

Radiation Safety Technician Certificate Series Course Descriptions

Basic Certificate

10804113 College Technical Mathematics 1A

...prepares the student to solve linear, quadratic, and relational equations; graph; formula rearrangement; solve systems of equations; percent; proportions; and operations on polynomials. Emphasis will be on the application of skills to technical problems. Successful completion of College Technical Mathematics 1A and College Technical Mathematics 1B is the equivalent of College Technical Mathematics 1.

PREREQUISITE: Accuplacer Math minimum score of 79 or Equivalent or 10804100 Math Proficiency

10624105 Health Physics Calculations and Statistics

...prepares the learner to solve linear and exponential equations, logarithms, plot graphs, determine counting statistics and reliability, and work with geometry and trigonometry problems.

10624114 Nuclear Systems and Sources

...introduces the learner to the major components of accelerators, lasers, isotope generators, nuclear gauging devices, X-ray tubes, nuclear reactors, and natural/background sources and the radiation hazards associated with them.

10624110 Nuclear Technology and Regulations

...introduces the learner to atomic and nuclear structure; radioactivity and half-life; regulation standards; and Title 10 Parts 19, 20, 30 and 35 of the Code of Federal Regulations.

Intermediate Certificate

10804114 College Technical Math 1B

...is a continuation of College Technical Math 1A. Topics include: measurement systems; computational geometry; right and oblique triangle trigonometry; and trigonometric functions on the unit circle. Emphasis will be on the application of skills to technical problems. Successful completion of College Technical Mathematics 1A and College Technical Mathematics 1B is the equivalent of College Technical Mathematics 1.

PREREQUISITE: 10804113 College Tech Math 1A, or 10804196 College Tech Math 1 A, or 10804109 Algebra Computation

10624122 Radiation Physics

...introduces the learner to health physics-related physics, properties of radiation, detection and measuring radiation, and gas-filled and solid-state detectors.

PREREQUISITES: 10624110 Nuclear Technology and Regulations and 10624105 Health Physics Calculations and Statistics and 10624114 Nuclear Systems and Sources

10624123 Radiation Physics-Lab

...expands the learner's ability to perform calculations, select instruments, and analyze samples. This course is associated with 624-122, Radiation Physics. *COREQUISITE: 10624122 Radiation Physics*

10624140 Radiochemistry

...prepares the learner to separate dissolved, suspended, liquid, and ionic radioactive components; perform qualitative and quantitative analysis of samples; and prevent the production of radioactive material by using proper chemical control.

PREREQUISITES: 10624122 Radiation Physics and 10806134 General Chemistry or 10806174 General Chemistry or High School Chemistry Equivalent

10624134 Radiation Shielding

...provides the learner with the skills to calculate radiation attenuation from various geometric radioactive sources, determine the effect of neutron radiation on materials, and estimate the exposure rate from various sources.

PREREQUISITE: 10624122 Radiation Physics

10624135 Radiation Shield-Lab

...expands the learner's ability to perform shielding of ionizing radiation sources and to measure the penetration of alpha beta and gamma radiation.

COREQUISITE: 10624134 Radiation Shielding

Advanced Certificate**10624118 Radiation Biology**

...prepares the learner to convert measuring units and activity to dose rates, predict the effect of radiation on living cells and human organs, evaluate radiation risk, and calculate internal doses.

PREREQUISITES: 10624110 Nuclear Technology and Regulations and 10624105 Health Physics Calculations and Statistics and 10624114 Nuclear Sys and Sources and 10624122 Radiation Physics and 10624123 Radiation Physics-Lab or 10624123C2 Radiation Physics

10624138 Radioactive Material and Management

...introduces the learner to the proper methods used to dispose of radioactive waste in liquid, solid, gaseous forms; determine waste classification, package/label requirements, proper type of transport container, shipment quantity classification, storage distance for people and film during shipments by rail/vessel/public roads, proper shipping name and UN number; completion of proper shipping papers; document materials inventory/shipments; evaluate methods used to process low level and high level waste.

10624145 Applied Health Physics

...prepares the learner to issue dosimetry, calculate neutron dose, monitor personal exposure, calculate radioactive airborne activity concentration, estimate radioactive airborne concentration, issue respirators, determine contamination levels, recommend protective clothing, reduce the spread of contamination, conduct an ALARA audit, reduce the total radiation exposure, maintain records, and estimate exposure to internal organs.

PREREQUISITE: 10624122 Radiation Physics

10624146 Applied Health Physics-Lab

...expands the learner's ability to perform applied health physics tasks as covered in Applied Health Physics, 624-145. This course is associated with 624-145.

COREQUISITE: 10624145 Applied Health Physics

Related Courses

10624132 Radiological Emergencies

...prepares the learner to plan and assist in emergencies involving radioactive material and radiation by calculating projected doses, collecting environmental samples, following emergency plans, and managing affected personnel.

PREREQUISITES: 106241 10 Nuclear Technology and Regulations and 10624105 Health Physics Calculations and Statistics and 10624114 Nuclear Systems and Sources

10449104 Principles of Industrial Hygiene

...prepares the learner to anticipate, recognize, and control occupational exposure to hazardous chemicals and physical stresses; conduct exposure monitoring; research regulations, literature, and other documents on occupational illness and disease; and evaluate exposure control procedures and practices for basic toxicology, air quality, noise, vibration, blood-borne pathogens, temperature extremes, radiation and ergonomics.

10529150 Hazardous Waste Site Worker

...provides training to respond to a hazardous material incident both in an industrial setting and field setting. Student will receive hazardous waste site worker certificate upon successful completion of the class.