

**PENNSYLVANIA COLLEGE
OF HEALTH SCIENCES**

Nuclear Medicine Technology Program

**STUDENT HANDBOOK
2022-23**

**PENNSYLVANIA COLLEGE OF HEALTH SCIENCES
NUCLEAR MEDICINE TECHNOLOGY PROGRAM**

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PENNSYLVANIA COLLEGE OF HEALTH SCIENCES NUCLEAR MEDICINE TECHNOLOGY PROGRAM

GENERAL INFORMATION

Introduction

Nuclear medicine is an integral part of the practice of medicine. This field uses radioactive isotopes for diagnostic and therapeutic purposes. Nuclear medicine uniquely provides information about both the structure and the function of virtually every major organ system within the body. It is this ability to characterize and quantify physiological function which separates Nuclear Medicine from other imaging modalities.

This handbook outlines the policies specific to the Nuclear Medicine Technology Program. Each student will also need to conform to the policies of PCHS and clinical sites.

Program Mission

The mission of the Nuclear Medicine Technology Program is to provide didactic and clinical education to persons who wish to serve the community as competent, entry-level nuclear medicine technologists.

Program Educational Outcomes

Graduates of the program will:

1. Work effectively with members of the health care team.
2. Demonstrate competency in the performance of nuclear medicine procedures.
3. Show ability to think critically by applying didactic knowledge to clinical situations.
4. Assume responsibility for continuous learning, professional growth and service to the community.
5. Respect the ethical, legal, moral and cultural issues that impact the care of patients.

Accreditation

The Pennsylvania College of Health Sciences' Nuclear Medicine Technology Program is accredited by the Joint Review Committee on Educational Programs in Nuclear Medicine Technology, 820 W. Danforth Road, #B1, Edmond, OK 73003.

The accreditation process includes review of course surveys, clinical site surveys, and employer surveys after graduation. In an effort to report results of the surveys to the JRCNMT, the program faculty will deploy course and clinical site surveys to the students and provide adequate time to complete the surveys. At program completion, graduating students will be asked to provide their employment status and location for faculty to deploy employer surveys after graduation.

Advisory Committee

The Advisory Committee is composed of at least two representatives from PCHS and one representative from each academic and clinical affiliate. Other institutional representatives may participate in discussions but are ex-officio and without vote. New members are appointed by their

institution. The function of the Advisory Committee is to facilitate cooperation among the institutions and to review and improve the course of study. The Advisory Committee will meet at least twice per year.

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Library and Reference Books

There are three collection areas of books that students may use for reference:

1. College Library: The Pennsylvania College of Health Sciences library is located in the Cooper Building in the Learning Commons. Books can be loaned for a period of two weeks. Please refer to PCHS student handbook for additional information. Clinical affiliates also have hospital libraries which are available to the students. Hours and lending policies vary.
2. Departmental Library: Located at each clinical site.
3. Academic Affiliate Libraries: Located at Cedar Crest College, Indiana University of Pennsylvania, Millersville University, and York College. For lending policies, please inquire at the individual library.

Professional Organizations and Educational Meetings

Students are encouraged to become members of the Society of Nuclear Medicine and Molecular Imaging and attend continuing education seminars in the area. These are usually evening meetings and therefore attendance is not mandatory.

Professional Conduct in the Clinical Area

1. The student must respect the confidentiality of the technologist-patient relationship and not discuss information with others outside of the health care team.
2. When in the clinical unit, students must wear correct professional attire as specified in the dress code described under the policy section of the handbook.
3. Students are expected to stay with their assigned technologist unless otherwise directed by the

clinical supervisor.

4. Students are not to leave the department without first notifying their instructor technologist.
5. When in areas where they may be overheard by patients, students shall address each other and members of the staff in a professional manner. Conversation held in the presence of a patient should be limited to that necessary to perform the study. Additional conversation should always include the patient and be used to put the patient at ease and make the study less intimidating.
6. Smoking and tobacco use will not be permitted on any properties affiliated with Pennsylvania College of Health Sciences' Nuclear Medicine Program.
7. Find constructive work to do between cases. Suggestions include: prepare for next imaging procedure, restock supplies, organize paperwork, review what was learned in an earlier study, or assist in other areas.
8. Personal phone calls/texting during clinical hours must be kept to a minimum and are not permitted in patient care areas; reserved for emergency situations only.

POLICIES

Evaluations

Scheduled evaluations will be given during each course. Unannounced tests may also be given. Tests may cover material reviewed in class as well as assigned readings. During clinical rotations, students will be graded on dependability, quality of work, responsibility and attitude. Students will need to demonstrate clinical competence.

Grading Policies

Didactic

Students must earn a "C" or 74% in each area of content in all didactic courses. An understanding of each of these areas is critical to the competent nuclear medicine technologist.

Clinical

An 84% is required for all competencies and the overall clinical course. A score of less than 84% on an individual evaluation does not necessarily indicate failure but does represent an area of weakness.

Unsuccessful Procedure Competency

- A procedure competency is considered unsuccessful under any of the following circumstances:
 - overall score is below 84%
 - student cannot independently demonstrate all critical behaviors (recorded as earned grade or 83%, whichever is lower)
 - competency is stopped by the student or clinical evaluator (grade recorded based on amount of competency completed)
- After completion of remedial activities to the satisfaction of the clinical instructor, the student may re-attempt the procedure competency.
- All attempted procedure competencies will contribute to the semester clinical grade in the semester attempted.

- More than two unsuccessful procedure competencies in one semester or circumstances of unsafe clinical practice may result in dismissal from the program.

Spot Competency

In order to assure that students continue to maintain competency, each student will be asked to complete a “spot comp” in semesters 2 and 3. Students will be asked to demonstrate ongoing competency in one of the procedures that they had successfully comped on in a prior semester. Failure to demonstrate ongoing competency will result in a two (2) point deduction from the semester clinical grade. Additionally, the student will be required to regain competency within three clinical weeks of attempted spot comp. Failure to do so will result in a probationary status.

Clinical Requirement Due Dates

Any requirement of the clinical program that is completed and/or submitted after the designated due date may result in a one (1) point deduction from the final clinical grade in that semester.

Student Signatures

Students are required to sign all evaluations, procedure competencies, conference records, etc. when they are reviewed. The student’s signature on the document is simply an acknowledgement of having received and reviewed the document and does not necessarily signify agreement with the information which it contains.

Attendance Policy

Due to the uniqueness of the program, the close patient contact, and responsibilities of the student, a high level of academic and technical competence is required. All students are required to attend all lectures, laboratory sessions and complete all course assignments. Absenteeism caused by situations beyond the control of the student will default to the policy of the assigned clinical site.

1. Students will be given 24 hours of personal time for use as sick days, interview days, etc. throughout the clinical year. Any time used in excess of the 24 hours will be made up at the convenience of the clinical supervisor.
2. Students are required to arrive on time for class and clinical. Clinical hours may vary depending upon assigned rotation.
3. At the end of the regularly assigned day you are expected to leave. Under only two circumstances are you permitted, but not required to stay.
 - a. At the request of the nuclear medicine staff, to assist on a busy day.
 - b. To observe an interesting study that is infrequently seen in the nuclear medicine department.

If you are interested in taking advantage of either of these opportunities, an equal number of hours will be added to your personal time. Overtime must be documented by the student and verified by the clinical supervisor on the attendance sheet.

4. If you will be late or absent notify the department on clinical days and the program director on class days prior to the time you are scheduled to arrive.
5. Absence of 3 days or more may require written documentation to return to the clinical site from a medical provider.

6. Your attendance is a reflection of your professionalism. The following behaviors will result in a written warning:
- ◇ Three incidents of tardiness
 - ◇ Unexcused absences from class or clinical
 - ◇ Failure to notify appropriate faculty of absence

Dress code

The Nuclear Medicine program expects students to maintain a positive image in the classroom (physical), clinical environment, college activities, and college-related experiences. Students should present themselves in a professional, neat, clean and coordinated appearance. This includes appropriate clothing attire, well-groomed hair, beards, and mustaches, and follows customary personal hygiene standards.

In the clinical environment, students are expected to wear appropriate clinical attire and meet clinical grooming standards. Clinical attire is designed to meet appropriate professional standards as well as act as an identifier of student status. Clinical attire includes the college student ID, college uniform (charcoal gray scrub top, pants, and warm-up jacket/lab coat), white socks, and non-permeable closed front and back shoes. It is a requirement for students to wear the warm-up jacket/lab coat at all times while in the clinical environment.

Students should maintain typical clinical grooming standards such as clean and well-groomed nails free from polish, avoid the use of fragrances, cover visible tattoos and facial piercings, and avoid wearing jewelry that dangles away from the body, interferes with clinical performance, or distracts others. Students should refer to the policy and guidelines specified by the clinical affiliates.

The Program Director upon written request of the student may grant exceptions to the dress code that are related to cultural or religious beliefs.

Probation and Dismissal

The following are examples of conditions that can result in probation. Should the condition be extreme, immediate expulsion is a possibility.

1. Violation of the professional conduct policy or Code of Conduct.
2. Violation of the attendance policy.
3. Failure to maintain a grade of "C" or better in didactic courses.
4. Insubordination
5. Failure to accomplish clinical assignments and objectives.
6. Unsafe clinical performance
 - Examples may include, but are not limited to the following behaviors:
 - a. Failure to prepare for clinical assignments.
 - b. Failure to properly prepare, document and/or administer pharmaceuticals (radioactive and non-radioactive)
 - c. Failure to demonstrate the application of previously learned skills, principles and competencies in the performance of nuclear medicine imaging.
 - d. Failure to comply with the policies and procedures of the clinical institution.

- e. Practices beyond educational level, experience, or responsibilities of a nuclear medicine student.
 - f. Failure to verify patient identification and/or doctor's order.
7. Cheating in related or professional courses. Refer to Academic Integrity 2.0
<https://my.pacollege.edu/college-services-and-resources/policies/Pages/default.aspx>
8. Failure to wear radiation monitoring devices or failure to turn in badges on an appropriate date to be read. See **Personnel Radiation Monitoring and Radiation Safety** policy below.

If a student does not comply with the policies and procedures set forth by the program and/or the hospital, the student will:

- receive a written warning
- have two points deducted from the semester clinical grade (with the exception of #3)
- be placed on probation

An additional event will result in a two (2) point deduction from the clinical grade. The third event will result in dismissal.

Any event that breeches patient safety or confidentiality can result in immediate dismissal. Failure to earn a passing grade will result in dismissal from the program. In the event of dismissal, the student will receive no tuition refund.

Health Science Programs (Associate Degrees, Technical Certificates, Academic Certificates) Any student not earning the required grade in a program specific course (NMT prefix) will be dismissed from the program. To resume enrollment in the program, students must reapply and be accepted.

All students are expected to comply with College policies related to COVID 19.

With the evolving conditions of COVID, it is the student's responsibility to follow both the PA College guidelines while on campus and those of their clinical assignment while on site. Please refer to the COVID 19 info on the PA College portal for the most up to date information.

Admission

Students enrolled in a Nuclear Medicine Technology program other than PA College (Cedar Crest College, Millersville University of Pennsylvania, Indiana University of Pennsylvania or York College of Pennsylvania) should apply to the academic certificate program in the fall prior to the August they wish to begin clinical. Students enrolled in the Nuclear Medicine program with PA College and the academic affiliates listed above are given priority over other applicants. This is a competitive admission process due to the limited availability of clinical seats.

Applicants to the academic certificate program must have earned an approved associate or higher degree, have completed a two-year post-secondary allied health program, or will have met the associate or baccalaureate requirements from the primary educational institution upon completion of the academic certificate program.

Nuclear Medicine Technology (NMT)

Associate Degree NMT students must complete the following courses with a grade of “C” or higher to be eligible for progression into the second year clinical coursework:

BIO 175	Human Anatomy & Physiology I
BIO 176	Human Anatomy & Physiology II
CHE 100	General Chemistry
ENG 100	English Composition
MAT 160	College Algebra
PHY 150	Physics

The following courses must be completed as prerequisites or co-requisites to the Nuclear Medicine academic certificate program:

- Humanities electives
- Social science electives

Refer to the all college policy, *2.2.1 Academic Progression*, for additional academic standards requirements.

Transfer Credit

1. Earned credit may be submitted for review based on the following timeline:

<i>Course</i>	<i>Years Between Completion of Original Course and Date of Enrollment to PA College</i>
Anatomy & Physiology I or II	≤ 10
Calculus	< 10
Microbiology	≤ 5
Nutrition	≤ 10

Acceptance of Credits Outside of Current Time Limits: Students may request that courses taken outside the current time limits be considered for acceptance if there is evidence of recent work experience within the concentration. Faculty in the discipline will determine if the work experience satisfies the requirement. Examples of evidence that will be considered include the following:

<i>Course</i>	<i>Recent Experience</i>
BIO 175/176 Anatomy & Physiology I and II	Teaching biology or related research or graduate degree
BIO 185 Microbiology	Working in a microbiology lab or related research or graduate degree
BIO 250 Nutrition for Life	Working as a dietitian or related

2. All other courses will be reviewed regardless of the time since completion. Transfer credit for courses will be approved by the appropriate faculty.

Refer to the all college policy, *1.0.1 Transfer Credit*, for additional information about transferring courses.

All NMT students must complete the following courses with a grade of “C” or higher:

Nuclear Medicine theory courses (NMT 201, 202, 203)
HSC 195 Cross-Sectional Anatomy
HSC 100 Medical Terminology
HSC 101 Methods of Patient Care
PHI 210 Ethical and Legal Dimensions in the Health Sciences

All students must complete the following courses with a grade of “B” or higher:
Nuclear Medicine clinical courses (NMT 211, 212, 213)

Refer to the all college policy, *2.2.1 Academic Progression*, for additional academic standards requirements.

Course Delivery

The instructor and institution reserve the right to alter, substitute, or amend syllabi and/or delivery of material. In extenuating circumstances, a change in class format (e.g. in-person to online) may be necessary.

In the event that such extenuating circumstances prohibit student participation in clinical experiences, course outcomes will be evaluated using alternate means, as appropriate.

Personnel Radiation Monitoring and Radiation Safety

The clinical department will provide the students with personal dosimeters in the form of badges and rings.

1. Students must wear the ring and body dosimeters appropriately.
2. Personal Dosimeters will be changed monthly, bimonthly or quarterly as required by the clinical site. Students are responsible for exchanging dosimeters in the time frame required by the date on the dosimeters.
3. Exposure reports will be reviewed at least quarterly with the students. Students with high readings will be informed of the readings and an investigation of exposure will be undertaken. Exposure records will be initialed by the student and kept on file.
4. **In the event of a lost or misplaced ring or body dosimeter, it is the student’s responsibility to notify the clinical supervisor or radiation safety officer immediately.**

Patient and Order Verification

All patients must be identified properly and receive the procedures requested by their referring physician. That proper documentation in the form of a signed doctor's order must be received and retained.

Identify all patients by two forms of ID prior to performing a nuclear medicine procedure. In the event that there is no signed doctor's order, follow the procedure at your clinical site to obtain an order.

Confirm that the following data is documented on the doctor's order:

- a. patient's name and birth date
- b. patient's referring physician's name
- c. exam desired
- d. clinical information
- e. additional note, if appropriate, such as stat report

Students must review all signed doctor's orders and procedure requests with a technologist prior to dispensing any form of pharmaceutical or radiopharmaceutical. The technologist will verify that he/she has reviewed the doctor's order, following the clinical facilities protocol, before permitting the student to continue with the study.

Incident/Event Reports

Documentation of all unusual events that in any way involve a student must be done as soon as possible using the Clinical Conference Form. A copy of the Clinical Conference Form must be promptly forwarded to the clinical supervisor and/or program director.

Pregnancy

Student Pregnancy Disclosure Policy 10.2.6

<https://my.pacollege.edu/college-services-and-resources/policies/Pages/default.aspx>

Additional Nuclear Medicine Program Statement:

The college follows the Penn Medicine Lancaster General Health pregnancy policy which identifies no radiation hazard for the student or fetus during the gestational period when appropriate and identified radiation safety procedures are followed as described by each clinical site. When a student becomes pregnant it is strongly recommended that she provide a written statement to the Program Director declaring that she is pregnant. After the student declares her pregnancy, the Radiation Safety Officer at her clinical site must be informed so he/she can make special arrangements and discuss the risks with the student. The student will be advised of the required radiation safety procedures she must follow while completing clinical assignments during her pregnancy. The student should not be involved with liquid iodine or capsule I-131 or I-125 > 200uCi. The pregnant student will not be placed at an academic or clinical disadvantage due to pregnancy and may continue in the program. Clinical and academic schedules may be created or

altered to ensure the competency of the student. The clinical and academic competency level of the pregnant student will be assessed upon her return to the program. Should the student become pregnant while attending a program within PCHS that utilizes ionizing radiation, she still must fulfill all classroom and clinical requirements to be eligible for graduation from the program.

Funeral Leave

Three days of funeral leave are given when there is a death in the immediate family, which is defined as mother, father, spouse, siblings and children. One day will be given in the event of grandparents or at the discretion of the Program Director.

Student Work Policy

Students will not be used in place of professional staff. Students who choose to work during the school year must do so on their own time.

Graduation

To meet graduation requirements, students must complete a minimum number of 30 credits at PA College.

Refer to the college policy, *2.5 Graduation*, for any additional graduation requirements.

Receipt of Nuclear Medicine Technology Program Student Handbook

I have received a copy of the Nuclear Medicine Technology Program Student Handbook. My signature on this document indicates that I have read, understand, and agree to abide by the policies outlined therein and give permission to send employer surveys after graduation.

Student Name (print) _____
Student Signature _____
Date _____