Nuclear Technicians

SOC: 19-4051 • Career Profile Report

■ Key Facts

$104,240	6,000	-8.0%
Median Salary	Employment	Growth Rate

■ Requirements & Salary Range

Education: Associate's degree

■ Automation Risk Assessment

Low Risk - 8.0% probability of being automated in the next 10-20 years.

This job is relatively safe from automation due to its creative, social, or complex problem-solving requirements.

■■ Work-Life Balance

7.5/10 - Good work-life balance

■ Personality Fit (RIASEC)

Higher scores indicate better personality fit for this career type.

Realistic	6.2/10	**Investigative**	9.4/10
Artistic	5.6/10	**Social**	6.4/10
Enterprising	4.8/10	**Conventional**	6.4/10

■ Top Skills Required

Attention to detail, Communication skills, Critical-thinking skills, Math skills, Mechanical skills

✓ Strengths

- High Demand
- Flexible Work
- Continuous Learning

■ Challenges

- Burnout Risk
- Rapid Technological Change

■ What They Do

Nuclear Technicians typically perform the following tasks: • Follow nuclear equipment operational policies and procedures that ensure environmental safety. • Conduct surveillance testing to determine safety of nuclear equipment. • Monitor nuclear reactor equipment performance to identify operational inefficiencies, hazards, or needs for maintenance or repair. • Test plant equipment to ensure it is operating properly. • Apply safety tags to equipment needing maintenance. • Follow policies and procedures for radiation workers to ensure personnel safety. • Modify, devise, or maintain nuclear equipment used in operations. • Monitor instruments, gauges, or recording devices under direction of nuclear experimenters. • Perform testing, maintenance, repair, or upgrading of accelerator systems. • Warn maintenance workers of radiation hazards and direct workers to vacate hazardous areas. • Calculate equipment operating factors, such as radiation times, dosages, temperatures, gamma intensities, or pressures, using standard formulas and conversion tables. • Measure the intensity and identify the types of radiation in work areas, equipment, or materials, using radiation detectors or other instruments. • Communicate with accelerator maintenance personnel to ensure readiness of support systems, such as vacuum, water cooling, or radio frequency power sources. • Identify and implement appropriate decontamination procedures, based on equipment and the size, nature, and type of contamination. • Decontaminate objects by cleaning them using soap or solvents or by abrading using brushes, buffing machines, or sandblasting machines. • Collect air, water, gas or solid samples for testing to determine radioactivity levels or to ensure appropriate radioactive containment. • Determine or recommend radioactive decontamination procedures, according to the size and nature of equipment and the degree of contamination. • Set up equipment that automatically detects area radiation deviations and test detection equipment to ensure its accuracy.