



For a career that is

Rewarding

CHALLENGING

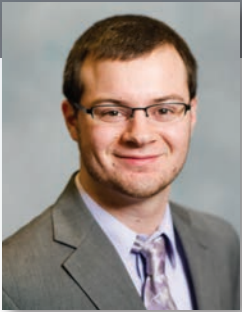
& Exciting

Nuclear Science and
Technology Offers

**Unlimited
Possibilities**

The sky's the limit

"I was drawn to the program because of the different paths I could take with my degree: Nuclear Medicine, Power, Research, etc. I wanted to have my name in a field that will shape our lives for years to come."



Richard Meshell

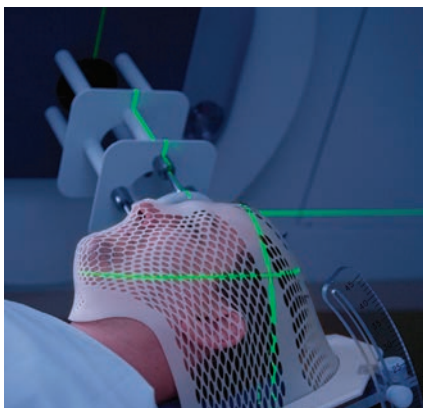
Nuclear Safety Analysis Engineer

Enercon Services, Inc., Kennesaw, GA
(BS in Nuclear Engineering)

These are exciting times for professionals in the nuclear science and technology field. New discoveries allow researchers and technicians to save lives, improve the environment, and venture into space. According to the U.S. Bureau of Labor Statistics, nuclear engineering has the second highest median salary - \$99,920 - with a bachelor's degree. You can be a part of the future by setting your sights on a unique career that will be both professionally and personally rewarding.

The choice is yours

Nuclear science and technology is a broad, diverse field with unlimited potential. The wide range of applications for NS&T go beyond nuclear power, and include everything from medical diagnostics, agriculture, and counterterrorism. There is a high demand for graduates of nuclear engineering programs with either B.S. or M.S. degrees.



18 million nuclear medical procedures are conducted every year in the U.S.

Medical Science

Discoveries based on nuclear science have dramatically improved both longevity and quality of life. Approximately, one-third of all patients admitted to hospitals in the U.S. are diagnosed or treated using radioisotopes. Physicians rely on x-rays to diagnose tumors without the need of invasive surgery. Radiation is being used to treat leukemia and other types of cancer. More than half of all medical equipment is sterilized with radiation using gamma irradiators, the remaining still use autoclaves (high pressure saturated steam).

Sample Career Choices in Nuclear Medicine and Biology

- Health physicists assure safe application of radiation
- Physicians use nuclear medicine to diagnose and treat diseases
- Nuclear medicine technologists run tests in hospitals



Careers in nuclear energy pay 36% more than average salaries in their local areas.



Nuclear technologies are applied in a wide variety of sectors including agriculture.

Environment

As the world's population grows, the need for food and other perishable resources is increasing rapidly. Radiation helps us develop plants that produce higher yields, raise healthier animals, eliminate pests without chemicals, and enhance food safety.

In recent years, more than 1,500 new crop varieties have been developed in 40 countries around the globe. Scientists used radiation technology to help them develop 90 percent of those new varieties. In the U.S., sterile insect technique (SIT) was used to eradicate the Screw-worm fly, whose larvae eat the living tissue of warm-blooded animals, including humans.

Sample Career Choices in Environmental Research and Nuclear Technology

- Gamma facilities operators use radiation to destroy microorganisms like salmonella or E. coli
- Biologists conduct experiments to develop new varieties of crops
- Research assistants help scientists and food engineers collect and analyze data
- Technologists measure to make the most of limited water supplies

Energy

With electricity consumption constantly rising, more countries around the world are viewing nuclear energy as a viable option as an emissions free energy producer. Nuclear energy is seen as a valuable, clean and efficient alternative to pollution-producing sources of energy relied on heavily today. Nuclear energy also powers satellites and ships, and provides electrical needs for some space laboratories.

Sample Career Choices in Nuclear Energy

- Reactor operators run the controls at a power plant to produce electricity
- Engineers design power plants and supervise operations
- Nuclear scientists explore ways to improve safety and efficiency
- Technologists locate underground natural resources

“Nuclear engineering really is the intersection of policy and technology. I get to work with scientists, policymakers, and international partners to mitigate the proliferation of nuclear weapons. I chose to study nuclear engineering so I could impact the world in a positive way.”



Lenka Kollar
Nonproliferation Technical Associate
Argonne National Laboratory, Lemont, IL
(BS and MS in Nuclear Engineering)



The U.S. has the most robust nuclear education system in the world with over 30 universities and 35 community colleges focusing on relevant nuclear energy related curriculum.



Nuclear workers keep their skills fresh by participating in company sponsored training.

Other nuclear-related choices include:

- Archaeology and paleontology
- Art appraisal and authentication
- Crime investigation
- Homeland Security
- Policy making
- Science education

Consider a career in nuclear science and technology

Take steps to prepare yourself during your high school and college years. Strong backgrounds in science and math are required for engineers and scientists. To enter the field as a scientist or engineer, you will need at least a four-year bachelor's degree, and some positions require a master's degree or doctorate. Technologists and technicians also need at least some math and science education. Entry level positions generally require at least two years of college.

Learn more. Go to NuclearConnect.org

- For success stories of young professionals
- Colleges & universities that offer nuclear-related degrees
- Job descriptions and salary ranges
- Scholarship information

At first I was just looking for a field that combined math and physics, but once I got into it, I quickly realized that nuclear engineering had many applications with the potential to improve quality of life around the world.



Courtesy DOE CSGF

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