

# 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 and of other professionals in the field.



## Career Description

Nuclear medicine technologists perform a number of 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 and relate to their illnesses and pending diagnostic procedures for therapy, instruct patients before and during procedures, evaluate the satisfactory preparation of patients before commencing 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, laboratory assistants, 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. According to a 2007 survey from the American Society of Radiologic Technologists, the overall average salary is \$69,083, although salaries vary by geographic location. Refer to Section IV, Table 5 of this *Directory* for more information, or see [www.ama-assn.org/go/hpsalary](http://www.ama-assn.org/go/hpsalary).



## Educational Programs

**Length.** The professional portion of the programs is 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 physics 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 imaging and nonimaging in vivo and in vitro 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.nmteb.org](http://www.nmteb.org)

American Registry of Radiologic Technologists  
1255 Northland Drive  
Mendota Heights, MN 55120  
[www.arrrt.org](http://www.arrrt.org)

### Program Accreditation

Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT)  
2000 West Danforth Road, Suite 130, #203  
Edmond, OK 73003  
405 285-0546  
405 285-0579 Fax  
E-mail: [jrcnmt@coxinet.net](mailto:jrcnmt@coxinet.net)  
[www.jrcnmt.org](http://www.jrcnmt.org)