# Plutonium workers get a new level of education in the actinide mission

March 2, 2021

## Nuclear Enterprise Science and Technology certificate program begins at UNM-LA

The pilot of LANL's new Nuclear Enterprise Science and Technology (NEST) program launched virtually in January. Designed for LANL's existing fissile material handler technician and technologist employee workforce, it will provide essential science, operations and business education on all aspects of working in modern nuclear materials handling and processing facilities.

The first course for the certificate program is called "Nuclear Facility Fundamentals." A cohort of 15 employees kicked off the program in January.

The academic certificate program received accreditation by the State Higher Education Department in FY20.

### What's in this NEST

NEST will address all aspects of working with plutonium (and other related special nuclear materials) for the next generation of technicians, operators, scientists and engineers to establish an effective and safe operating culture. The content will address specialized operational and technological aspects relevant to the actinide science mission. The program will also support the transformation of a UNM-LA building into a hands-on glovebox laboratory, where students can practice working.

### Expert instruction

Marianne Wilkerson, a UNM/LANL Joint Appointee, is the instructor for Nuclear Facility Fundamentals, the first course offered through UNM-LA for the NEST Certificate Program. Wilkerson began her career at LANL as an undergraduate student in INC-4 and then completed her Ph.D. thesis research in inorganic chemistry with Carol Burns and Robert Paine at UNM-Albuquerque, and her postdoctoral work with Harry Dewey. In addition to her duties for the NEST program, Wilkerson has served as principal investigator for a number of projects in nuclear forensics and plutonium science.

For this first course, she engaged LANL subject matter experts to deliver specific units on our historical background (Alan Carr), interactions of radiation with matter (John Klumpp), nuclear material control and accountability (Katrina Koehler), and criticality (Mandy Bowles-Tomaszewski and Norann Calhoun).

The program will serve as a new level of foundational education for plutonium workers in support of the national security mission.

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