

## Nuclear Medicine Technologist

Nuclear medicine is the medical specialty that utilizes the nuclear properties of radioactive and stable nuclides to make diagnostic evaluations of the anatomic or physiologic conditions of the body and to provide therapy with unsealed radioactive sources. The skills of the nuclear medicine technologist complement those of the nuclear medicine physician.



### History

The Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT) was formed by the Society of Nuclear Medicine, Society of Nuclear Medical Technologists, American College of Radiology, American Society of Clinical Pathologists, American Society for Medical Technology, and American Society of Radiologic Technologists. The first meeting of the Joint Review Committee was in 1970.

The Society of Nuclear Medical Technologists, one of the original sponsors, terminated its corporate status as a professional organization in 1975. The American Society for Medical Technology and the American Society of Clinical Pathologists relinquished sponsorship in 1994.

The first *Essentials of an Accredited Educational Program for the Nuclear Medicine Technologist* was adopted by the collaborating organizations in 1969. The *Essentials* were substantially revised in 1976, 1984, 1991, 1997, and 2003.



### Career Description

Nuclear medicine technologists perform tasks in the areas of patient care, technical skills, and administration. When caring for patients, they acquire adequate knowledge of the patients' medical histories to understand their illnesses and pending diagnostic procedures for therapy, instruct patients before and during procedures, evaluate the satisfactory preparation of patients before beginning a procedure, and recognize emergency patient conditions and initiate life-saving first aid when appropriate.

Nuclear medicine technologists apply their knowledge of radiation physics and safety regulations to limit radiation exposure, prepare and administer radiopharmaceuticals, use radiation detection devices and other kinds of laboratory equipment that measure the quantity and distribution of radionuclides deposited in the patient or in a patient specimen, perform in vivo and in vitro diagnostic procedures, use quality control techniques as part of a quality assurance program covering all procedures and products in the laboratory, and participate in research activities.

Administrative functions may include supervising other nuclear medicine technologists, students, and other personnel; participating in procuring supplies and equipment; documenting laboratory operations; participating in departmental inspections conducted by various licensing, regulatory, and accrediting agencies; and participating in scheduling patient examinations.



### Employment Characteristics

Opportunities in nuclear medicine technology may be found in major medical centers, smaller hospitals, and independent imaging centers. Opportunities also are available for obtaining positions in clinical research, education, and administration.



### Salary

Salaries vary depending on the employer and geographic location. Data from the 2007 Wage and Salary Survey of the American Society of Radiologic Technologists (ASRT) indicate that the average salary for practitioners with less than 2 years of experience is \$56,400, the overall average is \$69,083, and the average salary of the top 5% of earners is \$95,906. For more information, refer to [www.ama-assn.org/go/hpsalary](http://www.ama-assn.org/go/hpsalary).



### Educational Programs

**Length.** The professional portion of programs ranges from 1 to 2 years. Institutions offering accredited programs may provide an integrated educational sequence leading to an associate or baccalaureate degree over a period of 2 or 4 years.

**Prerequisites.** Applicants for admission must have graduated from high school or the equivalent and have acquired postsecondary competencies in human anatomy and physiology, physics, algebra, medical terminology, computer applications, oral and written communications, and general chemistry.

**Curriculum.** The curriculum includes:

- Patient care
- Statistics
- Nuclear medicine and radiation physics
- Radiation biology
- Radiation safety and protection
- Radionuclide chemistry and radiopharmacy
- Nuclear instrumentation
- Positron emission tomography (PET)
- Computer applications for nuclear medicine
- Diagnostic nuclear medicine procedures
- Immunology as related to nuclear medicine
- Radionuclide therapy
- Quality control and quality assurance



### Inquiries

#### Careers/Curriculum

American Society of Radiologic Technologists  
15000 Central Avenue SE

Albuquerque, NM 87123  
[www.asrt.org](http://www.asrt.org)

Society of Nuclear Medicine—Technologist Section  
1850 Samuel Morse Drive  
Reston, VA 22090-5316  
703 708-9000  
[www.snm.org](http://www.snm.org)

#### Certification/Registration

Nuclear Medicine Technology Certification Board  
3558 Habersham at Northlake, Building I  
Tucker, GA 30084  
404 315-1739  
[www.nmtcb.org](http://www.nmtcb.org)

American Registry of Radiologic Technologists  
1255 Northland Drive  
Mendota Heights, MN 55120  
651 687-0048  
www.arrt.org

**Program Accreditation**

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Medicine Technology (JRCNMT)  
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