrate the core skills necessary to instruct the varied aspects of the PRFOT and to develop and implement training plans to meet site training requirements.

Prerequisites:
PFT-320
PFT-401
TRF-100D
TRF-200
MIT-111
PFT-215
TRF-100

Minimum Number of Students: 8

Maximum Number of Students: 12

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PFT-370 Opposition Force

Delivery Method: Instructor-Led

Length: 40.00 Hours

Description: This scenario-based training provides students with the information they need to conduct, lead, and participate in "force-on-force" exercises as the opposition force, at the site level. Topical areas include: introduction to opposition force, pre-mission activities, mission activities, mounted and dismounted movements, exterior and interior tactics, vehicle ambush, and ESS weapon systems.

MEDICAL RELEASE: Site medical clearance forms MUST be on file with the NTC prior to attendance. DOE personnel must meet medical and fitness standards as mandated in 10 CFR 1046.

MANDATORY EQUIPMENT: Students are required to bring duty uniforms, elbow and knee pads, boots that provide ankle support and a load bearing vest. No site firearms are required for this course.

Audience: DOE and DOE-contractor protective force personnel

Goals & Objectives: Upon successful completion of the course, students will demonstrate skills and knowledge while performing acting as members of an opposition force team.

Prerequisites: PFT-215

Minimum Number of Students: 12

Maximum Number of Students: 18

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PFT-401 Firearms Instructor Certification

Delivery Method: Instructor-Led

Length: 80.00 Hours

Description: Students will learn how to safely instruct new shooters in firearms handling and qualification courses of fire. The course addresses safety issues, detection and correction of shooter errors, range instruction and designing courses of fire. Upon arrival, attendees must score 90% or higher on the DOE Daylight Handgun and Daylight Semi-automatic Rifle Qualification Courses. To successfully complete this training, attendees must perform student-directed classroom and range presentations, pass LSPTs at 100%, written tests at 80%, and the DOE Combined Qualification Course at 90%.

MEDICAL RELEASE: Site medical clearance forms MUST be on file with the NTC prior to attendance. DOE personnel must meet medical and fitness standards as mandated in 10 CFR 1046.

MANDATORY EQUIPMENT: Students must bring their site-issued duty uniforms and duty equipment, including the following: gun belt, holster, pistol and rifle magazine pouches, knee and elbow pads, gas mask with carrying pouch, and billed cap. Students who do not pass the DOE Combined Qualification Course at 90% will receive modified FIC certifications that do NOT include the Shooting on the Move portion.

Audience: DOE and DOE-contractor safeguards and security personnel

Goals & Objectives: Upon successful completion of this course, students will:

1) Demonstrate the ability to perform as an instructor in a classroom setting and as an assistant range officer on the firing line

2) Design individual courses of fire

3) Demonstrate the core skills necessary to instruct new shooters in pistol and rifle manipulation

Prerequisites: MIT-111

Minimum Number of Students: 12

Maximum Number of Students: 20

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PFT-402 Advanced Weapons Systems Instructor Certification

Delivery Method: Instructor-Led

Length: 40.00 Hours

Description: AWS participants receive instructor certification in only those weapons with which they have trained. This course provides instructor certification for the following weapons: M240B medium weight machine gun, MK48 medium weight machine gun, M249 light weight machine gun, MK46 light weight machine gun, M203 Grenade Launcher. Successful completion of this course results in certification of firearms instructors who conduct submachine gun training and grenade launcher training for the Pro Force training programs. Attendees must pass LSPTs at 100%, written examinations at 80% and successfully complete student-directed presentations.

SPECIAL NOTE: The NTC will provide all weapons necessary to complete the course. Students are required to have 100% attendance and participation.

MEDICAL RELEASE: Site medical clearance forms MUST be on file with the NTC prior to attendance. DOE personnel must meet medical and fitness standards as mandated in 10 CFR 1046, and provide a copy of current semi-annual weapons qualification scores (including scores for submachine gun, machine gun, and grenade launcher).

MANDATORY EQUIPMENT: Students must bring seasonal uniforms and outdoor gear plus duty equipment to include: protective mask w/ carrying pouch, tactical flashlight, handcuffs, Nomex gloves, elbow and knee pads, billed cap or hat, and boots that provide ankle support. A large Leatherman or similar tool is recommended.

Audience: DOE and DOE-contractor safeguards and security site firearms instructors

Goals & Objectives: Upon successful completion of this course, students will:

1) Demonstrate the skills necessary to conduct advanced weapons training on specific firearms

2) Qualify as an operator on each of the weapons that they will be certified to instruct

3) Understand specific DOE requirements for the weapons they are qualified to teach

Prerequisites: PFT-401
MIT-111

Minimum Number of Students: 10

Maximum Number of Students: 18

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PFT-403 Intermediate Force Instructor Certification

Delivery Method: Instructor-Led

Length: 80.00 Hours

Description: This course provides instructor-level training and certification in arrest and control defensive tactics as well as use of straight- and side-handle batons and chemical munitions. Included are three graded exercises: a performance test requiring a score of 100%, an instruction exercise requiring a satisfactory rating in all categories, and a written examination requiring a score of at least 80%.

SPECIAL NOTE: This training includes workplace simulations and/or role playing exercises that may induce stress or emotional response in some participants.

MEDICAL RELEASE: Site medical clearance forms MUST be on file with the NTC prior to attendance. DOE personnel must meet medical and fitness standards as mandated in 10 CFR 1046.

MANDATORY EQUIPMENT: Students must bring physical-fitness uniform, duty belt with holster, handcuffs, baton, and a roll of athletic tape.

Audience: DOE and DOE-contractor safeguards and security personnel

Goals & Objectives: Upon successful completion of this course, students will:

1) Demonstrate proficiency in defensive tactics training

2) Demonstrate ability to effectively instruct standardized defensive tactics for SPOs in mandated training areas

Prerequisites: MIT-111

Minimum Number of Students: 12

Maximum Number of Students: 24

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PFT-405 Basic Tactical Entry

Delivery Method: Instructor-Led

Length: 40.00 Hours

Description: This course covers the major elements comprising necessary knowledge and training for a Tactical Entry Specialist. It addresses selection, inspection, and proper manipulation of mechanical entry tools; identification and accomplishment of defeating barriers; target analysis in the review of target folders and intelligence prior to assault; communication; and breacher integration into the team. Lecture is reinforced by a series of practical skill-based activities designed to expose the student to realistic application of methods and techniques of employment. Activities follow a logical and progressive building-block approach that introduces the tools, methods of use, and integrated skill scenarios. Participants perform several graded (pass/fail) limited scope performance tests and take one written examination requiring a score of at least 80%.

SPECIAL NOTE: Participants must be assigned to a site SRT for at least 6 months.

MEDICAL RELEASE: Site medical clearance forms MUST be on file with the NTC prior to attendance. DOE personnel must meet medical and fitness standards as mandated in 10 CFR 1046.

MANDATORY EQUIPMENT: Students must bring: load bearing vest, knee and elbow pads, Nomex gloves, department-issued long-sleeve shirt and long pants (Nomex flight suit recommended), leather above-the-ankle boots, approved eye protection, site-issued body armor, tactical gear with helmet and chemical protective mask, handgun, and submachine gun/rifle. Handguns, submachine guns and rifles may be available from the NTC with prior coordination, if necessary.

Audience: DOE and DOE-contractor personnel assigned to SRTs

Goals & Objectives: Upon successful completion of this course, participants will:

1) Employ a variety of mechanical and ballistic methods for tactical entry by SRTs

2) Understand how to maintain tactical-entry equipment

3) Analyze targets to select and employ appropriate methods of forced entry during crisis resolution

4) Understand the principles of safety as they apply to all phases of tactical entry

Prerequisites:
PFT-310
TRF-100
TRF-200
PFT-215
TRF-100D

Minimum Number of Students: 8

Maximum Number of Students: 12

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PFT-407 Security Police Officer III Instructor Certification

Delivery Method: Instructor-Led

Length: 80.00 Hours

Description: This course provides information necessary to conduct SPOIII training. The course tests student-instructors' subject-matter knowledge and presents safety-related issues unique to SRT training. To be eligible to continue training beyond the first day of class, each attendee must pass the DOE SRT "shooting on the move" handgun qualification and submachine/rifle weapons qualification with a minimum score of 90%. The course includes 2 practical exercises requiring 100% and a written examination that requires a minimum score of 80%. This course does not provide student instructors with a Live Fire Shoothouse Instructor Certificate (LFSIC). Successful graduates may operate in their site's live-fire shoothouse as assistant instructors under the direct supervision of a currently certified LFSH IC.

SPECIAL NOTE: Participants must hold a current assignment as an SRT instructor.

MEDICAL RELEASE: Site medical clearance forms MUST be on file with the NTC prior to attendance. DOE personnel must meet medical and fitness standards as mandated in 10 CFR 1046.

MANDATORY EQUIPMENT: Students must bring seasonal uniforms, boots with ankle support, equipment belt, brimmed hat, Nomex gloves, eye/ear protection, body armor, elbow/knee pads. Students must bring their own site-issued duty handgun/shoulder fired guns with magazines, Level III-A body armor and load-bearing gear.

APPRENTICESHIP: To receive a LFSH IC, graduates of SRT IC must complete a 40-hour apprenticeship program under the supervision of a live-fire shoot house instructor and successfully pass, with a minimum score of 100%, a comprehensive site-specific written examination based on the sites' standard operating procedures and safety requirements. See PFT-501 for additional information.

Audience: DOE and DOE-contractor S&S personnel designated to conduct SRT training at DOE facilities

Goals & Objectives: Upon successful completion of this course, students will:

1) Perform as an SRT instructor

2) Receive certification to teach the SRT Basic Qualification Course

3) Perform in the Live Fire Shoot House as an assistant instructor under the direction of a full Live Fire Shoot House instructor

Prerequisites: MIT-111
PFT-310
PFT-401
TRF-100
TRF-200
PFT-215
TRF-100D

Minimum Number of Students: 6

Maximum Number of Students: 16

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PFT-408 Ground Control Instructor Certification

Delivery Method: Instructor-Led

Length: 40.00 Hours

Description: This course provides training and certification in arrest and control defensive tactics. The course addresses takedowns, controlling suspects on the ground, position of advantage, escapes/reversals, and weapon retention techniques from the ground. Included are: three graded exercises, a performance test requiring a score of 100%, an instruction exercise requiring a satisfactory rating in all categories, and a written examination requiring a score of at least 80%.

MEDICAL RELEASE: Site medical clearance forms MUST be on file with the NTC prior to attendance. DOE personnel must meet medical and fitness standards as mandated in 10 CFR 1046.

MANDATORY EQUIPMENT: Students must bring physical-fitness uniform with long pants (no short pants of any kind allowed). Knee pads and mat/wrestling-type shoes are highly recommended.

Audience: DOE and DOE-contractor trainers of protective force personnel

Goals & Objectives: Upon successful completion of this course, students will perform as ground control instructors qualified to conduct training for security personnel.

Prerequisites: MIT-111

Minimum Number of Students: 12

Maximum Number of Students: 24

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PFT-460 Tactical Leadership

Delivery Method: Instructor-Led

Length: 80.00 Hours

Description: This two-week long course provides DOE and DOE-contractor protective force personnel with the tactical leadership knowledge and skills they need to resolve critical incidents at a site or facility. The course is delivered through lecture and a variety of practical exercises. Topical areas include: Leadership Principles, Characteristic of a Leader, Knowledge and Leadership, Responsibilities of a Leader, Planning, Briefings, Staging Areas, Initial Response, Assault Executions, Post Assault, Stress Management, Team Movements in an Open Field/Urban Environment and Fighting from Mounted Movements.

MEDICAL RELEASE: Site medical clearance forms MUST be on file with the NTC prior to attendance. DOE personnel must meet medical and fitness standards as mandated in 10 CFR 1046. Students will be required to pass a written test with a score of at least 80% and must be a supervisor or current instructor.

MANDATORY EQUIPMENT: Students must bring duty uniforms, PPE, billed cap, Nomex gloves, tactical vest, elbow and knee pads, eye protection, ear protection, boots/shoes which are suitable for mountain terrain that provide ankle protection.

Audience: DOE and DOE-contractor protective force personnel

Goals & Objectives: Upon successful completion of the course, students will:

1) Identify leadership characteristics knowledge and principles

2) Demonstrate the ability to lead a small element in a combat situation

3) Demonstrate the ability to manage a critical incident scene

Prerequisites:
PFT-215
TRF-100
TRF-100D

Minimum Number of Students: 12

Maximum Number of Students: 18

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PFT-501 Live Fire Shoot House Instructor Certification

Delivery Method: Other

Length: 0.00 Hours

Description: This is a certification demonstrating that individuals are capable of full and safe performance as lead/control instructors in the Live Fire Shoot House at their sites. The process is as follows: After completing PFT-407, Special Police Officer III Instructor Certification, individuals serve as assistant LFSH instructors under the lead/control instructor at their site. This apprenticeship satisfies the 40-hour specification in DOE M 470.4-3. The lead/control instructor must determine when the apprentice is capable of full and safe performance and he must pass the written examination at 100%. Instructors satisfying these requirements must formally request LFSH IC certificates from the Director of NTC. Documents supporting completion of above requirements must also be provided at the time of the request. Certificates will not be issued for LFSH IC unless this supporting documentation is provided.

Audience: DOE and DOE-contractor protective force personnel

Goals & Objectives: Upon successful completion of the required apprenticeship, passing score of 100% on the exam and the recommendation of their site with proper documentation, students will be awarded the Live Fire Shoot House Instructor Certificate.

Prerequisites:
MIT-111
PFT-215
TRF-100
PFT-310
TRF-200
PFT-401
PFT-407
TRF-100D

Minimum Number of Students: 1

Maximum Number of Students: 1

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TRF-100 Tactical Response Force 1

Delivery Method: Instructor-Led

Length: 400.00 Hours

Description: This course provides standard basic training for the DOE Security Protection Officer II (SPO II) position upon entry into the DOE protective force community. TRF-1 will support the primary mission of the DOE Protective Force by providing training in the individual and team tactical combat skills necessary to protect safeguards and security interests from an armed terrorist threat. The scope of the course includes training in the use of handguns and rifles, an overview of advanced weapons, intermediate force and the DOE Force Continuum; field operations, recapture/recovery support operations and defensive and emergency vehicle operations. Proficiency in these areas will be enhanced through situational training force-on-force exercises in support of initial classroom content delivery and firing range practice.

MEDICAL RELEASE: Site medical clearance forms MUST be on file with the NTC prior to attendance. DOE personnel must meet medical and fitness standards as mandated in 10 CFR 1046. A valid driver's license is required for participation in the driving portion.

MANDATORY EQUIPMENT: Students must bring duty equipment, firearms and physical training gear, gas mask, tactical flashlight and handcuffs, seasonal outdoor gear and mat shoes.

Audience: DOE and DOE-contractor protective force personnel

Goals & Objectives: Upon successful completion of the course, students will:

1) Perform the necessary duties and tasks to be certified at the SPO II level

2) Pass performance-based and cognitive tests demonstrating the core skills required to effectively participate in response and containment operations within the DOE environment

Prerequisites: TRF-100D

Minimum Number of Students: 14

Maximum Number of Students: 20

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TRF-200 Tactical Response Force 2

Delivery Method: Instructor-Led

Length: 240.00 Hours

Description: This course teaches the basic skills needed by Level-III SPOs to become SRT members. Training will include tactical firearms, individual and team movement techniques, covert searching, close quarter battle techniques, and vehicle assaults. Skills are applied in live-fire problem-solving exercises, and physical training occurs throughout the program. The course includes one written exam which must be passed at 80%, the DOE shoot-on-the-move handgun and rifle/submachine gun courses which must be passed at 90%, and 2 shoot house performance tests. Included is a live-fire obstacle-course test requiring completion within 7 minutes and 30 seconds.

SPECIAL NOTE: Participants must minimally be site-designated SPO-IIs.

MEDICAL RELEASE: Site medical clearance forms MUST be on file with the NTC prior to attendance. DOE personnel must meet medical and fitness standards as mandated in 10 CFR 1046.

MANDATORY EQUIPMENT: Students must bring firearms and physical training gear appropriate to the season, boots providing ankle support, duty gear including belt, helmet, chemical-agent mask, flashlight, Nomex gloves, site-issued body armor (minimum level III-A) and tactical equipment, physical-fitness training uniform appropriate to the season, and elbow and knee pads.

Audience: DOE and DOE-contractor protective force personnel who will be assigned to SRTs

Goals & Objectives: Upon successful completion of the course, students will:

1) Perform the necessary duties and tasks to be certified at the SPO III level

2) Pass performance-based and cognitive tests demonstrating the core skills required to effectively participate in response and containment operations within the DOE environment as a member of an SRT

Prerequisites: TRF-100
TRF-100D

Minimum Number of Students: 14

Maximum Number of Students: 18

Physical Protection

PFT-202 Survey of Protective Forces

Delivery Method: Instructor-Led

Length: 40.00 Hours

Description: This course focuses on the knowledge and skills necessary to conduct effective and professional compliance and performance evaluations on protective force operations. Course content emphasizes the knowledge and skills associated with key survey functions, including pre-survey planning, document/records reviews, and performance testing. Each section is followed by a practical exercise.

AUDIENCE: DOE and DOE-contractor personnel who conduct (or participate in conducting) periodic safeguards and security (S&S) surveys that include the protective force topical area.

REQUIREMENTS: Familiarity with the DOE Facility Survey and Approval Program; Office of Health, Safety and Security, Physical Security Systems Inspector's Guide; applicable DOE orders; and applicable policy directives.

Audience: See course description.

Goals & Objectives: Upon successful completion of this course, attendees will

1) Be able to operate as effective and productive members of an S&S survey team.

2) Understand key success behaviors that are involved in surveying protective force operations.

Prerequisites: PHY-130

Minimum Number of Students: 14

Maximum Number of Students: 20

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PHY-100DB Introduction to Physical Protection Systems (Correspondence Course)

Delivery Method: Online Item

Length: 36.00 Hours

Description: NEW FEATURE: This course is now available as a .pdf download in the OLC². Please launch the course contents, download, print, and complete course per instructions.

NOTE: This correspondence course replaces the former classroom course titled Introduction to Physical Security.

This introductory correspondence course covers all aspects of physical security systems, including threat definition, target identification, detection (exterior and interior sensors, alarm assessment, communications, and display), entry control, and response from forces as well as communications. Also covered are the roles of hardware and technology as they integrate with the roles of protective forces and procedures. (Because the course focuses on physical protection of nuclear materials at fixed sites, it does NOT address protection of materials while they are in transit from site to site.) Included are excerpts from the student notebook, DOE M 470.4-2 Physical Protection, DOE M 470.4-3 Protective Force, and the IG Physical Security Systems report. Lessons are reviewed by self-directed quizzes. Student must pass with 80% or better.

REQUIREMENT: A basic understanding of safeguards and security terminology.

Audience: See course description.

Goals & Objectives:

Prerequisites: None

Minimum Number of Students: 0

Maximum Number of Students: 0

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PHY-120 Intermediate Physical Security Systems

Delivery Method: Instructor-Led

Length: 40.00 Hours

Description: This course addresses the following topical areas: current sensor technology, performance-testing procedures and maintenance to ensure operational performance. Also addressed in depth are DOE O 470.4A, Safeguards and Security Program Order, and DOE M 470.4-2, Chg.1, Physical Protection Program Manual.

The course is participative, allowing attendees to gain hands-on experience with various physical security systems. Included is a visit to Sandia National Laboratories' Sensor System Test Bed, enabling attendees to see the types and methodologies of tests conducted for DOE. The course includes quizzes and practical exercises.

AUDIENCE: DOE and DOE-contractor personnel responsible for designing, installing, operating, maintaining, inspecting, or performance-testing detection, assessment, access-control, and entry-control systems at sites.

REQUIREMENTS: Attendees must also have a basic understanding of electronic engineering concepts as they relate to sensor operation, and operational experience at their sites (preferably 1-2 years). On the first day, attendees should bring walking shoes and jackets. An outside tour will be conducted. On the second day, class will include an evening session to review nighttime lighting scenarios.

Audience: See course description.

Goals & Objectives: Upon successful completion of Intermediate Physical Security Systems, attendees will be able to

1) Discuss the general concepts of probability of detection.

2) Understand the detection phenomenology; circuitry; operational performance-testing; vulnerabilities; and forthcoming technological developments in interior, exterior, and entry-control systems and alarm communications.

3) Explain the advantages of a combined physical-protection system.

4) Recognize how sensor technology vulnerabilities affect the selection of components for a system.

5) Demonstrate a performance test of a system.

6) Discuss the reduction/elimination of system vulnerabilities.

Prerequisites: PHY-100DB

Minimum Number of Students: 14

Maximum Number of Students: 24

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PHY-210DB Facility Security Officer Orientation (Correspondence Course)

Delivery Method: Online Item

Length: 24.00 Hours

Description: NEW FEATURE: This course is now available as a .pdf download in the OLC² and, for NTC Learners without an OLC² login, from the NTC homepage (www.ntc.doe.gov) under 'Online Courses.' Please download, print, and complete course per instructions.

This introductory correspondence course provides an overview of the roles and responsibilities of the DOE or DOE-contractor facility security officer. The course emphasizes facility clearance requirements, personnel security, information security, incident reporting, and other related programs. The course references the NISPOM and a comprehensive listing of DOE orders, manuals, guides, forms, and notices.

Successful completion of this course is measured by means of the six sets of end-of-lesson written test questions. Successful completion depends upon a minimum score of 80% on each end-of-lesson test.

All documents related to this course can be found in their most current state at the following Web site: http://www.directives.doe.gov.

Audience: DOE and DOE-contractors newly assigned to facility security officer positions or functions.

Goals & Objectives:

Prerequisites: None

Minimum Number of Students: 0

Maximum Number of Students: 0

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ISC-121DB Classified Matter Protection and Control (Correspondence Course)

Delivery Method: Online Item

Length: 8.00 Hours

Description: NEW FEATURE: This course is now available as a .pdf download in the OLC². Please launch the course contents, download, print, and complete course per instructions. If preferred, printed materials may still be requested from NTC Registration.

This unclassified, introductory-level, self-paced correspondence course provides the basic skills needed to perform the essential CMPC program functions, which include the following major elements involved in protecting and controlling classified matter: generation and preparation; physical protection and storage; accountability; transmission and receiving; reproduction; and destruction. Included are exercises and an examination for which the minimum score is 80%.

Audience: DOE and DOE-contractor personnel

Goals & Objectives: Course Outcomes:
Upon successful completion of this course material, student correspondents will

1) Understand the minimum DOE requirements for CMPC according to DOE M 470.4-4, Information Security

2) Understand the terminology and elements of the CMPC Program

3) Possess the technical skills and knowledge needed to perform basic CMPC functions

Prerequisites: None

Minimum Number of Students: 0

Maximum Number of Students: 0

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ISC-141DE Operations Security (OPSEC) Overview

Delivery Method: Online Item

Length: 2.00 Hours

Description: NEW FEATURE: ISC-141DE is now available as an eLearning course on the OLC². No pre-registration is required; NTC learners may launch and take the course at any time. Completions will be automatically logged to the Learner's Learning History.

Please note: This eLearning course replaces ISC-141DW OPSEC Overview Web-based course,

This course is designed to provide federal employees and federal contractors with a basic working knowledge of Operations Security (OPSEC) and how it applies to executive branch agencies and departments. The course focuses on the history of OPSEC and the OPSEC process as described in NSDD-298. At the end of three lessons, students complete Lesson 4, a scenario that allows the student to apply OPSEC principles.

These materials can be used for initial OPSEC orientations, periodic OPSEC refresher training, and general security education or motivational purposes.

The NTC thanks the Interagency OPSEC Support Staff (IOSS) for the content of this course.

Audience: DOE and DOE-contractor community.

Goals & Objectives:

Prerequisites: None

Minimum Number of Students: 0

Maximum Number of Students: 0

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ISC-202DV Legal Aspects of Inquiries

Delivery Method: Other

Length: 16.00 Hours

Description: This unclassified, introductory-level, self-paced correspondence course, with its companion overview Digital Video Disc (DVD), provides an understanding of the legal issues associated with inquiries into incidents of security concern. Its purpose is to assist in the conduct of inquiries that protect DOE security interests, without violating the legal rights of DOE or DOE-contractor employees. Included are review questions for which the minimum passing score is 80%.

AUDIENCE: DOE and DOE-contractor personnel who are or will be responsible for conducting inquiries into incidents of security concern

Audience: See course description.

Goals & Objectives: Upon successful completion of this course material, students will understand

1) The legal parameters of an interview as they apply to the inquiry process

2) The concept of search and seizure as it applies to the inquiry process

3) Civil liability as it applies to the conduct of inquiries

4) Obstruction of justice and false statements as they apply to the inquiry process

Prerequisites: None

Minimum Number of Students: 0

Maximum Number of Students: 0

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ISC-221 Classified Matter Protection and Control I

Delivery Method: Instructor-Led

Length: 32.00 Hours

Description: This unclassified, intermediate-level course emphasizes development of skills needed to implement and evaluate the Classified Matter Protection and Control (CMPC) program. It includes the following major elements: an overview of the CMPC Program; access to classified matter; generation and marking; physical protection and storage; control systems and accountability, including accountable classified removable electronic media (ACREM); receipt and transmission; reproduction and destruction; unclassified controlled information; and basic reporting requirements for CMPC-related incidents of security concern, as well as benefits associated with reporting classified information security incidents. The course also emphasizes the interrelationships between CMPC and other safeguards and security (S&S) programs. Included are activities and a final examination, requiring a minimum score of 80%.

AUDIENCE: DOE and DOE-contractor S&S personnel responsible for handling classified matter, as well as CMPC Points of Contact who are responsible for implementing/coordinating CMPC functions.

REQUIREMENT: Current assignment to work with CMPC or oversight of those who do

NOTE: Student may substitute either (1) a local introductory course or (2) two years of experience in the CMPC field for the prerequisite course listed, ISC-121DB CMPC Correspondence Course. Students who have completed a local introductory course or have two years of experience in the CMPC field must submit validation from either their supervisor or training POC to the NTC Registration Department.

Audience: See course description.

Goals & Objectives: Upon successful completion of the CMPC I course, attendees will

1) Comprehend the general principles, terminology, and roles associated with the protection and control of classified matter in accordance with U.S. laws, and national and Departmental directives

2) Comprehend the access authorization requirements for classified matter

3) Comprehend and apply CMPC considerations and procedures associated with generating and marking classified matter

4) Comprehend storage requirements for classified matter

5) Comprehend and apply control systems and accountability requirements for classified matter

6) Comprehend and apply CMPC requirements for receiving and transmitting classified matter

7) Comprehend DOE procedures for reproduction and destruction of classified matter

8) Comprehend and apply the requirements for the protection and control of accountable classified removable electronic media (ACREM)

9) Comprehend Information Security requirements for handling, marking, and protecting unclassified controlled information

10) Understand potential incidents of security concern (IOSC) as they relate to CMPC

Prerequisites: ISC-121DB

Minimum Number of Students: 14

Maximum Number of Students: 25

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ISC-222 Special Program Security Officer (SPSO)

Delivery Method: Instructor-Led

Length: 32.00 Hours

Description: The course prepares participants to function as security officers for special programs. Building on the prerequisites, the course can, in effect, produce Special Program Security Officers (SPSOs) for special access programs (SAPs).

REQUIRED: In addition to the prerequisite courses, there is read-ahead material that all registered students will receive about four weeks prior to the class. Students are required to read this material before the first day of the class.

RECOMMENDED: It is also recommended that students take the following NTC classroom courses, either before or after taking ISC-222, to enhance their education as an SPSO:

ISC-301 Conduct of Inquiries
PHY-130 Basic Survey
ISC-221 Classified Matter Protection and Control I

Audience: DOE and DOE-contractor personnel who are, or will be, assigned responsibilities as SPSOs

Goals & Objectives: Upon successful completion of this course, participants will be able to do the following:

1) Understand the basic requirements surrounding SAPs: associated terms, directives, and roles and responsibilities; as well as the SAP initiation process

2) Understand the actions necessary to prepare for the receipt of a SAP

3) Understand both the general and technical aspects of constructing a SAP facility

4) Understand the required security plan outlining the protection measures for SAP operations

5) Understand the process for coordinating visits and associated activities within a SAP facility

6) Understand the basic CMPC requirements for SAP matter

7) Understand the cyber security requirements associated with SAPs

8) Understand how to conduct security self-assessments, as well as coordinate security surveys and inspections of SAPs

9) Understand reporting requirements upon discovery of an incident of security concern

10) Understand the general process of conducting training/briefings supporting SAP security requirements

11) Understand the procedures associated with formal SAP termination

Prerequisites: PHY-210DB
PHY-128DB
ISC-121DB

Minimum Number of Students: 14

Maximum Number of Students: 20

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ISC-234 Technical Surveillance Countermeasures

Delivery Method: Instructor-Led

Length: 16.00 Hours

Description: This course provides generic information for individuals associated with the DOE Technical Surveillance Countermeasures (TSCM) Program. The course serves as a general overview of the TSCM Program, touching on various levels of responsibilities for those who are involved in either DOE or national-level programs. It does not provide site-specific instructions, but rather, it points out the basic requirements to the students and shows the inter-relationship between TSCM and other security programs. It also covers threat analysis and demonstrates selected TSCM equipment.

REQUIRED: Clearance for access to Secret National Security Information.

Audience: Individuals who are serving as DOE TSCM Program Managers, TSCM Officers

Goals & Objectives: Upon successful completion of this course, attendees will

1) Understand the scope of the DOE TSCM Program

2) Be familiar with DOE and national directives related to the TSCM program

3) Be familiar with the responsibilities of the DOE TSCM Program personnel

4) Understand the relationship between the TSCM Program Manager and the field TSCM program elements

5) Have a working knowledge of various TSCM equipment and their applications

Prerequisites: None

Minimum Number of Students: 10

Maximum Number of Students: 20

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ISC-241 Operations Security (OPSEC)

Delivery Method: Instructor-Led

Length: 36.00 Hours

Description: This course focuses on resources, policies, and training that deny unauthorized individuals or groups access to classified and sensitive-unclassified information. Emphasis is placed on the exploitable sources of information normally available to an adversary and on cost-effective countermeasures to deny or delay the availability of such information. The course requires a minimum score of 80% based on administered testing results and completion of a 10-hour practical exercise.

Audience: DOE and DOE contractor personnel.

Goals & Objectives: Upon successful completion of this course, attendees will

1) Understand DOE OPSEC policy

2) Know and be able to apply the five-step OPSEC process: identification of critical information; analysis of threats; analysis of vulnerabilities; assessment of risks; and application of appropriate countermeasures

3) Know the DOE OPSEC organization and functions

4) Be familiar with methods for effectively assessing the strengths and weaknesses of an OPSEC program

5) Understand the interrelationship of the risk management and OPSEC programs

Prerequisites: None

Minimum Number of Students: 14

Maximum Number of Students: 24

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ISC-301 Conduct of Inquiries

Delivery Method: Instructor-Led

Length: 32.00 Hours

Description: This course addresses policies and procedures surrounding inquiries conducted to determine whether a compromise of classified information or a violation of a law has occurred. The course addresses all aspects of conducting inquiries (e.g., purpose and methods of conducting interviews); the legal parameters of conducting inquiries; report writing; and reporting requirements. Practical exercises reinforce these and other inquiry procedures. This course also emphasizes the interrelationship of the DOE Information Security Program elements and shows how these relationships can contribute to successful inquiries. Included is an end-of-course examination requiring a minimum score of 80%.

AUDIENCE: DOE and DOE-contractor personnel who are or will be responsible for conducting inquiries into incidents of security concern

Audience: See course description.

Goals & Objectives: Upon successful completion of this course, attendees will

1) Be familiar with the DOE directives related to the conduct of inquiries

2) Understand the scope and purpose of conducting inquiries

3) Possess a working knowledge of methods for conducting inquiries

4) Demonstrate, through practical exercise, the ability to conduct inquiries and produce reports, along with accompanying documentation

Prerequisites: ISC-202DV

Minimum Number of Students: 14

Maximum Number of Students: 20

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ISC-321 Classified Matter Protection and Control II —Program Management

Delivery Method: Instructor-Led

Length: 36.00 Hours

Description: This unclassified, advanced course prepares attendees to perform the following program management tasks: prepare and implement site procedures and various types of security plans; integrate with other safeguards and security functional areas; develop CMPC training/briefings for local needs; prepare for and perform, assist, or oversee various types of CMPC assessments; and develop, as well as process, a deviation request.

AUDIENCE: DOE and DOE-contractor personnel who are assigned CMPC Point of Contact duties and responsibilities for implementing and coordinating CMPC functions

Audience: See course description.

Goals & Objectives: Upon successful completion of this course, students will be able to

1) Understand CMPC program management requirements and associated POC responsibilities

2) Understand CMPC program issues related to implementation of site CMPC procedures and site security plans

3) Understand CMPC POC responsibilities related to CMPC training/briefings

4) Understand the CMPC POC's responsibilities related to preparing for an assessment

5) Understand the CMPC POC's responsibilities related to the conduct phase of assessments

6) Understand the CMPC POC?s responsibilities related to post-assessment activities

7) Understand the purpose and process for developing a deviation

8) Understand CMPC POC responsibilities related to CMPC program management

Prerequisites: ISC-121DB
ISC-221

Minimum Number of Students: 14

Maximum Number of Students: 20

Safety

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SAF-099DE General Technical Base Addendum

Delivery Method: Online Item

Length: 2.50 Hours

Description: Course Description: The OLC² presently hosts an online General Technical Base Course (COURSE GTB COURSE). This course formerly satisfied all competency requirements for the General Technical Base.

However, DOE approved the new General Technical Base Qualification Standard in 2007, that now requires a familiarity level knowledge of the following: 1) Comprehensive Emergency Management, 2) DOE Oversight Policy, 3) Accident Investigation, 4) DOE Corporate Operating Experience Program, 5) Central Technical Authority, 6) DOE Safeguards and Security, 7) Electrical Safety, 8) 10 CFR 851, and 9) Newly Identified KSAs.

To successfully complete the competency requirements for GTB, DOE employees must now take both the online General Technical Base Course (COURSE GTB_COURSE) and SAF-099DE GTB Addendum. When completion for both courses is achieved, employees will have satisfied the current competency training requirements for the GTB Qual Standard.

Students must pass each test with a score of 80% or better to achieve credit for the course.

Target Audience: DOE interns, DOE employees beginning a qualification program, new DOE or contractor employees at DOE defense nuclear facilities, or current DOE or contractor employees transferring to a defense nuclear facilities who must re-qualify as outlined in the above DOE Standard.

If you are a DOE Federal or contractor employee and do not have an OLC² login, please contact the OLC² Help Desk, 202.586.3607, or energyolc@hq.doe.gov.

If you require assistance logging into the OLC², please contact the OLC² Help Desk, 202.586.3607, or energyolc@hq.doe.gov.

Audience: See description.

Goals & Objectives:

Prerequisites: None

Minimum Number of Students: 0

Maximum Number of Students: 0

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SAF-100DE Federal Employee Occupational Safety and Health (FEOSH) Orientation Program

Delivery Method: Online Learning

Length: 1.00 Hours

Description: This course provides a basic orientation to the Department of Energy's Federal Employee Occupational Safety and Health (FEOSH) Program, including information on employee rights and responsibilities; reporting unsafe and unhealthful working conditions, work-related injuries, and occupational illnesses; regulatory requirements; safety and health training requirements; and general information about hazard recognition and control. SAF-100 meets the training requirements of Executive Order No. 12196 and the Occupational Safety and Health Administration's regulation on "Basic Program Elements for Federal Employee Occupational Safety and Health Programs and Related Matters," 29 CFR 1960.

Audience: This course is mandatory for all DOE employees.

Goals & Objectives:

Prerequisites: None

Minimum Number of Students: 0

Maximum Number of Students: 0

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SAF-101 General Technical Base

Delivery Method: Instructor-Led

Length: 40.00 Hours

Description: This classroom version of the General Technical Base Course provides students with training in the common core technical knowledge required to successfully complete the General Technical Base qualification standard. The course presents and discusses the five core areas and corresponding competencies outlined in DOE Standard 1146-2007, General Technical Base Qualification Standard. Successful completion of this course will meet the intent of achieving familiarity-level knowledge of these areas and competencies. Using short activities, the course presents and demonstrates the principles of the core areas and competencies. Short daily quizzes will be given in lieu of an exam at the end of the course.

NOTE: A separate online version of this course is under development.

AUDIENCE: Federal personnel who are responsible for the safe operation of defense nuclear facilities or who provide assistance, direction, guidance, oversight, or evaluation of contractor technical activities affecting the safe operation of defense nuclear facilities.

Audience: See description.

Goals & Objectives: Upon successful completion of the course, students will have familiarity-level knowledge of the five core areas listed below.

1) Nuclear Fundamentals;

2) Environmental Management;

3) Safety Management;

4) Conduct of Operations;

5) Authorization Basis Requirements and Documentation.

Prerequisites: None

Minimum Number of Students: 15

Maximum Number of Students: 24

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SAF-111 Electrical Systems and Safety Awareness

Delivery Method: Instructor-Led

Length: 8.00 Hours

Description: This course will provide students with a general introduction to electrical safety. Highlights addressed include: the history of electrical safety within the Department of Energy, the function of key federal drivers and consensus standards, key elements contributing to a model electrical safety program and the role of oversight in ensuring safe-work practices.

PREREQUISITE: Candidates should possess at least a familiarity level knowledge of their facility/site's electrical safety program.

AUDIENCE: Individuals who are site managers, deputy site managers, assistant managers and division directors who have electrical oversight responsibilities. This course is also intended for individuals in field engineer positions (facility representatives and safety system oversight personnel at nuclear facilities) and selected program and project managers who oversee construction activities. It is also intended for individuals currently in electrical safety oversight positions who need to re-qualify and new candidates for electrical safety oversight positions who are initially qualifying.

Audience: See description.

Goals & Objectives: Upon completion of this course, candidates will:

1) Describe the Department of Energy Electrical Safety Program model within the context of the Department of Energy;

2) Describe requirements for management and implementation of an electrical safety program;

3) Assess candidates current electrical safety program against general electrical safety program requirements.

Prerequisites: None

Minimum Number of Students: 15

Maximum Number of Students: 30

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SAF-133V Human Performance Fundamentals

Delivery Method: Instructor-Led

Length: 8.00 Hours

Description: The program is planned in modules over a one-day period. The training will include group discussions and exercises.

This course introduces participants to proven human performance principles and tools used to reduce human error, and reduce the frequency and severity of occurrences at our facilities. The course describes how individual behavior, leader behavior, and organizational processes and values affect safety, quality, and productivity. The purpose of the course is to bring participants to an understanding that they can proactively prevent occurrences triggered by human error.

AUDIENCE: The course can accommodate a broad spectrum of participants from various organizational levels and technical specialties. Participants may have varying degrees of experience within DOE and contractor organizations.

Audience: See description.

Goals & Objectives: Upon successful completion of the course, students will:

1) Describe the principles of Human Performance Improvement;

2) Describe the elements that affect safety, quality, and productivity;

3) Describe methods to reduce human error.

Prerequisites: None

Minimum Number of Students: 15

Maximum Number of Students: 30

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SAF-134V Evaluator Training

Delivery Method: Instructor-Led

Length: 24.00 Hours

Description: The program is planned in modules over a nominal three-day period. The training will include group discussions, breakout groups, and practical exercises. The curriculum will include role playing to enhance comprehension of the course material.

This course provides structured supplemental training to DOE/NNSA personnel to present proven methods for planning, conducting, and documenting assessment results. Participants will gain an understanding of assessment tips and techniques and how to use and apply this information to enhance individual observation and interviewing skills.

AUDIENCE: The course can accommodate a broad spectrum of participants from various organizational levels and technical specialties. Participants may have varying degrees of assessment experience and should be involved in conducting assessments. Participants should have knowledge of DOE site/facility and contractor processes and a basic knowledge of applicable regulatory requirements, DOE orders and industry standards.

Audience: See description.

Goals & Objectives: Upon successful completion of the course, students will:

1) Describe the principles of Human Performance Improvement;
2) Describe how to apply DOE Directives to DOE oversight;
3) Analyze data to determine organizational weaknesses;
4) Develop CRADS for an assessment;
5) Describe the process for conducting an assessment;
6) Describe the process for documenting assessment results.

Prerequisites: None

Minimum Number of Students: 15

Maximum Number of Students: 30

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SAF-220 Senior Technical Safety Manager Overview

Delivery Method: Instructor-Led

Length: 40.00 Hours

Description: The STSM Overview is designed for individuals that need to reactivate and retrieve prior knowledge to prepare them for the STSM qualification exam. The Overview will include lecture, discussion, and practice exams with questions similar to those presented on the actual STSM qualification exam. Exam results may be presented to the student's FTCP Agent for qualification determination.

AUDIENCE: The Overview has been designed for three groups of people:

1) Current STSMs who need to re-qualify and would like a refresher course prior to taking their re-qualification exam;

2) Candidates who feel they are ready for their initial STSM qualification and wish to assess their knowledge prior to taking the actual qualification exam;

3) Personnel who are interested or are considering beginning the STSM qualification process and would like an overview of the STSM material in order to explore breadth and depth.

PREREQUISITES: There are no formal prerequisites; however, prospective students are expected to have:

1) A familiarity-level knowledge of all competencies listed in the STSM Qualification Standard and a working-level knowledge of most of the competencies;

2) Completed the General Technical Base (An online version is available through your Online Learning Center) at https://OLC².energy.gov/elms/learner/login.jsp);

3) Read the draft STSM reference guide.

Audience: See description.

Goals & Objectives: Upon completion of this overview, students will have:

1) Performed a comprehensive review of the knowledge requirements contained in the STSM Functional Area Qualification Standard;

2) Assessed their current level of knowledge of the requirements contained in the STSM Functional Area Qualification Standard;

3) Completed practice competency exams.

Prerequisites: None

Minimum Number of Students: 15

Maximum Number of Students: 30

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SAF-221 Senior Technical Safety Manager Applications

Delivery Method: Instructor-Led

Length: 32.00 Hours

Description: This applications course will provide STSM incumbents the ability to refresh and update their skill level of selected performance requirements in DOE-STD-1175-2007, Senior Technical Safety Manager Functional Area Qualification (FAQ) Standard.

PREREQUISITES: Candidates must meet the STSM educational and experience requirements outlined in DOE M 426.1-1A, Federal Technical Capability Manual. New candidates must complete the SAF-220, Senior Technical Safety Manager Overview course.

AUDIENCE: Individuals currently in Senior Technical Safety Manager (STSM) positions who need to re-qualify and for new candidates for STSM positions who are initially qualifying.

Audience: See description.

Goals & Objectives: Upon completion of this course, students will:

1) Demonstrate the ability to perform identified skill requirements contained in the STSM Functional Area Qualification Standard.

Prerequisites: None

Minimum Number of Students: 12

Maximum Number of Students: 16

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SAF-230V Accident Investigation

Delivery Method: Instructor-Led

Length: 40.00 Hours

Description: Course content includes/addresses the requirements identified in DOE O 225.1A, Accident Investigations and information contained in DOE G 225.1A-1, Implementation Guide for Use with DOE O 225.1 Accident Investigations. Students are provided the Accident Investigator Training Course materials and DOE Workbook, Conducting Accident Investigations. Course presentation simulates a Type A investigation. Students are presented with an accident scenario and evidence packets. The class is divided into mock boards. Following lectures on analytical methods and other aspects of an investigation, the mock boards work through the various assignments and present their results to the class. Each of these break-out sessions is facilitated by an instructor who also evaluates individual performance. Personnel interested in attending are encouraged to read DOE O 225.1A, the associated guide, and selected Type A and B reports (currently available on the HSS Web page).

Audience: Site Managers, Accident Investigation Team Members and Safety Professionals

Goals & Objectives:

Prerequisites: None

Minimum Number of Students: 15

Maximum Number of Students: 30

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SAF-233V Advanced Human Performance

Delivery Method: Instructor-Led

Length: 24.00 Hours

Description: The program is planned in modules over a three-day period. The training will include group discussions, exercises, breakout sessions for case studies, and other activities.

This course will provide participants with a working knowledge of proven human performance principles and tools used to reduce human error, and the frequency and severity of occurrences at our facilities. Using case studies, dynamic learning activities and examples from the DOE Complex and other industries the course explains how individual behavior, leader behavior, and organizational processes and values affect safety, quality, and productivity. The purpose of the course is to train participants to understand human performance principles, and how these principles can be applied to proactively prevent serious events.

AUDIENCE: The course can accommodate a broad spectrum of participants from various organizational levels and technical specialties. Participants may have varying degrees of experience within DOE and contractor organizations. The training is intended for those who will be developing, modifying, and/or implementing programs or processes designed to improve organizational performance. Training can be tailored somewhat for specific organizational needs.

Audience: See description.

Goals & Objectives: Upon completion of this course, students will:

1) Describe the principles of Human Performance Improvement;

2) Describe conditions/limitations that can trigger error;

3) Describe the techniques/tools that can be used in the field to reduce error;

4) Describe how different types of defenses or barriers can be used to eliminate latent organizational weaknesses;

5) Describe the leader's role in eliminating latent organizational weaknesses;

6) Describe the elements of a strong safety culture.

Prerequisites: None

Minimum Number of Students: 15

Maximum Number of Students: 30

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SAF-234V Managing Maintenance Error

Delivery Method: Instructor-Led

Length: 32.00 Hours

Description: This course, endorsed by the Department of Energy Office of Nuclear Safety Policy and Standards, teaches the requirements and intent of 10 CFR Part 830, "Nuclear Safety Management," Regulations Subpart B, Section 830.203, and DOE G 424.1-1, "Implementation Guide for Use in Addressing Unreviewed Safety Question Requirements." It presents the purpose of and terminology specific to the USQ process, as well as the key aspects of the USQ process. Using an interactive written case study, the student develops competencies in conducting USQ Applicability Assessment, Screening, and Determinations. This course incorporates the most recent application/implementations for this process from DOE Headquarters.

PREREQUISITES: General familiarity of 10 CFR Part 830.203 and DOE G 424.1-1.

AUDIENCE: DOE and Contractor personnel who are involved with the preparation, review, and approval of the Unreviewed Safety Questions (USQ) process. This may include Facility Management, Safety Analysts, Operations Personnel, DOE Program Management and DOE Facility Representatives.

Audience: See description.

Goals & Objectives: Upon completion of this course, students will:

1) Describe the purpose of a Unreviewed Safety Question (USQ);
2) Describe when the USQ process is applicable;
3) Describe the USQ screening process;
4) Determine a positive or negative USQ;
5) Describe how to request an amendment to the Safety Basis;
6) Describe how to handle a PISA;
7) Describe USQ documentation/reporting requirements.

Prerequisites: None

Minimum Number of Students: 15

Maximum Number of Students: 30

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SAF-242V Unreviewed Safety Question

Delivery Method: Instructor-Led

Length: 32.00 Hours

Description: This course, endorsed by the Department of Energy Office of Nuclear Safety Policy and Standards, teaches the requirements and intent of 10 CFR Part 830, "Nuclear Safety Management," Regulations Subpart B, Section 830.203, and DOE G 424.1-1, "Implementation Guide for Use in Addressing Unreviewed Safety Question Requirements." It presents the purpose of and terminology specific to the USQ process, as well as the key aspects of the USQ process. Using an interactive written case study, the student develops competencies in conducting USQ Applicability Assessment, Screening, and Determinations. This course incorporates the most recent application/implementations for this process from DOE Headquarters.

PREREQUISITES: General familiarity of 10 CFR Part 830.203 and DOE G 424.1-1.

AUDIENCE: DOE and Contractor personnel who are involved with the preparation, review, and approval of the Unreviewed Safety Questions (USQ) process. This may include Facility Management, Safety Analysts, Operations Personnel, DOE Program Management and DOE Facility Representatives.

Audience: See description.

Goals & Objectives: Upon completion of this course, students will:

1) Describe the purpose of a Unreviewed Safety Question (USQ);
2) Describe when the USQ process is applicable;
3) Describe the USQ screening process;
4) Determine a positive or negative USQ;
5) Describe how to request an amendment to the Safety Basis;
6) Describe how to handle a PISA;
7) Describe USQ documentation/reporting requirements.

Prerequisites: None

Minimum Number of Students: 15

Maximum Number of Students: 30

SAF-243V Managing Maintenance Error

Delivery Method: Other

Length: 12.00 Hours

Description: The program is planned in modules over a one and one-half day period. Day one provides a series of training modules, including group discussions and exercises. The second day is intended as a working session with facility personnel to develop an approach to implement specific HP tools locally.

Many high technology industries such as medical, nuclear power, airline, and the military have adopted human performance improvement strategies designed to reduce human error and strengthen their capabilities to perform at a higher level. This course addresses the application of these principles to maintenance error and its management. It is based on extensive scientific research gleaned from experiences in maintenance organizations. It describes what maintenance organizations can do to reduce the number of human errors and to mitigate the consequences. Participants will be provided steps that maintenance personnel, supervision, and management can take to improve their safety, quality, and productivity.

PREREQUISITES: Previous HP training is useful but is NOT REQUIRED.

AUDIENCE: The course can accommodate a broad spectrum of participants from various organizational levels and technical specialties. Course materials are designed for personnel in maintenance organizations, their supervisors, managers, and DOE counterparts. Training can be tailored somewhat for specific organizational needs.

Audience: See description.

Goals & Objectives: Upon completion of this course, students will:

1) Describe the basics of human performance;

2) Describe accidents and error prevention;

3) Describe organizational measures for managing error;

4) Describe safety culture.

Prerequisites: None

Minimum Number of Students: 15

Maximum Number of Students: 30

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SAF-250 Protective Force Safety Fundamentals

Delivery Method: Instructor-Led

Length: 40.00 Hours

Description: This course was developed for Safety, Health and Environmental professionals who are about to become protective force safety personnel. The course will cover - Analyzing hazards - Developing control measures - Complying with applicable safety, health and environmental regulations that specifically concern Protective Forces.

AUDIENCE: This course is for new safety personnel assigned protective forces oversight responsibilities. The course will also cover how to effectively interact with other protective force personnel. The target audience consists of DOE Safety Personnel and Professional Contractors. These persons are considered safety professionals and will possess background knowledge of safety in OSHA, Industrial or Nuclear Safety, acquired in a more industrial setting. This course will assist these safety professionals in transferring their expertise to the Protective Force setting.

Audience: See description.

Goals & Objectives: Upon completion of this course, new Protective Force Safety personnel will be able to:

1) Understand mission and risks associated with protective force;
2) Understand the scope of pro force deployment and federal agent operations;
3) Understand how to balance realistic training and safety;
4) Understand how range operations support training and mission requirements;
5) Understand how to balance realism and safety performance testing;
6) Understand DOE requirements for identifying, reporting and investigating incidents.

Prerequisites: None

Minimum Number of Students: 15

Maximum Number of Students: 30

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SAF-261V Conduct of Operations

Delivery Method: Instructor-Led

Length: 32.00 Hours

Description: This interactive course teaches the students the application of those principles associated with a formal operating environment as enveloped by DOE Order 5480.9, Conduct of Operations Requirements for DOE Facilities, and the DOE Standards titled, Guides to Good Practices for Conduct of Operations. The students will acquire a detailed understanding of the importance for applying "best practices" for conducting both operations and field oversight functions. They will analyze and discuss several video and written case studies from several industries. The instructors will facilitate these discussions to help the class derive relevant approaches and solutions, as well as show practical application to their work environment. Each of the eighteen chapters to DOE Order 5480.19 will be addressed in detail, along with several topics that enhance oversight techniques. This instruction includes a practical exercise (walk through observation techniques) that applies theory to practice followed by a Lessons Learned discussion.

AUDIENCE: DOE/NNSA and Contractor personnel who require a working-level knowledge of Conduct of Operations. This may include those pursuing DOE/NNSA qualification as Senior Technical Safety Manager (STSM) or Contractor management and operations supervisors.

Audience: See description.

Goals & Objectives: Upon completion of this course, students will:

1) Describe chapters 1-18 of DOE O 5480.19, Conduct of Operations Requirements for DOE Facilities;

2) Describe the roles and responsibilities of DOE/NNSA and contractor line managers for conduct of operations;

3) Describe conduct of operations procedures;

4) Describe routine operating practices;

5) Describe lockout-tagout procedures.

Prerequisites: None

Minimum Number of Students: 15

Maximum Number of Students: 20

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SAF-270 Safety System Oversight Duties and Responsibilities

Delivery Method: Instructor-Led

Length: 32.00 Hours

Description: This Safety System Oversight Duties and Responsibilities course provides training for technical personnel responsible for safety system oversight. The course presents and discusses the overall DOE/NNSA requirements, expectations, basis, techniques, and guidance involving the roles and responsibilities for oversight of safety systems. The course also emphasizes the interfaces and working relationships between SSO personnel and other personnel involved in safety system oversight. Using short exercises and activities at the end of each module, the course presents and describes methods for accomplishing safety system oversight. During each exercise, training staff experienced in performing safety system oversight provide guidance and coaching.

NOTE: A separate course, Safety System Oversight Assessment, emphasizes SSO assessment duties.

PREREQUISITES: There are no NTC-specific prerequisites, though prospective students are expected to meet or exceed DOE entry-level requirements for Safety System Oversight personnel and must have the technical education and expertise needed to perform their duties, including completion of the General Technical Base Qualification Standard and one Functional Area Qualification. Students are expected to have a working-level knowledge of the facility-specific safety systems to which they have been assigned and the ability to provide effective oversight and formal assessments of these safety systems. Students are also expected to have a basic understanding of the requirements of nuclear and facility safety.

RECOMMENDATIONS: Although this is an intermediate-level course, students should have the following to ensure course success:

1) A technical degree (or equivalent);

2) Current or pending qualifications according to a DOE technical position standard;

3) Knowledge of Safety Basis, Design Basis, Authorization Basis, Unreviewed Safety Question, Technical Safety Requirements, and Documented Safety Analysis.

Audience: See description.

Goals & Objectives: Upon successful completion of the course, students will:

1) Identify SSO duties and responsibilities;

2) Identify the interface between the SSO and other personnel involved in safety system oversight;

3) Identify contractor requirements for safety system oversight;

4) Develop performance-based issues;

5) Explain how to review the contractor system health status;

6) Explain how to conduct periodic evaluations of system configuration;

7) Explain how to evaluate the material condition of the systems and components;

8) Explain how to evaluate the reliability of system functions;

9) Perform an exercise review of contractor response to system abnormalities;

10) Perform an exercise review of the contractor system engineer program;

11) Be able to plan, conduct, and report assessments;

12) Be able to determine funding and resources for the safety system.

Prerequisites: None

Minimum Number of Students: 15

Maximum Number of Students: 30

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SAF-271 Safety System Oversight Assessments

Delivery Method: Instructor-Led

Length: 24.00 Hours

Description: The course will provide training on planning, conducting and reporting assessments to provide competence in performing Duty 3 of DOE M 426.1-1A, Federal Technical Capability Manual.

AUDIENCE: DOE technical personnel who are assigned the duties and responsibilities of safety system oversight. These personnel are highly experienced and highly qualified in the technical aspects of their assigned safety systems.

Audience: See description.

Goals & Objectives: Upon completion of the course students will understand the role of assessments in the Safety System Oversight (SSO) process.

Prerequisites: None

Minimum Number of Students: 10

Maximum Number of Students: 24

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SAF-340V Nuclear Executive Leadership Training

Delivery Method: Instructor-Led

Length: 40.00 Hours

Description: The program is presented in modules over a nominal five-day period, and is conducted as an in-residence program. The training includes group discussions, guest speakers, breakout groups, and case studies. The curriculum includes testing to verify comprehension of the material.

AUDIENCE: NOMINATION ONLY. The target audience includes Managers and Deputy Managers from the Site Offices and Senior Managers from DOE and NNSA Headquarters. Attendees should be qualified as Senior Technical Safety Manager or possess the equivalent competencies. Course participants are selected by their respective Assistant Secretary or the NNSA Principal Deputy Administrator.

Audience: See description.

Goals & Objectives: Provide structured supplemental training to DOE/NNSA senior personnel to improve their capability to fulfill safety and leadership responsibilities within the Department's defense nuclear complex. Successful completion satisfies the minimum requirements to support delegation of safety responsibilities as described in the Deputy Secretary Energy's memorandum, Delegation of Safety Authorities, dated December 27, 2005.

Prerequisites: None

Minimum Number of Students: 15

Maximum Number of Students: 30

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SAF-380 DOE Oversight Awareness

Delivery Method: Instructor-Led

Length: 8.00 Hours

Description: The DOE Oversight Awareness course covers the requirements, as defined in DOE O 226.1A, for federal personnel who conduct oversight. The course provides an introduction to oversight, how the new model contract clauses drive methods of oversight, an introduction to the requirements and elements of a Contractor Assurance System (CAS) and introduces the students to an oversight process flow model.

AUDIENCE: Federal employees who have oversight responsibilities. This includes employees new to oversight as well as senior managers who would like a how-to or refresher course in oversight.

Audience: See description.

Goals & Objectives: At the completion of the course, students will demonstrate a familiarity level knowledge of the oversight requirements and processes used by the DOE to conduct oversight of M&O contractors.

Upon successful completion of the course, students will:

1) Explain the concept of oversight;

2) Describe the H (Special Contract Requirements) clauses of a typical model contract;

3) Discuss the elements of a typical Contractor Assurance System per DOE O 226.1A;

4) Describe a DOE oversight model.

Prerequisites: None

Minimum Number of Students: 15

Maximum Number of Students: 30

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SAF-381 DOE Oversight Implementation

Delivery Method: Instructor-Led

Length: 32.00 Hours

Description: The course content is based on the oversight model developed, modified and vetted by participants of SAF-380, DOE Oversight Awareness course. This course will contain lessons that will go into detail regarding the scope and methods that can be used by the students to implement the oversight model.

AUDIENCE: Site Office/Field Office supervisors and managers with responsibilities for contractor performance oversight.

1) Site Office/Field Office personnel responsible for conducting oversight such as Facility representatives, health and safety subject matter experts, and project manager/engineers;

2) DOE program/project managers within HQ program offices that have primary responsibility for establishing and directing, through their respective field elements.

Audience: See description.

Goals & Objectives: The objectives for this course are:

1) Describe the oversight model;

2) Determine oversight framework;

3) Identify required and non-required oversight activities;

4) Determine Contractor Assurance System confidence;

5) Determine program health;

6) Determine oversight activity ranking;

7) Develop an Integrated Oversight Plan;

8) Conduct routine assessments of facilities, systems, operations, and programs;

9) Conduct operational awareness activities;

10) Describe the use of a Data Management System;

11) Analyze and trend data;

12) Conduct routine monitoring of contractor work performance;

13) Determine effectiveness of a Contractor Assurance System;

14) Identify issues;

15) Identify and disseminate lessons learned;

16) Describe how oversight results are used in contract management;

17) Conduct self-assessments of DOE line management functions and performance.

Prerequisites: SAF-380

Minimum Number of Students: 15

Maximum Number of Students: 24

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SAF-701 Safety Basis Overview

Delivery Method: Instructor-Led

Length: 16.00 Hours

Description: This course is designed for individuals involved in safety analysis and the development, implementation, and maintenance of Safety Basis documents for DOE activities, facilities, and sites.

AUDIENCE: Familiarize new Safety Analysts with safety basis concepts, principles, and process implemented throughout the DOE.

Audience: See description.

Goals & Objectives: Upon completion of this course, students will:

1) Describe the significant legislation leading to the current state of Safety Basis requirements and oversight of DOE hazardous facilities, processes, and activities;

2) Describe the Safety Basis development process;

3) Describe the Hazard Analysis process as it relates to Safety Basis development;

4) Describe the Facility Hazard Categorization process as it relates to Safety Basis development;

5) Describe the hazard control development process for a DOE facility Safety Basis;

6) Describe the Safety Basis approval process.

Prerequisites: None

Minimum Number of Students: 15

Maximum Number of Students: 30