

# NUCLEAR MEDICINE TECHNOLOGY

Associate in Applied Science Degree | Career Program  
Department of Engineering, Physics and Technology

## Program Description

Affiliated with Montefiore The University Hospital for the Albert Einstein College of Medicine

This rewarding technology field involves collaboration and interactions with highly specialized people, the operation of sophisticated instruments, and excellent salaries. Nuclear Medicine is a branch of medical imaging that uses radioactive isotopes for the diagnosis and treatment of certain diseases.

The Nuclear Medicine Technologist prepares and administers the correct radioisotope doses, positions the patients under the gamma camera and produces images that are then interpreted by a physician.

BCC's affiliated clinical sites include Montefiore Medical Center, Mount Sinai Medical Center, New York Presbyterian, St. Barnabas Hospital and Memorial Sloan Kettering Cancer Center. Under supervision, students perform scans of the liver, bone, brain, kidneys, and the heart and cardiovascular system. Several sites perform Position Emission Tomography. The Nuclear Medicine Technology program is accredited by the Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT), nationally recognized by the Council for Higher Education Accreditation (CHEA).

The minimum acceptable cumulative G.P.A. for applying to the Nuclear Medicine Technology program is 2.7 (B-). For students transferring from another college, grades received from transferred courses will be used in the calculation of their effective index. Transferred courses may not include NMT designated courses.

Once students have been accepted to the Nuclear Medicine Program, students must pass each didactic NMT class with a C+ or better and each clinical class with a B- or better. If students do not receive the required minimum grade, they are subject to program dismissal. For full policies on NMT program admission, retention, and graduation, please consult the BCC Codification of Academic Rules and Regulations at <http://www.bcc.cuny.edu/academics/academic-rules-regulations/>

Upon the completion of the program at Bronx Community College, students are required to pass one of two national registry examinations to become identified as a Registered Nuclear Medicine Technologist and to practice as a Nuclear Medicine Technologist. Further study in this field is possible in institutions offering a baccalaureate degree in Nuclear Medicine Technology. The program articulates with New York City College of Technology and SUNY Empire State College. Visit the Transfer Planning web site for more information.

## Learning Outcomes

Upon successful completion of the Nuclear Medicine Technology program requirements, students will be able to:

1. Ensure appropriate sequence for multiple procedures and interact with appropriate health care personnel regarding special orders.
2. Inspect inventory of radiopharmaceuticals, pharmaceuticals, and supplies to ensure that adequate quantities are available to complete scheduled procedures.
3. Obtain pertinent medical history, including any previous imaging procedures, to assist in performing the study and physician interpretation.
4. Take appropriate measures to minimize radiation exposure to patient (i.e., Image Wisely, Image Gently).
5. Use appropriate precautions to minimize occupational radiation exposure (i.e., ALARA).
6. Verify that the radiopharmaceutical is correct for the procedure to be performed prior to administering the dose.
7. Determine appropriate dosage to be administered.
8. Record patient and radiopharmaceutical information to comply with regulatory requirements.
9. Interpret results of instrumentation quality control tests to assure that performance standards are met.
10. Annotate images with information necessary for identification and interpretation.

## Nuclear Medicine Graduate Outcomes

Percentage of Students Successfully Passing, on the First Attempt, the The American Registry of Radiologic Technologists (ARRT) and the Nuclear Medicine Technology Certification Board (NMTCB) Accreditation Exams:

Year	ARRT		
	Number of Examinees	Passed	%
2015	11	9	82
2016	12	6	50
2017	7	7	100
2018	4	3	75%
2019	11	10	91%

Year	NMTCB		
	Number of Examinees	Passed	%
2015	7	6	86
2016	0	0	0
2017	3	3	100
2018	2	1	50%
2019	9	6	67%

Year of Program Entry	# Initially Enrolled
2015	14
2016	15
2017	14
2018	11
2019	17

Year of Program Entry	# Graduated
2015	7
2016	11
2017	7
2018	5
2019	12

Year of Program Entry	Graduation Rate (%)
2015	50%
2016	73%
2017	50%
2018	45%
2019	71%

Average Graduation Rate: 58%

## NUCLEAR MEDICINE TECHNOLOGY CURRICULUM (PATHWAYS)

63 Credits required for AAS Degree

Program Director: Professor Grace Tursi

### Required Core

#### A. English Composition

- ENG 110 English Composition I: Fundamentals of Writing and Rhetoric *OR* ENG 111 English Composition I: Writing and Rhetoric (3 Credits)

#### B. Mathematical and Quantitative Reasoning

- MTH 30 Pre-Calculus Mathematics (4 Credits)

#### C. Life and Physical Sciences

- BIO 23 Human Anatomy and Physiology I (4 Credits)

### Flexible Core

#### A. World Cultures and Global Issues

- HIS 10 History of the Modern World *OR* HIS 11 Introduction to the Modern World (3 Credits)

#### D. Individual and Society

- COMM 11 Fundamentals of Interpersonal Communication (3 Credits)

#### E. Scientific World

- BIO 24 Human Anatomy and Physiology II (4 Credits)

#### Additional Flexible Core course

- CHM 17 Fundamentals of General Chemistry I (4 Credits)

### SUBTOTAL 25

### Major Requirements

- ART 10 Art Survey *OR* MUS 10 Music Survey (1 Credit)
- BIO 22 Medical Terminology (2 Credits)
- LAW 45 Medical Law (3 Credits)
- NMT 78<sup>1</sup> EKG – Interpretation and Techniques (2 Credits)
- NMT 79<sup>1</sup> Phlebotomy (2 Credits)
- NMT 71 Nuclear Medicine Laboratory (1 Credit)
- NMT 81 Orientation to Nuclear Medicine (3 Credits)
- NMT 82 Radio-Pharmaceutical Chemistry (3 Credits)
- NMT 83<sup>1</sup> Radiation Physics and Dosimetry (3 Credits)
- NMT 84 Radiation Biology (2 Credits)
- NMT 85<sup>1</sup> Nuclear Medicine Procedures (2 Credits)
- NMT 86 Didactic Nuclear Medicine (1 Credit)

- NMT 87<sup>1</sup> Clinical Nuclear Medicine I (3 Credits)
- NMT 88 Senior NMT Seminar (3 Credits)
- NMT 90<sup>1</sup> Clinical Nuclear Medicine II (3 Credits)
- PHY 24 Principles of General Physics (4 Credits)

**SUBTOTAL 38**

<sup>1</sup> Parts or all of these courses are taught at Montefiore Medical Center including NMT 78, 79. NMT 71 and 81-88 are taught sequentially, although listed concurrently. These instructional hours for NMT 81-84 generally extend from January through May, just prior to the start of clinical training. Students may not register for any NMT course without permission of the program director.

