

# 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 a variety of scans on select organs, cells, and molecules within the body. In addition, 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).

To be eligible for admission to NMT, students must have successfully completed all the Math, Biology, Chemistry, Physics, and English pre-requisites (ENG 100/110/111, BIO 23, BIO 24, CHM 17, MTH 28/28.5, & PHY 24). Students must also have a minimum grade point average of B- (2.7) after completing the prerequisite courses. Be aware that admission to the program is competitive, and a GPA of higher than 2.7 may be needed to be admitted to the clinical program and enrolled in NMT courses. In cases where the program capacity is lower than the number of qualified students, students with the highest GPA will be admitted first. 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. Those students who have been at BCC waiting for admission to the Program will have preference over new transfer students.

**Note, as well, that non academic factors (e.g., criminal record, health conditions, and drug use) can impact whether a student may be admitted or continue in the NMT program. Please refer to the NMT handbook for additional information and/or contact the NMT program director.**

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 academic policies on NMT program admission, retention, and graduation, please consult the BCC Codification of Academic Rules and Regulations available on the BCC website.

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. Demonstrate knowledge of Nuclear Medicine procedures and core concepts through assessment provided by Mock Certification Exam.
2. Demonstrate competence in a variety of routine Nuclear Medicine procedures.
3. Demonstrate proficiency of radiation safety including: radiation physics, radiation biology, instrumentation, quality control, and principles of ALARA.
4. Exhibit skills in patient care including: interpersonal communication, obtaining pertinent medical history, basic skills in EKG and phlebotomy.
5. Display a working knowledge of radiopharmaceuticals including: dosage administration, pediatric considerations, and decay principles.

## Nuclear Medicine Graduate Achievement Data

Graduate achievement data is an indicator of program effectiveness, demonstrating the extent to which a program achieves its goals. The current report on graduate achievement data, identified by program, is available on the JRCNMT website by clicking on the following link: <http://www.jrcnmt.org/students/program-graduate-outcomes/>

## 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 28 College Algebra and Elementary Trigonometry (3 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 24**

### 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 (2 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 39**

<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.