



We leverage the Laboratory's strong base of scientific innovation and technology development in our training programs, and we try to keep it simple by providing our clients with a quality, full-service learning experience.

Approaches and Features

PNNL's S&T-based training programs, many of which are centered on national and international security objectives, are enhanced through exceptional business practices and unique learning approaches in the areas of:

- » Trans-cultural Training
- » Environmental, Safety & Health documentation
- » Customs Clearances
- » Freight Forwarding
- » Mock Facilities
- » Tool-kit Development
- » Training Aids
- » Classroom and Field Scenario Instruction
- » Facilitation
- » Logistics Coordination
- » Proposal Development and Contracting
- » Project Management
- » Finance Management
- » Help Desk Support

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At Home and Around the Globe

PNNL conducts training programs at the most appropriate venues – whether in the field, the office, or at special, dedicated training facilities. We lead or coordinate training programs in virtually all major U.S. cities, ports and border crossings. Internationally, PNNL conducts training programs in every corner of the world.

Clients, Partners, Collaborators

- » National Nuclear Security Administration
- » U.S. Department of Energy
- » U.S. Department of Homeland Security
- » Domestic Nuclear Detection Office
- » U.S. Customs and Border Protection
- » U.S. Department of State
- » U.S. Department of Defense
- » International Atomic Energy Agency
- » Centers for Disease Control and Prevention
- » World Institute of Nuclear Security
- » Nuclear Regulatory Commission
- » Foreign Countries
- » Sandia National Laboratories
- » Los Alamos National Laboratory

About PNNL

PNNL is a DOE Office of Science national laboratory where interdisciplinary teams advance science and technology to serve national needs. PNNL employs approximately 4,900 staff, has a \$1.1 billion annual budget, and has been managed by Ohio-based Battelle since the lab's inception in 1965.

Science-based Training

Delivering customized curriculum, training, and field exercise programs



Pacific Northwest
NATIONAL LABORATORY

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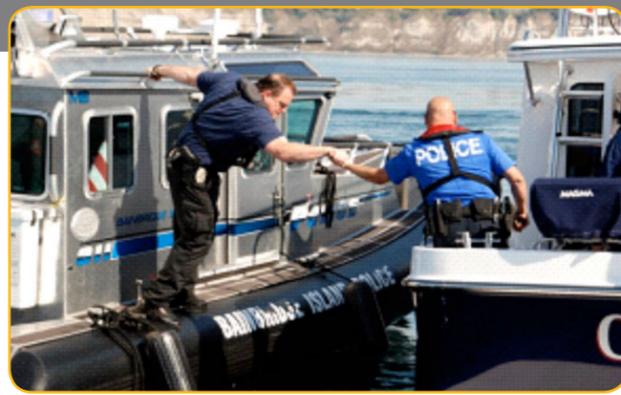
Delivering S&T Based Training and Learning Programs

The approaches and requirements for training in the 21st century have become as wide-ranging and sophisticated as the work environment itself. Equally diverse are the driving forces behind training programs – whether it's keeping up to date on the latest in technologies, or staying abreast of emerging regulations. At the Pacific Northwest National Laboratory (PNNL), our staff specialize in the development and delivery of S&T-based training and learning programs.

As a U.S. Department of Energy (DOE) national laboratory, we leverage multi-disciplinary technical expertise and world-class science facilities to deliver solutions to the nation's most intractable problems in energy, national security, and the environment. A natural extension to our research and development offerings is the implementation of S&T-based training programs. Our ability to assemble integrated teams for targeted training objectives is a PNNL flagship capability.

PNNL Expertise

Field exercises and customized classroom learning is essential to many multi-million dollar programs PNNL stewards for the federal government. For DOE's National Nuclear Security Administration's Second Line of Defense Program, PNNL conducts training on the technologies and tools used to deter, detect, and interdict illicit nuclear materials. Training takes place at ports and



Training is conducted in diverse environments

border crossings around the world, as well as at DOE's HAMMER facility located near the PNNL campus in Richland, Washington. HAMMER is a hands-on training center for responding to high-risk tasks aligned with nuclear safeguards, security, and emergency response.

PNNL also leads training programs for the U.S. Department of Homeland Security's Radiation Portal Monitor Project. All training is conducted in the field – at literally hundreds of sites across the nation – on technology systems used to scan vehicles, cargo containers, and other forms of conveyances for illicit radiological material.

PNNL specializes in Chemical, Biological, Radiological, Nuclear, Explosive (CBRNE) training. In concert with training we are establishing new tools and approaches for emergency response, recovery, and continuity of operations for natural disasters, such as pandemics.

The Science of Training and Learning

While core elements of our training curricula remain constant for knowledge acquisition, the physical, environmental, and cultural elements associated with learning vary greatly. PNNL staff place the highest priority on attention to detail to ensure training outcomes are met so students can apply that knowledge in real-world situations they encounter. To accomplish this, we develop from the ground up or customize established training programs to achieve specific skill and knowledge requirements. We employ or simulate realistic settings to provide students with the most effective training experience possible.

PNNL training expertise includes:

- » **Needs analysis/assessment.** Understanding the gaps in knowledge and training needs so those needs can be addressed.
- » **Training features.** Employing the most productive approaches to ensure the highest quality of training, including practical field exercises, tabletop exercises, and train-the-trainer programs.
- » **Instructional design.** Developing a custom training program to meet specific objectives and priorities for our clients.
- » **Course management.** Assuring the training program remains relevant, or updating as needed, so learning objectives are successfully met.
- » **Cognitive analysis.** Evaluating course implementation and instructor and student performance so timely responses to feedback can be incorporated into training approaches.
- » **Distance learning methodologies.** Carefully combining the most effective suite of learning approaches – web-based, video conference, simulation and more – when instructor and student are physically separated by distance.



Skilled Staff and Teams

Our instructors are subject matter experts in the technical disciplines in which they train. The educational and professional background for PNNL training teams is widespread, and includes:

- » Instructional Design
- » Training and Learning Technologies
- » Organizational Development
- » Information Technology
- » Engineering
- » Chemistry
- » Management Systems
- » Business Administration
- » Operations Research
- » Statistics and Modeling
- » Physics
- » International Relations
- » Security/Physical Protection
- » Nuclear Engineering
- » Energy

Training Specialties

Our training specialties are as diverse as the students we train, which frequently include law enforcement personnel, port authority staff, security guards, health officials, transportation specialists, and military representatives. PNNL training programs span:

- » Emergency and Crisis Response
- » Radiological Detection and Identification
- » International Nuclear Safety
- » Border Enforcement and Protection
- » Military Readiness
- » Nuclear Nonproliferation
- » Materials Protection and Control
- » Public Health
- » Weapons of Mass Destruction
- » Export Control
- » Special Operations
- » Occupational Health and Industrial Hygiene
- » Chemical, Biological, Radiological, Nuclear, Explosive



Committed staff



Expertise in international training capabilities