

Nuclear Medicine Technology, AAS

School of Health Professions

Program Description

The Nuclear Medicine Technology AAS Program trains individuals to become professionals skilled in using radioactive materials and specialized equipment to diagnose and treat diseases. The program prepares students for a career as a nuclear medicine technologist, focusing on the safe handling of radioactive substances, operating advanced imaging equipment, and working closely with patients and healthcare teams.

Career Opportunities

Graduates of a Nuclear Medicine Technology Program typically find roles in hospitals, diagnostic imaging centers, research institutions, and outpatient care facilities. The programs equip students with the technical, medical, and interpersonal skills needed to succeed in a high-demand healthcare field.

This is a selective admission program. Please see the college website for details.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Foundational Knowledge:
 - Understand the principles of nuclear physics, radiation, and radiopharmaceutical chemistry.
 - Explain human anatomy, physiology, and pathology as they relate to nuclear medicine procedures.
 - Understand the biological effects of radiation on human tissue.
2. Technical Proficiency:
 - Operate and maintain nuclear medicine equipment, including gamma cameras, PET/CT scanners, and dose calibrators.
 - Accurately prepare, handle, and administer radiopharmaceuticals.
 - Perform imaging and non-imaging procedures, such as PET scans, SPECT scans, and organ function tests.
3. Safety and Compliance:
 - Apply radiation safety principles to protect patients, staff, and the public from unnecessary exposure.
 - Comply with federal, state, and institutional regulations regarding the use of radioactive materials.
- Safely manage the storage and disposal of radioactive substances.
4. Patient Care and Communication:
 - Provide compassionate and culturally competent care to diverse patient populations.
 - Communicate effectively with patients to explain procedures, address concerns, and ensure cooperation.
 - Monitor patients for adverse reactions and respond appropriately to emergencies.
5. Analytical and Problem-Solving Skills:
 - Evaluate diagnostic images and data for quality and accuracy.
 - Collaborate with healthcare teams to analyze results and contribute to patient diagnoses and treatment plans.
 - Troubleshoot technical issues with equipment and procedures.
6. Professionalism and Ethics:
 - Demonstrate ethical decision-making and maintain patient confidentiality.
 - Exhibit professionalism in interactions with patients, colleagues, and other healthcare professionals.
 - Commit to lifelong learning and staying current with advancements in nuclear medicine technology.
7. Clinical Competence:
 - Perform clinical procedures independently under supervision during internships or practicums.
 - Document patient and procedure data accurately and efficiently.
 - Adhere to best practices and protocols to ensure high-quality outcomes.
8. Certification and Career Readiness
 - Prepare for national certification exams such as the NMTCB (Nuclear Medicine Technology Certification Board) or ARRT (American Registry of Radiologic Technologists).
 - Develop the skills necessary for employment in hospitals, diagnostic imaging centers, or research facilities.

Continue to the next page...

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| Sugg. Term | Seq # | Course ID | Course Title | Cr. | Prereq/Coreq(Co) | Options Available |
|------------------------|-------|-----------|---|-----|--|-------------------|
| Prior to Program Start | 1 | BIO 171 | Anatomy and Physiology I | 4 | CHM 107, CHM 150/151, CHM 225 or HS Chemistry & ENG 095 or Placement | |
| 1st Fall | 2 | NMT 100 | Introduction to Nuclear Medicine | 1 | Admission to Program, BIO 171(C or better) | |
| | 3 | ALH 122 | Medical Terminology | 3 | | |
| | 4 | BIO 172 | Anatomy and Physiology II | 4 | BIO 171 (C or better) | |
| | 5 | NMT 102 | Applied Nuclear Medicine - PET Technology I | 4 | Admission to Program, BIO 171 (C or better) | |
| | 6 | NMT 104 | Nuclear Medicine - PET Instrumentation I | 3 | Admission to Program | |
| 1st Spring | 7 | NMT 150 | Nuclear Medicine - PET Physics | 3 | NMT 100, HS Physics (C or better), or PHY 107(C or better), or PHY 110 (C or better) | |
| | 8 | MTH 157 | College Algebra | 3 | MTH100 or Placement | |
| | 9 | NMT 154 | Nuclear Medicine - PET Instrumentation II | 3 | NMT 104 | |
| | 10 | NMT 152 | Applied Nuclear Medicine - PET Technology II | 4 | NMT 102; Co: NMT 150 | |
| 1st Summer | 11 | NMT 165 | Clinical Nuclear Medicine Education I | 4 | Co: NMT 152 | |
| | 12 | NMT 175 | Clinical Nuclear Medicine Education II | 3 | NMT 165 | |
| 2nd Fall | 13 | NMT 185 | Clinical Nuclear Medicine Education III | 3 | NMT 175 | |
| | 14 | CPT 150 | Microcomputer Concepts | 3 | | |
| | 15 | ENG 161 | College Writing | 3 | ENG 085 with Permission of Instructor, ENG 095 or Placement | |
| | 16 | PSY 160 | General Psychology | 3 | | |
| | 17 | NMT 202 | Applied Nuclear Medicine - PET Technology III | 4 | NMT 152 | |
| 2nd Spring | 18 | NMT 215 | Clinical Nuclear Medicine Education IV | 4 | NMT 185 | |
| | 19 | PHL 203 | Biomedical Ethics | 3 | | |
| | 20 | RAD 221 | Radiographic Pathology | 3 | RAD 211, RAD 216 | |
| | 21 | NMT 265 | Clinical Nuclear Medicine Education V | 5 | NMT 215 | |
| | 22 | RAD 231 | Nuclear Medicine Technology - PET Capstone | 1 | RAD 211, RAD 216; Co: RAD 221, RAD 226 | |
| | 23 | SPC 156 | Interpersonal Communication | 3 | | |

Minimum Program Credits

74

NMT