

 **Dade Moeller**

Training Academy

Specializing in Radiation and Occupational Safety Training

Teaming with:

EnergX **FLUOR**

 **LUDLUM**
MEASUREMENTS, INC.



Radiation Worker • Nuclear Medicine • Safety Management • Homeland Security
Industrial Hygiene, Worker Safety & Health • Professional Development

2013 COURSE CATALOG

About Dade Moeller...

We are a company of 270 professionals (and growing!), providing a full range of services to more than 135 federal, state, and commercial clients. We specialize in nuclear and radiological services, worker safety and health, and environmental protection. We are well known for our technical excellence, our commitment to quality, and our integrity.

What is the Dade Moeller Training Academy?

Our Academy is the training arm of Dade Moeller, and our faculty is made up of some of our best professionals. When they are not teaching in the classroom, our faculty members are working on high-level projects with government and commercial clients. We believe that knowledge and understanding are keys to keeping workers, the public, and the environment safe, and we make sure that our Academy students benefit from our company's current, real-world experience and expertise. See p. 19 for faculty profiles.

How long have you been teaching?

The Academy was founded by Raymond Johnson, MS, PE, CHP, in 1984 and came to be known as the Radiation Safety Academy. It became part of Dade Moeller in 2007. Over the past 28 years, more than 11,400 satisfied people have trained with us!

From Our Students...

"The instructors are great, the atmosphere is fantastic. I left this course with the confidence to run a productive and safe radiation program."

Jen Shafer
Antigua Medical Services

"All-around excellent course! Material was suitable for novice and experienced RSOs alike, and anyone in-between. Instructors and staff fostered an outstanding learning environment, engaged student interaction, and provided a comfortable atmosphere for an exceptional class."

**Student of the Medical Radiation Safety Officer
(MRSO) Course**
September 28, 2012

Where are you located?

We have Training Centers in Gaithersburg, Maryland (Washington, DC, area) and Las Vegas, Nevada. Teaming with EnergyX and Fluor, we also offer courses in Oak Ridge, Tennessee and in Greenville, SC. Additional training sites include Acton, Massachusetts (Boston area), and Richland, Washington. We offer 28 courses online, and if you have a group of people to train, we will come to you! See p. 18 for more information on our locations and p. 22 for our list of online courses.



Why should I choose Dade Moeller Training Academy?

We are well known in the industry for providing high quality training from a faculty of experts — a certificate from Dade Moeller Training Academy means that you were trained by the best of the best. We use practical, hands-on exercises (often with live radioactive sources), our training centers are state-of-the-art, and we offer free refresher training on many courses. We also are accredited by many professional organizations, so most of our courses are eligible for continuing education credits.

How do I register for a class?

Visit our website at www.moellerinc.com/academy to register online, or call us to register by phone at 1-800-871-7930.

2013 Course and Price List

For detailed descriptions of all courses, please visit www.moellerinc.com/academy.

Radiation Safety Officers

Our Most Popular Courses!

- Radiation Safety Officer (see p. 4), 5 Days, \$1,995
- Advanced Radiation Safety Officer (see p. 5), 5 Days, \$1,895
- Medical Radiation Safety Officer (see p. 6), 5 Days, \$1,995

Radiation Safety Managers

- Radiation Safety for Authorized Users and Supervisors (see p. 13), 3 Days, \$1,095
- Auditing and Assessing Radiation Safety Programs (see p. 13), 3 Days, \$1,295
- How to Avoid Radiation Litigation, 2 Days, \$795
- Radiation Regulations, Licensing, Inspections, and Compliance, 3 Days, \$1,095
- Site Characterization, Decontamination, and Decommissioning, 5 Days, \$1,895
- Development of Radiation Protection Program Improvement Plans (see p. 9), 4 Days, \$1,580

Radiation Workers

- DOT, NRC, & IATA Requirements for Shipping Radioactive Material, with Radiation Fundamentals (see p. 7), 2 Days, \$795
- Radiation Instruments Workshop (see p. 11), 5 Days, \$1,895
- X-ray Safety for Industrial, Baggage, Analytical, & Cabinet Machines (see p. 12), 2 Days, \$795
- Radiation Safety Technician (see p. 13), 5 Days, \$1,895
- Basic Radiation Safety for Authorized Users, 1 Day, \$395
- DOE Radiological Worker Training I, 2 Days, \$795
- DOE Radiological Worker Training II, 2 Days, \$795
- Fluoroscopy Safety, 4 Hours, \$275
- Fundamentals of Liquid Scintillation Counting, 2 Days, \$895
- Low-Level Radioactive & Mixed Waste Management, 3 Days, \$1,095
- Naturally Occurring Radioactive Material, 3 Days, \$1,095
- OSHA 8-hour Annual Refresher, 1 Day, \$395
- Radiation Safety Awareness, 1 Day, \$Customized
- Radiation Safety for Operators of Nuclear Gauges, Sealed Source Devices (Portable and Fixed), 2 Days, \$795

Industrial Hygiene, Worker Safety and Health

- Industrial Hygiene Fundamentals for Non-Industrial Hygienists (see p. 8), 5 Days, \$1,495
- NFPA 101® Occupancies Seminar (see p. 8), 5 Days, \$1,495
- Process Safety Management/Risk Management Planning (see p. 9), 4 Days, \$1,195
- Facilities Hazards Assessments and Analysis (see p. 9), 4 Days, \$1,195
- Non-Ionizing Radiation (NIR) Safety (see p. 12), 3 Days, \$1,295
- Safety Culture for Leaders (see p. 14), 1 Day, \$385 (Fluor)

Professional Development

- ABHP, Part 1 Exam Preparation (see p. 10), 5 Days, \$1,895
- ABHP, Part 2 Exam Preparation (see p. 10), 5 Days, \$1,895
- NRRPT Exam Preparation (see p. 10), 5 Days, \$1,895
- Counseling Radiation Workers, 3 Days, \$1,095
- Radiation Risk Communication, 3 Days, \$1,095
- Training for the Radiation Safety Trainer, 3 Days, \$1,095
- Human Performance Improvement (HPI) for Engineers and Knowledge Workers, 1 Day, \$385 (Fluor)
- Six Sigma Green Belt ASQ Exam Prep (see p. 16), 5 Days, \$1,995 (EnergX)
- Six Sigma Black Belt ASQ Exam Prep (see p. 16), 10 Days, \$4,495 (EnergX)
- Project Management Professional (PMP®) Exam Prep (see p. 15), 5 Days, \$2,495 (iPad included) (EnergX)
- Certified Safety Professional (CSP®) & Safety Culture Professional (see p. 16), 5 Days, \$2,495 (EnergX)

Nuclear Medicine

- Nuclear Medicine: Physics and Technology (see p. 13), 1 Day, \$250

Homeland Security

- How to Deal with the Terror of Nuclear Terrorism, 3 Days, \$1,095
- Radiation Safety for Homeland Security and Emergency Responders, 2 Days, \$795
- Radiation Safety and Homeland Security Workshop, 1 and 8 Hours, Call for Pricing

More Courses & Additional Information Available Online!

For detailed course descriptions, sample agendas, testimonials, and registration information, please visit us at www.moellerinc.com/academy.



Visit www.moellerinc.com/academy for all available courses.

Radiation Safety Officer (RSO)

5 Days/40 Hours, \$1,995

- **Who:** Those seeking qualification as a Radiation Safety Officer.

- **What:** Through lectures, hands-on laboratory exercises, and extensive reference materials, this course gives you the technical information and practical experience necessary to ensure that you are well prepared to serve as an RSO and will meet the requirements of the U.S. Nuclear Regulatory Commission, Agreement States, and the U.S. Department of Transportation. During the week, you will complete 32 hours of instruction in the following required subjects: radiation fundamentals, health risks, regulations, licensing, enforcement, dosimetry, instruments, statistics, quality assurance, DOT shipment and receipt of radioactive materials, program management, record-keeping, emergency response, and preparing for inspections. You also will complete 8 or more hours from our selection of elective subjects shown on the adjacent Course Agenda.

- **Includes:** Free online training course, "Fundamentals of Radiation Safety;" free one-time refresher training; comprehensive training manual; data CD of supplemental reference material, including forms for surveying labs and posted rooms, sample spreadsheets for maintaining waste disposal records, and all 21 volumes of US NRC NUREG 1556; breakfast and lunch each day; certificate of completion.

- **Credits:** AAHP (32 CE credits); ABIH (6.68–7.35 CM points); ARRT & SNMTS (max 42.5 VOICE credits); WSO-CSS Radiation (1.20 CEU credits).

- **Did You Know...?** This is our 23rd year offering RSO training! Join the more than 2,500 RSOs who have graduated from our Academy with rave reviews!

Optional Add-on Module: DOT HAZMAT Certification

(additional \$200 fee)

- Complete an additional 4 hours on shipping radioactive materials, as required by DOT (49 CFR 172 Subpart H) and NRC (10 CFR 71.5 and 10 CFR 20.1906). This module concludes with an examination, successful completion of which will earn you an additional certificate valid for 3 years.

Optional Add-on Module: Liquid Scintillation Counting

(additional \$200 fee; available in Gaithersburg and Oak Ridge)

- Complete an additional 4 hours on the fundamentals of liquid scintillation counting (LSC). Gain a basic understanding of the principles of LSC for analysis of many types of samples.

Content Overview

- Introductions and Content Overview
- Radiation and radioactivity, radioactive decay
- Radiation units, sources of radiation
- Health effects
- Training for the radiation safety trainer (optional)*

- Radiation protection standards, 10 CFR Parts 19 & 20
- Essential highlights of 10 CFR Parts 2, 30, 31, 33
- License application and amendments
- External radiation protection and shielding
- Internal radiation protection and contamination control*
- Sealed source and industrial gauges*
- Math review and problem solving (optional)*

- Radiation survey instruments
- Instruments lab, applications & troubleshooting, leak tests
- Emergency response
- Radiation safety surveys*
- Security of radioactive sources — increased controls*
- Hands-on laboratory survey and PPE exercise (optional)*

- Interpreting radiation measurements and quality assurance
- Overview of radioactive material transportation and package receiving
- Developing a training program
- Practical record-keeping for RSOs
- X-ray safety*
- Radioactive waste management, mixed wastes, waste manifests
- Legal implications: radiation litigation
- First steps as a new RSO
- Radiation protection program management, preparing for regulatory inspections
- Presentation of certificates and adjourn 40-hour RSO course

Free continental breakfast and lunch provided daily

* Elective choices

From Our Students...

"Professional, practical, entertaining, and relevant information for both beginner and experienced radiation workers. A one-stop shopping experience for all your radiation training needs."

Thomas Dugas
EADS North America, Inc.

"My RSO wanted me to get refresher training, and the Dade Moeller Training Academy was their first choice (and not because it was free). I could've taken a course in St. Louis, but I chose to drive to Maryland for this course. Great job in 2006 and still today, great job!"

Roel Villanueva
Decatur Memorial Hospital, Illinois

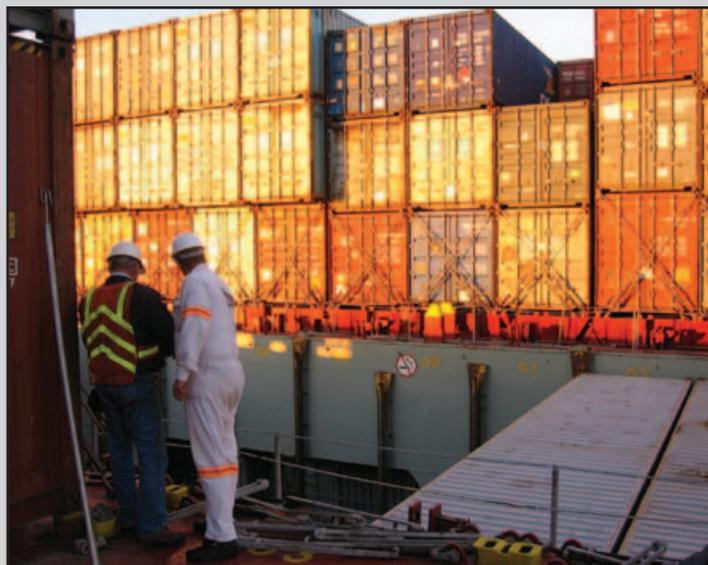
"If you are going to be taking on the position of RSO, then these are the people to show you what you need to know, why you need to know it, and what you need to do with that knowledge. Excellent instructors and course! Any questions you have, they can and will answer them."

Ken Fiorentini
Hess Oil

Advanced Radiation Safety Officer

5 Days, \$1,895

- **Who:** Experienced RSOs, health physicists, and specialists in radiation safety who previously have completed a 40-hour RSO course (or have equivalent training and experience).
- **What:** In this class, you will gain a deeper understanding and increased confidence as an experienced RSO. You will review practical, real-world assessments of radiation safety programs, radiation safety and licensing regulations, risk assessment, probability of causation, and dosimetry based on pertinent reports from ICRP, NCRP, IAEA, IRPA, UNSCEAR, EPA, and BEIR. Other topics include HAZMAT and emergency response, radioactive and mixed waste management, bioassay programs, ALARA programs, DOT shipping and receiving requirements, BEIR reports, risk communication, safety program implementation, review of NUREGs, MARSSIM and decommissioning, dosimetry review, risk assessment, laser safety, and radiation litigation avoidance. You also will become more familiar with radiation detection instrumentation, including troubleshooting, calibration, QA, and data interpretation.
- **Includes:** Free online training course, "Fundamentals of Radiation Safety;" 800+ page Advanced RSO manual; data CD of supplemental reference material, including forms for surveying labs and posted rooms, sample spreadsheets for maintaining waste disposal records, and all 21 volumes of US NRC NUREG 1556; breakfast and lunch each day; certificate of completion.
- **Credits:** AAHP (32 CE credits); ABIH (6.01 CM points); WSO-CSS Radiation (1.20 CEU credits).
- **Did You Know...?** We encourage a casual, interactive atmosphere so that you can benefit from the real-life experiences of the instructors and your classmates.



Medical Radiation Safety Officer (MRSO)

5 Days, \$1,995



- **Who:** Those managing a radiation safety program or working with radioactive material and/or radiation-producing machines in a medical environment.
- **What:** This course will help keep you current with the radiation safety aspects of the many new techniques related to using ionizing radiation in the continually evolving medical field. Gain a practical understanding of the regulations governing the safe use of radiation-emitting machines and radioactive materials, as well as responsibilities for managing radiation safety in a hospital. Discuss real-world experiences on numerous relevant topics included in the agenda at right. Learn how to implement a successful, compliant radiation safety program that will withstand rigorous inspection.
- **Includes:** Free one-time refresher training; comprehensive Medical Radiation Safety Manual; data CD of supplemental reference material, including forms for surveying labs and posted rooms, sample spreadsheets for maintaining waste disposal records, and all 21 volumes of US NRC NUREG 1556; breakfast and lunch each day; certificate of completion.
- **Credits:** CAMPEP (up to 36 CE credits, advance approval required); AAHP (32 CE credits); ABIH (6.01–6.68 CM points); ARRT & SNMTS (40.5 VOICE credits); WSO-CSS Radiation (1.20 CEU credits); MDCB (36 units dosimetry credits).
- **Did You Know...?** Due to the widespread use of radiation-producing machines and radioactive materials in medicine, the National Council on Radiation Protection and Measurements now reports that the average person in the U.S. receives approximately the same dose from medical radiation as from natural background radiation.



Medical RSO Content Overview

- Role of the RSO in a Medical Setting
- Health Effects
- Radiation Protection Standards, Highlights of 10 CFR Part 19 and 20
- Managing a Personal Monitoring Program
- Developing a Training Program-Medical
- Medical Use Licensing, 10 CFR 35
- Security of Radioactive Materials and Increased Controls
- Medical Radioactive Waste Management, Mixed Waste, Waste Manifests
- Principles of Radiation Protection (formally External and Internal)
- Shipping and Receipt of Radioactive Materials for Medical Facilities
- Radiation Safety in PET/CT Facilities
- Image Gently
- Sealed sources in Medicine, Blood Bank Irradiators and Leak Tests
- Radiation Safety Concerns with Fluoroscopy: Minimizing Doses
- X-Ray Registration and Inspections
- Safety Culture
- Spills, Patient Care and Hospital Emergency Response
- Managing 131 I Diagnostic, Therapeutic Procedures and Release of Patients
- Radiation Safety Instruments, Laboratory Instruments, Dose Calibrators
- Accreditation
- Instrument Applications and Troubleshooting
- Radiation Safety Program Management, Committees
- Radiation Safety Surveys, Inspections, Audits, Notice of Violations in Medical Facilities

Optional Add-on Module: DOT HAZMAT Certification

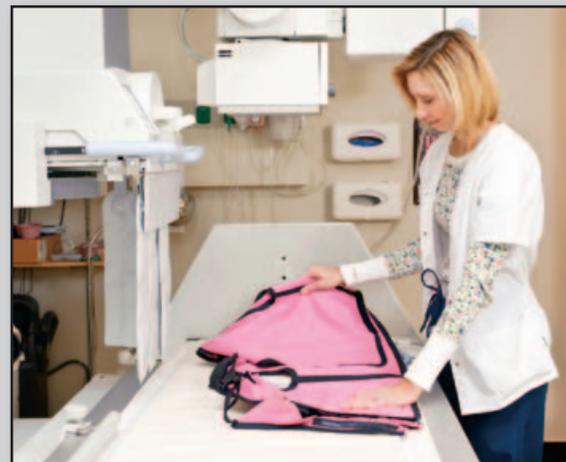
(additional \$200 fee)

- See RSO Course description on page 4 for more information.

Optional Add-on Module: Liquid Scintillation Counting

(additional \$200 fee; available in Gaithersburg only)

- See RSO Course description on page 4 for more information.



DOT, NRC, & IATA Requirements for Shipping Radioactive Material, with Radiation Fundamentals

2 Days, \$795

- **Who:** Those involved in preparing or offering packages containing radioactive material for shipment.
- **What:** Meet the training requirements of the U.S. Department of Transportation (DOT) as specified by 49 CFR 172 Subpart H, the U.S. Nuclear Regulatory Commission (NRC) as specified by 10 CFR 71.5, and the International Air Transport Association (IATA). Learn to identify quantities of radioactive material that are regulated as hazardous materials when offered for shipment. Review the requirements for shipping Type A packages, excepted packages containing limited quantities, radioactive instruments or articles, or those qualifying as Empty, and packages containing low-specific activity materials and surface contaminated objects. This course includes a written exam. Upon successful completion, you will receive a certificate you can use to document your training for employer certification, as required by 49 CFR 172.704(d).
- **Includes:** Free online training course, "Hazardous Materials Transportation Security Awareness;" training manual; copies of pertinent shipping regulations and regulatory guides; checklists to assist in maintaining compliance with all regulatory requirements; breakfast and lunch each day; certificate of completion.
- **Credits:** AAHP (32 CE credits); ABIH (2.67 CM points); ARRT & SNMTS (12 CEH credits).
- **Did You Know...?** We also offer a 1 ½-day course that meets DOT, NRC, and IATA training requirements for those who previously have completed training on shipping radioactive material or already are knowledgeable in the fundamentals of radiation, radioactivity, and radiation safety.

Content Overview

Introduction to Transportation of Radioactive Material

- Risk perceptions
- Sources of radiation
- Atomic structure and radioactivity
- Radiation health risks
- Review of DOT training materials
- Applicability of DOT regulations, DOT training regulations, general awareness and familiarization video
- Definitions, special form, normal form, categories of radioactive material
- Radiation detection instruments

Shipping Radioactive Material

- NRC regulations, general requirements, radiation limits, quality control, Type A packages, Type B packages
- HAZMAT table and hazard communication (marking, labeling, shipping papers, emergency response, placarding)
- Special classifications (limited quantities, instrument and articles, empty packages, low specific activity, surface contaminated objects)
- Conveyance by highway, carrier requirements, registration, incident reporting, package receipt and inspection, low-level radioactive waste
- Questions and answers, course critique
- Written exam
- Review of exam, presentation of certificates, adjourn
- Several class exercises performed during course to help illustrate and reinforce understanding of the material

Free continental breakfast and lunch provided daily



Industrial Hygiene Fundamentals for Non-Industrial Hygienists

5 Days, \$1,495

- **Who:** Safety, health, and environmental professionals or managers who have Industrial Hygiene responsibilities but limited training or experience.
- **What:** This class will familiarize you with the fundamentals of Industrial Hygiene and Industrial Safety. Gain hands-on knowledge to recognize existing and potential chemical, physical, ergonomic, and biological hazards in your facility. Understand how to protect your employees using general engineering and administrative processes. Learn to conduct your own Industrial Hygiene walk-through survey and know when to call a Certified Industrial Hygienist.
- **Includes:** *Fundamentals of Industrial Hygiene* (5th ed.); *Fundamentals of Industrial Hygiene Study Guide*; *NIOSH Pocket Guide to Chemical Hazards*; breakfast and lunch each day; certificate of completion.
- **Credits:** Pending, contact Registrar.
- **Did You Know...?** In 1997, the National Safety Council wrote, "The focus is now on integrating safety, health, and environmental management throughout the business strategy." Since then, many radiation protection professionals have become responsible for all aspects of Health Physics, Industrial Hygiene, and Industrial Safety.

Content Overview

- Overview, Common objectives of HP/IH/IS, Review of hazard types, Common aspects of HP/IH/IS: Regulation/licensing, engineered protection, administrative protection, PPE
- Common aspects of HP/IH/IS (continued): Recognition and evaluation of hazards, emergency response, waste management, transportation, program management
- Why are there differences in HP/IH/IS: Diversity and nature of hazards, nature of risks presented, mechanisms of damage/dosimetry, history of regulatory approach, present regulations, recognition of hazards, risk assessment approach, available protection methods
- Differences in HP/IH/IS: Sources of radiation, radiological decay, radiation interaction mechanisms, units, chemical/biological effects, recognition of hazards, regulations/licensing, engineered protection, administrative protection, PPE
- Differences in HP/IH/IS (continued): Evaluation of hazards, waste management, transportation, emergency response, program management

NFPA 101® Life Safety Code

5 Days, \$1,495

- **Who:** Those charged with reviewing their facility's compliance with the National Fire Protection Association's (NFPA) *Life Safety Code*, and/or evaluating new facilities or uses of current space.
- **What:** This hands-on course will give you the tools you need to apply the extensive *NFPA 101® Life Safety Code* with confidence. Gain a thorough understanding of *NFPA 101®* concepts and requirements for fire and life safety and their application to selected occupancies. Learn to prevent — or identify and correct — safety issues that could cause problems for your business.
- **Includes:** *NFPA 101®: Life Safety Code* (2012 ed.); student manual; breakfast and lunch each day; certificate of completion.
- **Credits:** Pending, contact Registrar.
- **Did You Know...?** Even a seemingly minor *Life Safety Code* violation can have devastating consequences!



Process Safety Management/Risk Management Planning

4 Days, \$1,195

- **Who:** Safety, maintenance, operations, and environmental professionals who have a system regulated by OSHA's Process Safety Management Rule (29 CFR 1910.129) or EPA's Risk Management Programs Rule.
- **What:** This course provides an overview of the concepts and regulatory requirements of Process Safety Management. Learn how to manage process safety to achieve regulatory compliance and operational excellence. Understand key OSHA interpretations, citations, and common deficiencies, and be able to integrate Process Safety Management into your overall site safety management system. Learn the impact of EPA's Risk Management Programs Rule on process safety, as well as what can be expected from EPA in Process Safety Management enforcement.
- **Includes:** Student manual; outline of a model PSM/RMP program; breakfast and lunch each day; certificate of completion.
- **Credits:** Pending, contact Registrar.
- **Did You Know...?** We can come to you! Training multiple people on-site helps ensure compliance and gives you the benefit of receiving immediate, real-time data on your facility.

Development of Radiation Protection Program Improvement Plans

4 Days, \$1,580

As the saying goes, "There is always room for improvement". However, there are few opportunities to learn how to rigorously evaluate our programs in an unbiased and systematic way, to set improvement goals and develop a formal program improvement plan. The objective of this course is to do just that.

The curriculum is organized, after the careful examination of a case study, to provide time to assist the class participants in starting to apply the lessons learned in the class to their own programs.

The course is designed to be of use to a spectrum of individuals involved in the management, oversight and, implementation of a radiation protection program, including RSOs to Program Directors. Intimate familiarity with a radiation protection program and access to the program's documentation are desirable to achieve the maximum value from the last day's workshop.

Included Benefits:

- Comprehensive training manual

Course Credits Offered

- AAHP 32 CE Credits
- ABIH 4.76 CM Points

Content Overview

Program Evaluation

- Introduction and Course Overview
- Evaluation Criteria
- Do You Have A Program?
- Is The Program Communicated?
- Is The Program Implemented?
- How Do You Know?

Program Improvement Plans

- Program Improvement Plans
- USA Regulatory
- Integrated Safety Management System
- International Standards Organization

Case Study

- Desired Program Goals (By Program Element)
- Existing Impediments to Achieving Goals (By Program Element)
- Delta Analysis of Evaluation Findings Vs. Desired Goals, Addressing Impediments
- Improvement Strategy (By Program Element)
- Improvement Action Plan (By Program Element)
- Assignment of Responsibility for Improvement Actions
- Improvement Schedule (By Program Element)
- Action Plan Project Management

Program Plan Development Workshop

- Student Improvement Plan Development Exercise
- Student Improvement Plan Exercise Reports
- Course Evaluation and Presentation of Certificates

Free Continental Breakfast and Lunch Provided Daily

Facilities Hazards Assessments and Analysis

4 Days, \$1,195

- **Who:** Safety, maintenance, operations, and environmental professionals and supervisors with responsibility for the identification and mitigation of hazards at their work site.



- **What:** This course presents key issues for conducting and documenting effective facilities hazards assessments, audits, and analyses. Learn how to set objectives, plan, and design audits, as well as conduct audits, write findings, and assess recommendations. Understand OSHA's policy actions on hazards assessments and how they may affect your audits and other compliance management issues.
- **Includes:** Student manual; breakfast and lunch each day; certificate of completion.
- **Credits:** Pending, contact Registrar.
- **Did You Know...?** Many of OSHA's and EPA's hazards assessment findings (and fines!) can be identified before the regulators show up!



ABHP and NRRPT Examination Preparation

Three 5-Day Courses, \$1,895 (per course)

- **Who:** Those intending to take Part 1 and/or Part 2 of the American Board of Health Physics (ABHP) exam to become a Certified Health Physicist, or the National Registry of Radiation Protection Technologists (NRRPT) Registration Exam.
- **What:** This set of three preparation courses was previously one course that has been expanded to improve your preparation for each of these examinations. Each is an intensive review with problem solving sessions on questions with technical content similar to the specific exam that you will take to become a certified radiation safety professional. We specifically focused each course to provide you with the best preparation experience for your exam. In each course, problem solving will be for the type and complexity of questions that will be on your exam.
- **Includes:** *Introduction to Health Physics* (4th ed.) by Dr. Herman Cember; *The Health Physics Solutions Manual: Introduction to Health Physics Problems Made Easy*; sample exam questions; comprehensive training manual; breakfast and lunch each day and a certificate of completion.
- **Credits:** American Academy of Health Physics (32 CE credits); American Board of Industrial Hygiene (6.01 CM points for ABHP or NRRP courses).
- **Did You Know...?** Each class is taught by instructors with the certification that you strive to achieve and class size is limited to ensure maximum attention to your specific needs.



Content Overview

The agenda for each course will differ based on the type of exam.

ABHP Part 1 preparation will include lecture and problem solving sessions. A review of each problem set will allow you to recognize weaknesses in understanding and help you to gain confidence to take and pass the exam. Hundreds of problems in several focused and general collections will be provided.

ABHP Part 2 preparation will involve class problem solving and test taking. Lectures in this course will be provided based on the needs and requests of the students. All available Part 2 exams and solutions will be provided and as many as possible discussed.

NRRPT exam preparation will include lecture and problem solving sessions. A review of each problem set will allow you to recognize weaknesses in understanding and help you to gain confidence to take and pass the exam. Hundreds of problems in several focused and general collections will be provided.

From Our Students...

"This course is fantastic! It not only prepared me for the exam, but gave me the confidence that I was going to be on track for my own future studies. The instructors are incredibly knowledgeable and helpful. Totally worth the time and cost!"

Raja Mena
National Security Technologies
June 22, 2012

Radiation Instruments Workshop

5 Days, \$1,895

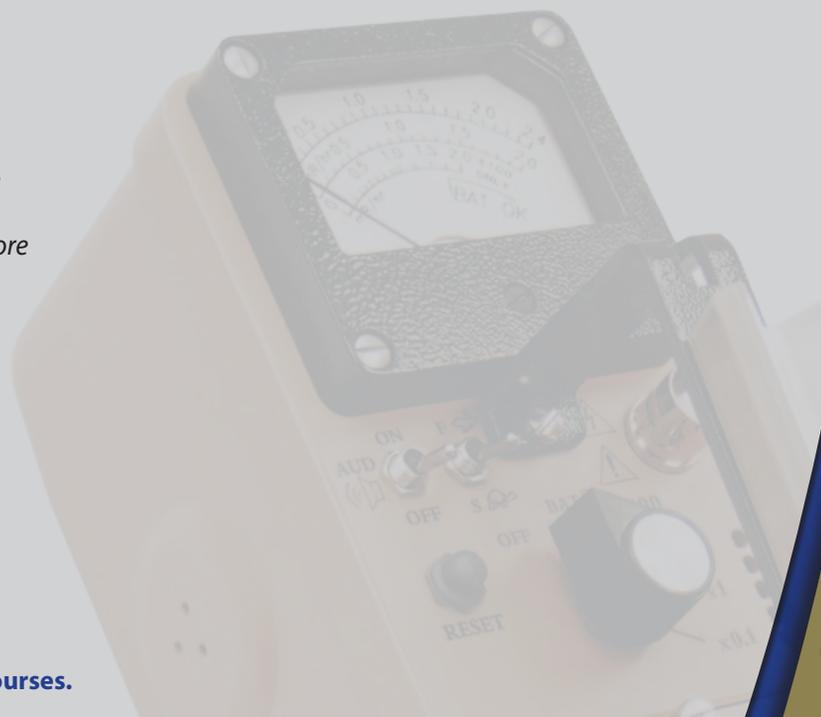
- **Who:** Anyone who makes or interprets radiation measurements and relies on such measurements for important decisions.
- **What:** Gain hands-on experience with a variety of portable and laboratory radiation instruments. Learn how to choose the best instruments for your needs, how to set up and ensure that instruments are working properly, how to use each instrument properly and appropriately, and how to calibrate each instrument. Also learn how to interpret radiation measurements, ensure quality, and troubleshoot instrument failures. Most importantly, you will learn the many ways that radiation instruments can be misleading. Portable instruments covered include ion chambers, proportional counters, GM meters, and a variety of NaI, plastic, and ZnS scintillation detectors. Laboratory instruments include proportional counters, NaI and solid state detectors, and liquid scintillation counters.
- **Includes:** Comprehensive training manual; transportation to UNLV analytical lab; breakfast and lunch each day; certificate of completion.
- **Credits:** AAHP (32 CE credits); ABIH (6.01 CM points); WSO-CSS Radiation (1.20 CEU credits).
- **Did You Know...?** Through our partnership with the University of Nevada, Las Vegas, Department of Health Physics, you will gain hands-on experience at the University's state-of-the-art analytical lab*. We provide free transportation to the lab, which is less than 10 minutes away from our Training Center. See p. 17 for more on our partnership with UNLV.

* Instrument Workshop Classes held at the Oak Ridge Training Center are not associated with UNLV.



Content Overview

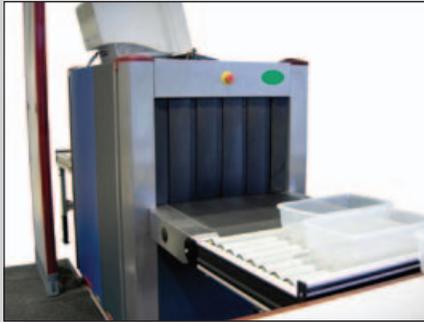
- Introduction and Content Overview
 - Radiation and radioactivity, radiation decay
 - Introduction to principles of radiation measurements: portable instruments, gas ionization, scintillation (NaI, ZnS, plastic)
 - Introduction to principles continued
 - Hands-on exposure measurements
 - Principles of gamma spectroscopy
 - Gas proportional detectors, operation
 - Gamma spectroscopy laboratory exercises, peak collection and identification, resolution and FWHM calculation
 - Hands-on exercises: surveys with gas proportional detectors; exposure meter calibrations
 - Principles of liquid scintillation counting, quench, LSC calibration and quench correction
 - Liquid scintillation counting laboratory, MDA, x2, sample preparation (smears, bioassays), analysis, reporting, programming your LSC
 - Interpreting radiation measurements, radiation statistics
 - Quality assurance programs
 - Radiation surveys and sampling
 - Decommissioning surveys and MARSSIM instrumentation requirements
 - Choosing the right instrument, operational checks, troubleshooting
 - Instrument calibration exercise
 - Conducting and documenting radiation survey measurements
 - Life in the real world; situational problems (research laboratories, gauges, emergency response, security issues)
 - Course summary and evaluation
 - Presentation of certificates and adjourn
- Free continental breakfast and lunch provided daily



X-ray Safety for Industrial, Baggage, Analytical, and Cabinet Machines

2 Days, \$795

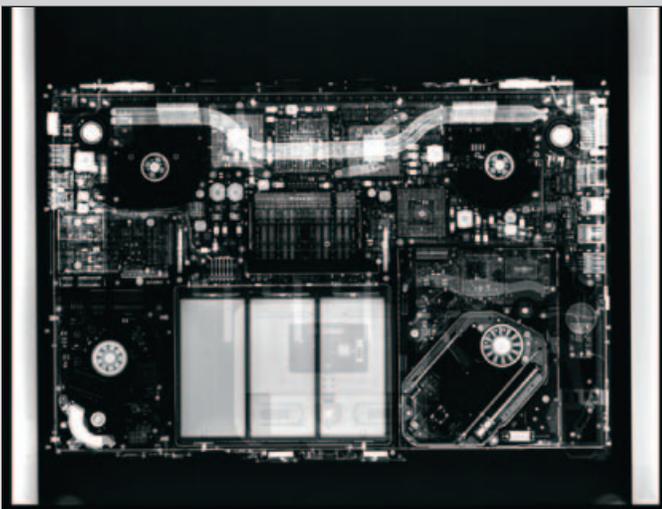
- **Who:** Those who are responsible for X-ray safety or who work with open or closed beam (non-medical) X-ray machines.
- **What:** This course provides a thorough review of the fundamentals of radiation safety and focuses on the specifics of X-ray production, interactions and health effects of X-rays, and state and federal regulatory requirements for X-ray safety. Gain a comprehensive and practical understanding of dose limits, radiation instruments, operating and emergency response procedures, causes of accidents, personnel monitoring, shielding, safety controls and postings, fail-safe interlocks, shutter controls, warning signals and devices, and responsibilities for X-ray safety. You also will learn hands-on how to conduct an X-ray safety survey. Machines covered in this class include: baggage (or product) inspection systems, industrial X-ray systems, cabinet X-ray systems, analytical machines, and density and thickness gauges.
- **Includes:** Comprehensive training manual; breakfast and lunch each day; certificate of completion.
- **Credits:** AAHP (16 CE credits); ABIH (2.67 CM points).
- **Did You Know...?** If you would like the benefit of training on your own machines, we can come to you!



NEW! Non-Ionizing Radiation (NIR) Safety

3 Days, \$1,295

- **Who:** ES&H professionals who are responsible for safety programs designed to protect workers and the public from non-ionizing radiation hazards.
- **What:** This course will provide you with the information needed to identify, assess, and control non-ionizing radiation hazards. Topics will include relevant standards and safety program elements associated with radiofrequency/microwave emitters, static and extremely low frequency (ELF) fields, ultraviolet light sources, and lasers. In addition, the variety of measurement equipment used to assess non-ionizing radiation levels – and the standards for proper use - will be discussed. Finally, examples of real-world NIR problems and solutions will be presented for the different types of NIR sources covered by the agenda.
- **Includes:** Comprehensive training manual, relevant IEEE and ANSI standards; breakfast and lunch each day; certificate of completion
- **Credits:** Pending, contact Registrar
- **Did You Know...?** Enforcement of consensus NIR standards can fall under OSHA's General Duty clause.



X-ray of a laptop computer.

From Our Students...

"I learned a great deal about radiation and radiation safety that will be of great use to me personally as well as Novelos as we move forward. Dade Moeller came highly recommended and it certainly lived up to the hype. Thank you again and I look forward to attending the RSO training in a year or two."

Brad Wallom

*Pharmaceutical Manufacturing Technician
Novelos Therapeutics*

Radiation Safety Technician

5 Days, \$1,895

- **Who:** Safety technicians involved with ensuring the safe handling, use, transportation, and disposal of radioactive materials and radiation sources. Excellent for newly hired radiation safety or health physics technicians.
- **What:** Through lectures and hands-on laboratory instruction, gain knowledge and improve your skills in performing radiation safety surveys, shipping and receiving radioactive materials, and managing and disposing of radioactive waste. Learn practical steps you can take to ensure worker protection and compliance with regulations.
- **Includes:** Free online training course, "Hazardous Materials Transportation Security Awareness;" special 1,100+ page training manual that includes extensive regulatory information as well as forms and checklists to help ensure compliance with DOT requirements; breakfast and lunch each day; certificate of completion.
- **Credits:** ABIH (6.01 CM points).
- **Did You Know...?** All radioactive materials licensees require initial radiation safety training for individuals who will utilize licensed sources of radioactivity. Our technician class will prepare you to integrate safe practices with your company-specific procedures.

Auditing and Assessing Radiation Safety Programs

3 Days, \$1,295

- **Who:** Auditors and assessors who evaluate radiation protection programs; radiation protection professionals who design, manage, and maintain these programs; and facility administrators who are responsible for them.
- **What:** This course will teach you the methods of evaluating radiation protection programs in accordance with proven techniques, as well as the means to design a plan to achieve regulatory compliance. Learn how to manage Corrective Action Reports and track Compliance Actions. Your instructors have developed and implemented radiation protection programs and have defended their programs during NRC and Agreement State audits conducted by experienced regulators.
- **Includes:** Course manual; CD of CFR regulations, NUREGs, Regulatory Guides, and assessment templates; breakfast and lunch each day; certificate of completion.
- **Credits:** Pending, contact Registrar
- **Did You Know...?** Audits ensure compliance with radiation protection regulations; internal reviews or assessments ensure that there is a means to achieve efficient compliance. Annual audits of radiation safety programs are required by Federal and State regulation.

NEW! Nuclear Medicine: Physics and Technology

1 Day, \$250

- **Who:** This course is intended for the practicing nuclear medicine technologist, however other professionals in the field such as students of nuclear medicine technology programs, service engineers and managers of nuclear medicine departments can benefit from this course. This course is well-suited for technologists who are preparing to take the board certification exam.
- **What:** This one day course will provide review and reinforcement for all levels of professionals in nuclear medicine, and assist in your effort to gain certification. Discussions will include practical and current developments in nuclear medicine physics and instrumentation. This course is designed to ensure that at the end of each lecture there is enough time for Q&A and discussions related to your specific environment and individual needs.
- **Includes:** Course manual, refreshments and lunch, and a certificate of completion.
- **Credits:** This course has been approved for 7 hours of CE Category A by the ASRT.
- **Did You Know...?** We limit class size to ensure maximum attention to your individual needs.

Radiation Safety for Authorized Users and Supervisors of Radioactive Materials

3 Days, \$1,095

- **Who:** Those working under a non-medical license with delegated responsibility as an Authorized User to supervise the use of radioactive materials.
- **What:** Emphasizing practical knowledge, this course provides 24 hours of radiation safety training covering radiation protection principles, characteristics of ionizing radiation, units of radiation dose and quantities, radiation detection instrumentation, biological hazards associated with exposure to radiation, radioactive waste management, and safe handling of radioactive materials. Customize your training with elective modules.
- **Includes:** Comprehensive training manual; breakfast and lunch each day; certificate of completion.
- **Credits:** AAHP (32 CE credits); ABIH (4.01 CM points); AART & SNMTS (up to 24 VOICE credits).
- **Did You Know...?** Facilities usually require 24 hours of radiation safety training before they will name you as an Authorized User (Principal Investigator) on their radioactive materials license.

NEW! Human Performance Improvement (HPI) for Engineers and Knowledge Workers

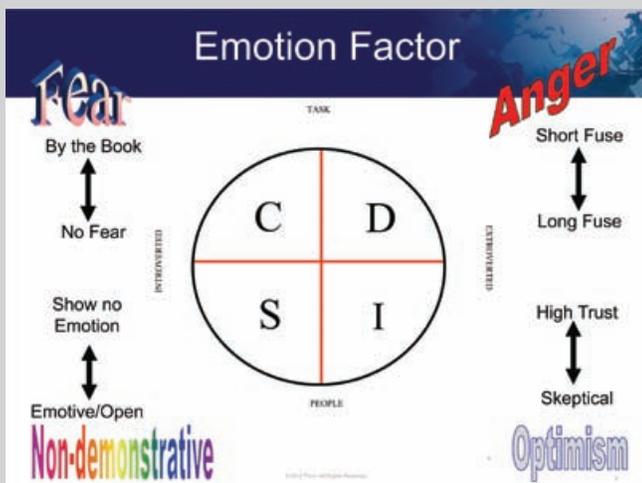
1 Day, \$385

- **Who:** Engineering managers and directors as well as managers and directors of groups managing technical risk (work control, finance, project controls, etc.). Engineers and other professionals who work with managers to help manage risk and reduce errors in technical work.
- **What:** This course is designed to provide tools to reduce errors made by engineers and knowledge workers (i.e. people who touch the "paper" part of companies). These tools are different in form and application from tools used by front line workers and their supervisors, who perform physical work in companies. The emphasis is on early detection of errors, especially in design. Late detection of design errors usually results in self revealing events years later that are dangerous to people, and potentially financially disastrous to companies. The course creates an understanding of the general nature of the unique personality profiles of engineers and knowledge workers and why they can fail to recognize errors in their work.
- **Includes:** Student manual; CDSI Emotion Tool, breakfast and lunch each day; certificate of completion.
- **Did You Know...?** Engineers are almost uniformly wired to be introverted and analytical. If so, how well do they communicate?

NEW! Safety Culture for Leaders

1 Day, \$385

- **Who:** Leaders in organizations where managing risk is important.
- **What:** This class is designed to provide tools for leaders to better understand their company's safety culture and lead efforts to move it in a positive direction. The use of the cultural tools will lead to better event and accident investigations, more leading indicators in company's Corrective Action Programs (CAP), and enhanced learning throughout the organization. While the basis for much of the material comes from the Nuclear Regulatory Commission (NRC), the Institute for Nuclear Power Operators (INPO), and the International Atomic Energy Agency (IAEA), the lessons are universally applicable to the construction, aviation, transportation, mining, medical, or any other technical community where risk management is important.
- **Includes:** Student manual; a primer on how to change behaviors; understanding of the IAEA Cultural Maturity Model; breakfast and lunch each day; certificate of completion.
- **Did You Know...?** Worker safety behaviors and other visible artifacts that differ from what leaders in the company say they value are always indicators of deeper, hidden cultural issues.



NEW! Project Management Professional (PMP®) Exam Prep

5 Days, \$2,495 (iPad included)

- **Who:** Those preparing for the PMP exam to become certified by the Project Management Institute.
- **What:** This course will prepare students to pass the PMP exam. Beyond the scope of the exam topics, we also provide attendees with practical tools, additional resources, and the skills needed to immediately apply the acquired practices to their current projects.
- **Includes:** Students will receive an iPad that is pre-loaded with courseware and study materials, a bound workbook and notes companion, exam simulation and practice questions, and a signed certificate of completion.
- **Credits:** 5 Days (35 PDU's) Project Management Institute (PMI®) requires candidates to obtain 35 PDU's to qualify for taking the PMP exam.
- **Did You Know...?**
 - Industry research indicates that 74% of all projects hit roadblocks, are over budget or are late. 28% of these projects fail altogether.
 - Certified PMP's demand an average salary of 10% more than uncertified project managers.
 - 70% of employers or projects require or encourage a PMI certification
 - EnergyX PMP training boasts an extraordinarily high exam pass rate (95%)



Content Overview

- Initiating a Project
- Planning Project Work
- Develop Schedules, Cost Estimates, & Budgets
- Plan Quality, Staffing, and Communications
- Analyze Risks and Plan Risk Response
- Planning Project Procurement
- Executing Project Work
- Monitor and Control Project Work
- Monitor and Control Schedule & Costs
- Monitor and Control Quality, Staffing, & Communications
- Monitor and Control Project Risk & Contracts
- Closing the Project

NEW! Certified Safety Professional (CSP®) & Safety Culture Professional

5 Days, \$2,495

- **Who:** Experienced RSOs, health physicists, and specialists in safety, responsible for individual and/or organizational safety programs. This course benefits anyone tasked with assessing potential hazards and applying countermeasures to minimize work stoppage, and accidents that may harm people, property or the environment.
- **What:** This hands-on class will enhance skill sets that are critical to creating a safe work environment through safety conscious workers. Participants will learn to accurately define the components of a safety culture, assign organizational and personal responsibilities, and apply tools & learned techniques for safety improvement. Our content maps directly to the objectives covered by the CSP certification exam.
- **Includes:** All related courseware, hands-on activity guide, student workbook, TI-30Xa calculator. and completion certificate.
- **Credits:** 5 Days (35 PDU's)
- **Did You Know...?**
 - Over 50% of all safety position ads last year identified the CSP credential
 - The average CSP earns about \$17,000 more per year than peers without certification

Content Overview

- Define, identify, and assess safety culture
- Incident Analysis & Corrective Action Planning
- Continuous Improvement: Performance
- Communication and Conflict
- Setting and Managing Performance Expectations
- Tools and techniques for Safety Improvement
- BEST Observation and feedback process
- Culture: Management & Personal Responsibilities
- Creating a sustainable safety culture Concepts of probability, statistics and calculus
- Engineering: safety and environmental, occupational health, fire protection
- Applied management: principles, ergonomic analysis, risk management, Workers' Compensation
- Legal/regulatory and professional affairs



NEW! Six Sigma Green Belt

ASQ Exam Prep

5 Days, \$1,995

- **Who:** Members of process improvement teams that analyze and solve quality problems, and are involved with Six Sigma, lean or other quality improvement projects. Candidates should have at least 3 years of relevant work experience.
- **What:** Six Sigma is a disciplined, data-driven approach to eliminating defects in processes, products, and services. This measurement-based methodology focuses on process improvement and variation reduction by applying a set of statistical, analytical and problem solving tools and techniques.
- **Includes:** All relevant courseware, student workbook, and completion certificate.
- **Credits:** The content of this course maps directly to the SSGB Body of Knowledge and will prepare students to successfully pass the ASQ (American Society for Quality) Green Belt certification exam.



NEW! Six Sigma Black Belt

ASQ Exam Prep

10 Days, \$4,495

- **Who:** This course is designed for business professionals with a college degree or those professionals who have significant experience in business operations. Also invited to attend are students who have completed a Green Belt program through an external vendor or through an in-house program.
- **What:** The Certified Six Sigma Black Belt is a professional who can explain Six Sigma philosophies and principles, including supporting systems and tools. A Black Belt should demonstrate team leadership, understand team dynamics and assign team member roles and responsibilities. Black Belts have a thorough understanding of all aspects of the DMAIC model in accordance with Six Sigma principles. They have basic knowledge of Lean enterprise concepts, are able to identify non-value-added elements and activities and are able to use specific tools.
- **Includes:** All relevant courseware, student workbook, and completion certificate.
- **Credits:** The content of this course maps directly to the SSBB Body of Knowledge and will prepare students to successfully pass the ASQ (American Society for Quality) Black Belt certification exam.



Content Overview

- Identifying core processes and key customer considerations
- Defining customer requirements
- Measuring current performance
- Define opportunities for improvement
- Measure the relevant processes requiring improvement
- Gather and analyze data to investigate causes
- Improve, control and redesign processes

Content Overview

- Six Sigma Overview
- Six Sigma Leadership
- Stakeholder Management
- Measure Phase
- Analyze Phase
- Improve Phase
- Control Phase
- Exam Review

Partnerships

We partner with local organizations that share our commitment to excellence and help us ensure an optimal training experience for you.

University of Nevada, Las Vegas (UNLV):

The UNLV Department of Health Physics and Diagnostic Sciences provides additional qualified instructors and analytical equipment to enhance your learning experience while at our Las Vegas Training Center. You will benefit from the Department's fully-equipped laboratories, including a spectroscopy lab, liquid scintillation lab, and environmental radiochemistry lab. The facility is less than three miles away from our Training Center, and we provide free transportation. *See p. 11 for more on our Radiation Instruments Workshop in Las Vegas.*

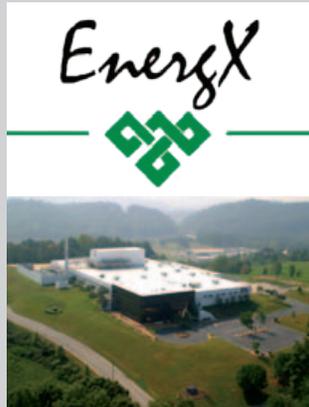


Robert L. Bigelow Physics Building

© 2011 University of Nevada, Las Vegas.
Courtesy UNLV Photo Services.

EnergX:

We have partnered with EnergX to expand our professional development and industry certification course offerings. With an elite team of instructors specializing in Project Management, Organizational Development, and Safety Culture, EnergX delivers high-impact training to a wide variety of commercial and government organizations. Additionally, we share use of our training centers in Oak Ridge, Tennessee; Gaithersburg, Maryland; Richland, Washington; and Las Vegas, Nevada. We believe that sharing our resources in this way offers you a unique benefit — increased access to our combined expertise at a competitive cost. *See pp. 15-16 for more info about our certification and professional development training.*



EnergX, Oak Ridge Location

Fluor

We are teaming with Fluor for the presentation of two courses:

The logo for Fluor, featuring the word "FLUOR" in a bold, blue, sans-serif font with a registered trademark symbol (®) to the right.

"Safety Culture for Leaders" and "HPI for Engineers and Knowledge Workers." Each is a one-day course at a cost of \$385 each. They will be taught on consecutive days. This year, they will be offered as a set once in Greenville, SC; Richland, WA; Las Vegas, NV; Acton, MA; Gaithersburg MD; and Oak Ridge, TN.

Ludlum Measurements

Dade Moeller and Ludlum Measurements have established



a partnership with the focus on improving the use and calibration of radiation detection instruments and training on basic principles of radiation protection and how to operate the instruments. They recognize these as fundamental needs of the Health Physics community.



Locations

Las Vegas Training Center

4100 W. Flamingo Road, Ste. 2200
Las Vegas, Nevada 89103

Have some fun while attending class at our Las Vegas Training Center! Our two large classrooms feature high-backed chairs for your comfort and state-of-the-art projection and audio systems, including a computerized "Smart Board." Make yourself at home with our relaxing break area, secure Wi-Fi, Internet stations and printers, and a student kitchen with refrigerator and sink. Located in the safe and professional Vantage Pointe office complex (free parking), we are across from the Palms Resort and Casino and adjacent to the Gold Coast Hotel and Casino. We are 6 miles from McCarran International Airport and less than 2 miles from the Las Vegas strip, with its world-famous restaurants and entertainment. Some of our classes also feature hands-on exercises at the University of Nevada, Las Vegas health physics laboratories, with free transportation included.



Oak Ridge Training Center

1000B Clearview Ct.
Oak Ridge, Tennessee 37830
EnergX: 1-866-932-1333

With three large classrooms, two computer labs, a 50-seat auditorium, and a high bay area for large demonstrations, laboratory activities, and mock exercises, our Oak Ridge Training Center is a versatile space that can accommodate an array of training needs. Large windows allow in the natural light as well as scenic vistas from the Center's hilltop location. Our laptop-accessible classrooms feature free and secure Wi-Fi, and remote ceiling projection. For your comfort, our parking is ample and free, and we offer internet stations, a coffee bar, and a kitchenette with a sink, refrigerator, and microwave. We are an easy 30-minute drive from the McGhee Tyson Airport in Knoxville, and we provide transportation for large groups.



Gaithersburg Training Center

438 N. Frederick Ave., Ste. 220
Gaithersburg, Maryland 20877

Conveniently located in the Washington, DC, metropolitan area, our Gaithersburg Training Center is popular with students who work for and with Federal government agencies. We can be reached easily from all three area airports: Reagan National Airport, Baltimore Washington International Airport, and Dulles International Airport, as well as from Union Station. Our two large classrooms are equipped with comfortable high-backed chairs and state-of-the-art projection and audio systems, including a computerized "Smart Board." Our student break area is well-stocked with a variety of free snacks, drinks, and freshly-brewed coffee available all day, and you are welcome to use our Internet work stations and printers. Parking is free, and several hotels and restaurants are nearby.



Richland Training Site

1835 Terminal Dr., Ste. 200
Richland, Washington 99354

This year, we are pleased to offer courses in Richland to accommodate our growing list of students who work at the Department of Energy's Hanford Site or at Pacific Northwest National Laboratories. For those outside the area, consider joining us in Richland! Your training experience will be enhanced with the first-hand DOE experiences offered by your classmates. We are a 15-minute drive from the convenient and hassle-free Tri-Cities Airport.



Greenville Training Center

100 Fluor Daniel Dr.
Greenville, South Carolina 29607

Located between Atlanta and Charlotte, and near the Blue Ridge Mountains, Fluor's Greenville office is situated on an 85-plus acre campus with trees and ponds, wildlife, and



trails. The main building is Centre 1, which contains 2 presentation rooms, 17 conference rooms, a library, and a cafeteria with capacity for 950 people.

Acton Training Site

One Acton Place, Suite 201
Acton, Massachusetts 01720

Just 20 miles from Boston, west of historical Lexington and Concord, this picturesque suburban town is popular with our students who live in or are visiting New England. This training site is conveniently served by Logan International Airport, Manchester-Boston Regional Airport in New Hampshire, and TF Green International Airport in Rhode Island.



Faculty

Sean Austin, MS, CHP

Senior Health Physicist

Sean has more than 20 years of experience in Radiation Safety Officer services, sealed source device registrations, license applications and amendments, program audits, RAM inventory, disposal including mixed waste management, and decommissioning. He specializes in training on instruments, waste management, regulations, licensing, and the transportation, shipping, and receiving of RAM. Sean is from Rhode Island, is the father of two teenage daughters, likes to travel to new places, and enjoys golf when he has some spare time.



Alan Fellman, Ph.D., CHP

Senior Health Physicist

Alan has more than 20 years of experience in Radiation Safety Officer services, sealed source device registrations, license applications and amendments, safety plan development, program audits, radiation risk assessment, dosimetry analysis and documentation, and decommissioning. Alan specializes in training on radiation fundamentals, regulations, dosimetry, health risk assessment, and inspections and audits. Hailing from the metropolitan New York City area, Alan tells it like it is and is popular among students for his dry wit.



Judson Kenoyer, MS, CHP, CIH

Senior Health Physicist/Industrial Hygienist

Judson has worked in the Industrial Hygiene and Health Physics fields for over 37 years and has provided management, technical leadership, and assistance in several related areas. His experience emphasizes line, project and program management, operational industrial hygiene and health physics, radiation protection instrumentation calibration and performance testing, occupational safety, and emergency preparedness. He has provided training in all of these areas to a variety of clients. Brought up in Southern California, Judson lived in Tri-Cities, Wash., for 25 years and is now working and living in the Oak Ridge, Tenn., area.



Sandy Konerth, DABR, DABMP

Senior Medical Physicist

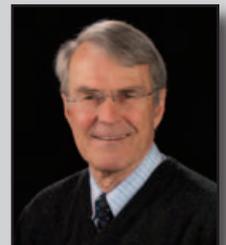
Sandy has more than 20 years of experience in medical health physics and is a Licensed State Inspector for the state of Maryland. She is experienced in clinical physics and regulatory compliance and has worked in both private and university settings. She also has worked extensively in the areas of quality assurance and audits. Sandy lives in Maryland but is originally from the south, which will explain why you may hear a ya'll now and then.



David Waite, Ph.D., CHP, CHMM

Senior Health Physicist

David is an internationally recognized expert in Integrated Safety Management, radiological health, and waste management with more than 45 years of experience in health physics, environmental radioactivity, nuclear and mixed waste management, risk assessment, and large program management. He specializes in training for problem solving required for certification exams, as well as radiation program development, implementation, improvement, and management. Fulfilling a lifelong dream of getting back to teaching after retirement from the corporate world, David joined Dade Moeller to concentrate on instruction of existing courses and development of new courses reflecting the scope of the company's other offerings.



Thomas O'Dou, Ph.D., CHP, RRPT

Senior Health Physicist

Tom has worked in radiation safety management programs for the Navy, Nuclear Power Plants, Department of Defense contractors, and a university since 1977. He has experience in radiation safety program audits and assessments, investigation of high personnel dose, waste management, decommissioning, and license application, renewal, and amendment. Tom specializes in training radiation fundamentals, program management, health effects, instrumentation, operational health physics, and CHP and NRRPT exam preparation. Known as "MacGyver" at home, Tom loves to take things apart and will attempt to repair almost anything.



Edward Maher, Sc.D., CHP

Senior Health Physicist



Ed has 35 years of experience as a health physicist in the federal, commercial and university sectors. His specialty areas include natural background radiation, indoor radon, nonionizing radiation, environmental monitoring, auditing, laboratory operations, and power reactors. Ed is an adjunct faculty member at the Harvard School of Public Health, a retired USAF officer and a past president of the Health Physics Society. Ed was born and raised in Massachusetts and loves to “flavor” his lectures with real-world experiences (successes and bloopers) and the lessons learned from those experiences.

Ray Johnson, MS, PE, CHP

Senior Health Physicist



With more than 40 years of experience, Ray specializes in training on sealed sources, industrial gauges and X-ray, radiation instruments, licensing, audits, and risk communication. He has presented more than 350 seminars, workshops, and short courses on radiation safety, radiation risk assessments, risk communication, emergency response, radon measurements, and quality assurance and has written more than 300 publications on radiation protection and risk communication. With entertaining stories and anecdotes from a long career in radiation safety, Ray makes learning fun.

Matthew Smith, MS

Senior Health Physicist



Matt has more than 20 years of health physics experience in the areas of dosimetry and dose reconstruction, instrumentation, border security training, and non-ionizing radiation. In the area of border security training, he has participated in over 200 courses for US Customs and Border Protection, DOE Second Line of Defense Program, and the U.S. State Department. He has also provided non-ionizing expertise in the areas of assessment, measurement, and training for DOE national labs, DoD, NASA-JPL, and several commercial clients. Matt is originally from Minnesota, but now enjoys studying and visiting abandoned mining towns and claims throughout the West.

Mike Jedlicka, BS

Health Physicist



Mike’s 8 years of experience include managing a radioanalytical laboratory and instrument calibration facility, serving as field team leader on decommissioning and other radiological site investigations, and participating as an Academy instructor on several health physics related topics. He was a key contributor in developing and implementing the Quality Assurance program for the Dade Moeller Radioanalytical and Calibration Laboratory, where he currently serves as the lead health physicist. Mike is the primary instructor for our liquid scintillation counting course and continues to contribute to numerous consulting projects involving radiation surveying and regulatory compliance auditing.

Steve Bump, MSPH, CHP, CIH, PMP

Senior Health Physicist/Industrial Hygienist



Steve has more than 34 years of experience in health physics, industrial hygiene, health and safety, program and project management. He is experienced in regulatory inspections, commercial nuclear power and DOE site remediation. Steve prefers a practical approach to training rather than a theoretical approach. He is also a certified volleyball official and enjoys watching his daughter play. He is an avid golfer when time allows.

Mehdy Jabir, M.Phil., DABR, DABSMM

Senior Medical Physicist



Mehdy has extensive experience as a Medical Physicist in academia, hospitals, and the private sector. His areas of specialty include Radiation Oncology and Nuclear Medicine. He also works in CT and Radiation Protection and is interested in instrumentation performance evaluation and quality control. He has been teaching at various levels from technology programs, such as therapeutic radiology and nuclear medicine, to graduate school and has developed an expertise in instructing medical residents. Mehdy is a graduate of the University of London, England and he carries four board certifications.

Stephen Sohinki

*Vice President, Safety Programs,
Dade Moeller & Associates*

Before joining the firm in 2006, Steve was a member of the Senior Executive Service for 17 years and he has 35 years of experience in the field of nuclear energy (both civilian and military uses), including regulatory compliance/oversight and project management. During his service with the U.S. Department of Energy (DOE), he managed major national security programs associated with the analysis of alternatives for the nuclear weapons complex of the future, the development of a new supply of tritium to support the nuclear weapons stockpile, as well as the Department's safety enforcement program, which contributed significantly to the improvement of safety performance throughout the DOE Complex.



Dan Mantooth

Instructor, Dade Moeller & Associates

Mr. Mantooth has 33 years of experience in occupational and radiological safety and waste management and 25 years of line and project management experience. He has provided staff and consulting support to the U.S. Department of Energy (DOE), U.S. Department of Defense (DOD), U.S. Environmental Protection Agency (EPA), and commercial power operations. His key areas of expertise include occupational and radiological safety program management, development, implementation, and assessment. Mr. Mantooth currently manages Dade Moeller's Consulting Division in Oak Ridge, Tennessee.



Barry Mulkhraj, CBAP, PMP, SSGB, SSBB

Instructor, EnergX

Barry has more than 15 years of experience working in the areas of Business Analysis, Systems Development, Process Streamlining, Automation, Project Management and Corporate Education. He is Project Management Professional (PMP), Certified Business Analysis Professional (CBAP), Six Sigma Green Belt (SSGB), and Six Sigma Black Belt (SSBB). His experience has benefited organizations in the fields of Government, Technology, Manufacturing and Consultancy; including the US Federal Government, Government of Canada, Oak Ridge National Laboratory, Nationwide Insurance, IBM, and West Indian Tobacco.



Joe Estey, MS, CHP

Instructor, EnergX

Mr. Este has served more than 20 years in leadership roles at numerous Fortune 500 companies, and has thrived as an executive-level trainer and keynote presenter for more than 15 years. He is featured as a subject matter expert for leadership and organizational development in various training productions. Using research based, fact-driven Human Performance Improvement techniques and tools, he has helped hundreds of companies and thousands of individuals predict when and where errors will occur, and how to eliminate "the undesirable event"—whether it is a failure to meet a customer's need, meager conformity with regulatory requirements, or poor productivity and less than adequate safety performance in the workplace.



Bill Rigot

Senior Consultant, Fluor

Bill is a skilled consultant in several areas, specializing in managing risk and resilience in technical industries. Bill draws on his extensive experience with the Navy's Nuclear Power Program, and most recently with the Department of Energy's (DOE) Savannah River Site (SRS) where he managed Training, Engineering, and Plutonium operations activities. Bill went on to lead implementation of Human Performance Improvement (HPI) at SRS, and was the co-chair of the DOE HPI Task Team, which helped to assist and standardize HPI implementation across DOE sites nationally. Bill speaks and teaches regularly at national conferences. He was the keynote speaker for both the Institute for Nuclear Power Operations (INPO) Engineering HPI conference in 2008, and the Army Corps of Engineers annual safety conference in 2011. He currently serves as a corporate resource to the Fluor Corporation on HPI and Safety Culture.



Web-Based Training

www.moellerinc.com/webtraining

With our convenient web-based training program, pick and choose from 28 high-quality courses available 24/7 to fit your busy schedule without traveling to a training center. Our courses are developed and consistently updated by the same expert faculty members who teach our classroom courses. Featuring illustrations and a logical flow of information, many courses also offer audio narrative and large print options. All of our web-based training courses can be stopped and started as needed for your convenience. Take a test at the end of each module and, with a passing score, you can print out your own certificate of completion.

Did You Know...? We frequently develop and host customized web-based training for federal agencies, as well as research and industrial facilities. Contact us for details!

Radiation Worker Training Courses

- Basic Radiation Safety, 8 hours \$247
- Radioactive Waste Management and Disposal, 2 hours \$87
- Radioactive Material Package Receipt and Inspection, 2 hours \$47
- Fundamentals of Radiation Safety, 4 hours \$112
- Fluoroscopy Safety, 4 hours \$147
- Health Effects of Ionizing Radiation, 1 hour \$37
- X-ray Safety Awareness, 1 hour \$67

Radiation Worker Refresher Training Courses

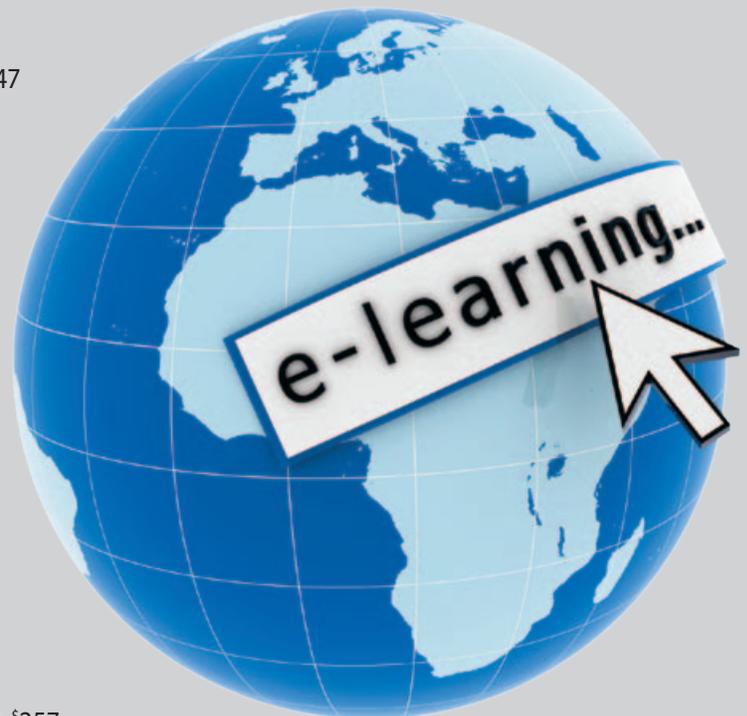
- Regulations, 1 hour \$37
- Detection Instruments, 1 hour \$37
- Safety Surveys, 1 hour \$37
- Radioactive Wastes, 1 hour \$37
- Safety Programs, 1 hour \$37
- Fluoroscopy Refresher, 1 hour \$47
- General Employee Radiation Safety Awareness, 1 hour \$47
- Fundamentals, 1–2 hours \$112
- OSHA HAZWOPER Refresher Training, 8 hours \$87
- Medical X-ray Procedures for Operators, 2 hours \$112
- Radiation Safety Training for Alaska Fluoroscopy Users, 10 hours \$257

Hazardous Materials Transportation Courses

- Hazardous Materials Transportation General Awareness, 1 hour \$37
- Hazardous Materials Transportation Security Awareness, 1 hour \$37
- DOT Requirements for Shipping Model 451P Pressurized Ion Chambers, 1–2 hours \$97
- DOT and NRC Requirements for Shipping:
 - Radioactive Empty Packages, 4 hours \$237
 - Radioactive Empty Packages with Radiation Fundamentals, 4–6 hours \$297
- DOT, NRC and IATA Requirements for Shipping:
 - Limited Quantity Radioactive Materials, 4 hours \$237
 - Limited Quantity Radioactive Materials with Radiation Fundamentals, 4–6 hours \$297
 - Radioactive Instruments and Articles, 4 hours \$237
 - Radioactive Instruments and Articles with Radiation Fundamentals, 4–6 hours \$297

Homeland Security Workshops & Training Course

- Radiation Safety and Homeland Security, 1 hour \$37



Frequently Asked Questions

How do I register for a class?

Visit our website at www.moellerinc.com/academy and register online, or call us to register and pay by phone at 1-800-871-7930. Registration questions also can be emailed to academy@moellerinc.com.

Do I need to bring anything with me to class?

Yes, please bring a calculator. Other than that, we provide the course manual, pen, highlighter, and paper for notes.

Will I get a certificate of completion at the end?

Yes, there is a certificate provided after completion of all our courses.

Is there a test at the end of the course?

For classroom courses, there is no test unless you add the DOT Transportation option to your training. There are also tests for all courses on Shipping Radioactive Material, including the Low-Level Waste class, which the student attends for the first two days.

If I have to leave early one day, what happens?

You will need to make up the hours by taking an evening elective and discussing any further arrangements with the instructor.

Is there a dress code?

We recommend "comfortable business casual," but anything tasteful, clean, and without holes is fine.

Are meals included?

Yes, a continental breakfast and lunch are included as part of your tuition. You are on your own for dinner, but we provide restaurant suggestions upon request.

Because of allergies or health concerns, can I bring my own meals?

Of course. We have a refrigerator, microwave, and toaster oven you can use, too.

Do you provide transportation to and from airports, hotels, and restaurants?

No, you'll need to set up your own transportation. We will assist with taxi services, upon request.

Looking for Something Else?

The following courses have been scheduled but didn't fit in the Catalog! For more information, please check them out online at www.moellerinc.com/academy or call us at 1-800-871-7930.

- Low-Level Radioactive & Mixed Waste Management, 3 Days
- Fundamentals of Liquid Scintillation Counting, 2 Days
- Radiation Safety for Homeland Security and Emergency Responders, 2 Days
- Naturally Occurring Radioactive Material (NORM), 3 Days
- Site Characterization, Decontamination, and Decommissioning, 5 Days

Contact Us!

Michelle LeBlanc, our Registrar, will make sure your training experience exceeds your expectations! Contact Michelle if you have any questions about our courses, locations, web-based training, faculty, or amenities, or to register by phone.

Phone: 1-800-871-7930

Web: www.moellerinc.com/academy

Email: academy@moellerinc.com

Facebook: www.facebook.com/DadeMoeller

Twitter: @DadeMoellerAcad

**Now Tweeting
& Posting
Upcoming
Class Dates!**



Kelly Austin, MS, CHP, 1965-2011

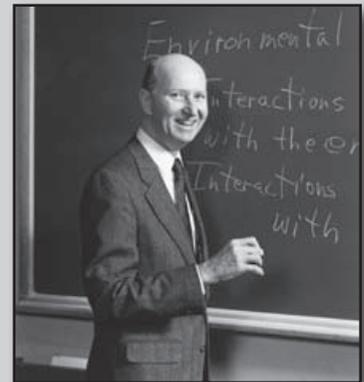
Kelly H. Austin Memorial Scholarship Fund

Dade Moeller encourages you to further your education. If you are not sponsored by an employer and need tuition assistance, please contact our Registrar at 800-871-7930 and ask about our Kelly H. Austin Memorial Scholarship Fund.

 **Dade Moeller**[®]

Founded in 1994, our Company proudly bears the name of the premier scientist and educator in the fields of health physics and environmental health, Dr. Dade W. Moeller, CHP, PE. We offer best-in-class capabilities and exceptional depth in radiation protection, health physics, training, and worker safety. In all our work, we are dedicated to meeting the highest standards for professional integrity, job commitment, and technical excellence—the hallmarks embodied by Dr. Moeller throughout his distinguished career of more than 60 years.

Dade Moeller provides a full range of safety, health, and environmental services with a focus on clients who possess radioactive materials and operate nuclear facilities. We help our clients protect human health and the environment from harmful exposure to radiation and hazardous agents and comply with Federal and state regulations. We employ over 200 experienced professionals, including more Certified Health Physicists than any other private entity in the nation; Certified Industrial Hygienists; Certified Safety Professionals; and Professional Engineers. Our staff includes renowned leaders in virtually every area of radiation protection, and many have contributed to national and international policies, regulations, and industrial standards in their fields of expertise. In addition to our radiation and safety training, we are available to assist with:



Dade W. Moeller, Ph.D., CHP, PE 1927–2011

- **Radiological & Nuclear Services**

Audits & Assessments; Dosimetry & Laboratory Services; Decontamination & Decommissioning; Waste Management

- **Occupational Safety & Health**

Audits & Assessments; Incident/Accident Investigation; Industrial Hygiene & Safety; Quality Assurance

- **Environmental Protection**

Audits; Compliance, Permits & Licensing; NEPA; Quality Assurance

January						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
30	31	1	2	3	4	5
	New Year's Eve	New Year's Day				
6	7	8	9	10	11	12
	Rad. Safety for Auth. Users					
	Radiation Safety Officer					
13	14	15	16	17	18	19
	Medical Radiation Safety Officer					
	ABHP Part 1 Exam Prep					
20	21	22	23	24	25	26
	PMP Certification Prep					
	ABHP Part 2 Exam Prep					
	Martin Luther King Jr. Holiday	X-ray Safety				
27	28	29	30	31	1	2

February						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
27	28	29	30	31	1	2
						Nuclear Medicine
3	4	5	6	7	8	9
	DOT Certification					
	Non-ionizing Radiation Safety					
	NRRT Exam Prep					
10	11	12	13	14	15	16
	DOT Certification	Safety Culture	HPI			
	Low Level Rad. & Mixed Waste Mgmt.					
	Radiation Safety Technician					
	Rad. Safety for Auth. Users					
	Radiation Safety Officer					
17	18	19	20	21	22	23
	Six Sigma Green Belt Certification Prep					
	Medical Radiation Safety Officer					
24	25	26	27	28	1	2
	President's Day					
	NFPA 101 Life Safety Code					

May						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
28	29	30	1	2	3	4
5	6	7	8	9	10	11
	Auditing & Assessing Rad. Programs					
	Rad. Safety for Auth. Users					
	Radiation Safety Officer					
12	13	14	15	16	17	18
		Rad. Safety for Homeland Security & Emerg. Response				
	Medical Radiation Safety Officer					
19	20	21	22	23	24	25
	PMP Certification Prep					
26	27	28	29	30	31	1
	Memorial Day					

June						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
26	27	28	29	30	31	1
						Nuclear Medicine
2	3	4	5	6	7	8
9	10	11	12	13	14	15
	DOT Certification	Safety Culture	HPI			
	Low Level Rad. & Mixed Waste Mgmt.					
	Radiation Safety Technician					
16	17	18	19	20	21	22
	Safety Culture & GSP Prep					
	ABHP Part 2 Exam Prep					
23/30	24	25	26	27	28	29
	Father's Day					
	Rad. Safety for Auth. Users					
	Radiation Safety Officer					

September						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
	Labor Day					Nuclear Medicine
8	9	10	11	12	13	14
	Rad. Safety for Auth. Users					
	Radiation Safety Officer					
15	16	17	18	19	20	21
	X-ray Safety					
	PMP Certification Prep					
	Industrial Hygiene Fundamentals					
22	23	24	25	26	27	28
	DOT Certification					
29	30	1	2	3	4	5
	Rad. Safety for Auth. Users					
	Radiation Safety Officer					
	Medical Radiation Safety Officer					

October						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
29	30	1	2	3	4	5
	Medical Radiation Safety Officer					Nuclear Medicine
	Rad. Safety for Auth. Users					
	Radiation Safety Officer					
6	7	8	9	10	11	12
	Advanced Radiation Safety Officer					
	Auditing & Assessing Rad. Programs					
13	14	15	16	17	18	19
	Decontamination & Decommissioning					
20	21	22	23	24	25	26
	Safety Culture	HPI				
	Six Sigma Green Belt Certification Prep					
	General Industry Safety					
27	28	29	30	31	1	2
	DOT Certification					
	Liq. Scintillation Counting					
	Rad. Safety for Auth. Users					
	Radiation Safety Officer					

March

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
24	25	26	27	28	1	2
3	4	5	6	7	8	9
	Rad. Safety for Auth. Users Radiation Safety Officer					
10	11	12	13	14	15	16
	Safety Culture & CSP Prep Decontamination and Decommissioning Facilities Hazards Assessments Liq. Scintillation Counting					
17	18	19	20	21	22	23
	DOT Certification Medical Radiation Safety Officer					
24	25	26	27	28	29	30
	Radiation Instruments Workshop					

April

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
31	1	2	3	4	5	6
Easter Sunday						
7	8	9	10	11	12	13
	Rad. Safety for Auth. Users Radiation Safety Officer Process Safety/Risk Management Medical Radiation Safety Officer					
14	15	16	17	18	19	20
	X-ray Safety Six Sigma Green Belt Certification Prep Advanced Radiation Safety Officer Development of Rad. Protection Dept. Improvement Plans Industrial Hygiene Fundamentals					
21	22	23	24	25	26	27
	Rad. Safety for Auth. Users Radiation Safety Officer					
28	29	30	1	2	3	4
	DOT Certification					

July

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
30	1	2	3	4	5	6
				Independence Day		
7	8	9	10	11	12	13
14	15	16	17	18	19	20
	Rad. Safety for Auth. Users Radiation Safety Officer					
21	22	23	24	25	26	27
	Medical Radiation Safety Officer Six Sigma Green Belt Certification Prep DOT Certification					
28	29	30	31	1	2	3
	Radiation Protection Fundamentals for Policy Makers					

August

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
28	29	30	31	1	2	3
4	5	6	7	8	9	10
	Six Sigma Black Belt Certification Prep NFPA 101 Life Safety Code					
11	12	13	14	15	16	17
	Safety Culture HPI Six Sigma Black Belt Certification Prep Radiation Instruments Workshop					
18	19	20	21	22	23	24
	Rad. Safety for Auth. Users Radiation Safety Officer					
25	26	27	28	29	30	31

November

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
28	28	29	30	31	1	2
3	4	5	6	7	8	9
	Facilities Hazards Assessments Medical Radiation Safety Officer					
10	11	12	13	14	15	16
	PMP Certification Prep Non-Ionizing Radiation Safety					
	Rad. Safety for Auth. Users Radiation Safety Officer					
17	18	19	20	21	22	23
	N.O.R.M. Naturally Occurring Radioactive Materials Process Safety/Risk Management					
24	25	26	27	28	29	30
			Hanukkah Begins	Thanksgiving Day		

December

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
8	9	10	11	12	13	14
	DOT Certification Rad. Safety for Auth. Users Radiation Safety Officer Six Sigma Black Belt Certification Prep					
15	16	17	18	19	20	21
	Six Sigma Black Belt Certification Prep					
22	23	24	25	26	27	28
29	30	31	1	2	3	4
			Christmas Day			