

Section 5

Radiation Safety Training

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This section covers training for individuals working in or frequenting areas where radioactive materials are used.

A. Individuals Directly Using Radioactive Materials

1. Regulations for Training

a. Training for Safe Work Practices

State and federal regulations require that individuals who work with radioactive material be provided with sufficient training to enable them to conduct their work safely. This training must include information on the potential hazards associated with the use of radioactive material, health protection considerations, and precautions or procedures to minimize exposure. In addition, training at the University of Washington includes information regarding worker's rights, emergency procedures, and institutional procedures for the procurement, use, and disposal of radioactive material. This training meets the Washington Administrative Code requirements for radiation protection instruction to workers. Records of this training are kept in the UW Radiation Safety Office.

b. Training for Specific Laboratories

It is also recommended that each Authorized Investigator provide instructions to all personnel on specific radiation safety concerns for the particular laboratories in which they will be working. This training should be directly related to the duties of the individual, and commensurate with the risks.

c. Campus Wide Training

1) Independent Radiation Workers

All individuals who will work independently with radioactive materials must first complete the UW Radiation Safety Training class. Only those persons who have completed this training class will be certified as radiation workers and listed on an authorization.

2) Directly Supervised Radiation Workers

Prior to taking the UW Radiation Safety Training class, individuals may use radioactive materials only under the direct supervision of laboratory staff who are already certified for the use of radioactive materials by the Radiation Safety Office. This period of directly supervised use must not last longer than three months. This would apply to individuals who are enrolled in a Radiation Safety Training class but have not yet completed the class, or temporary personnel who are only going to be in the laboratory for short periods of time. Examples of these temporary personnel would include rotating graduate students, work-study students, visiting scientists, or students enrolled in certain laboratory courses or training programs that may use radionuclides in small amounts.

2. UW Training Class

License conditions require that all individuals working directly and independently with unsealed radioactive materials in the course of their employment at the University of Washington must take the UW Radiation Safety Training class and pass a final examination.

a. Course

Training is offered on-line and occasionally in classroom sessions. Topics include basic radiation physics, biological effects of ionizing radiation, radiation survey techniques, waste disposal, UW and State Rules & Regulations. The Radiation Safety Training class is supplemented with a training manual which is available on-line at the Environmental Health and Safety website. Individuals are further encouraged to retake or review training periodically as a refresher.

b. Class Schedule

Since training is on-line, only the final class session is scheduled as a classroom session. This session includes an opportunity to ask the instructor questions, and also a final exam is given. The Radiation Safety Training Question and Final Exam classroom session is offered approximately ten times a year by the Radiation Safety Office staff. Contact the Radiation Safety Office for exact times, dates, and locations.

c. Previously Trained Personnel

It is recommended that all individuals become familiar with all four of the on-line Radiation Safety Training modules. However, if a person has had previous radiation safety training at another institution, they should concentrate on Modules 4 and 5 since these are specific to the University of Washington and the State of Washington requirements.

d. Radiation Scientist Exemption

Certain radiation scientists who have significant training, experience, and/or certification (for example Health Physicists, Medical Physicists, and Board Certified Radiologists and Nuclear Medicine Physicians,) may be exempt from training requirements. This determination can be made on a case by case basis by discussing requirements and qualifications with Radiation Safety Office staff.

d. Sealed Source Exemption

Personnel working with sealed sources need to have training commensurate with the risks of the materials that they will be using and with their proximity to the materials. However in many cases, the risks from small sealed sources may be very slight and workers would not be expected to get a measurable occupational dose. In these situations, personnel may not be required to take the UW Radiation Safety Training program, if appropriate instruction can be provided by other means. Consult with the Radiation Safety Office regarding the training necessary for sealed source use.

B. Individuals Not Directly Using Radioactive Materials

Washington Administrative Code 246-221-140 requires instruction for individuals working in or frequenting any portion of a “restricted area.” The Code also defines a restricted area (WAC 246-220-010):

"Restricted Area - means any area to which access is limited by the licensee or registrant for purposes of protecting individuals against undue risks from exposure to radiation and radioactive material."

At the University of Washington, there are very few areas where access is limited for these reasons. Nearly all of the laboratories where radioactive materials are used are conducting biomedical research. Very small amounts of radioactive material are used and "undue risks" from these materials are not encountered. Often, the risks from associated biohazards and chemicals will far outweigh the radiation risks. These laboratories are not considered restricted areas for radiation protection purposes, and the likelihood of receiving a measurable dose is highly improbable.

Therefore, if individuals frequent or work in research laboratories yet do not directly handle radioactive materials, they do not need training as radiation workers. A determination about training for individuals allowed access to other areas, where “undue risks” may be present, will be made by Radiation Safety Office staff.