PET/CT PROGRAM
Jefferson College of Health Professions
Department of Radiologic Sciences

Academic Policies and Clinical Education Handbook

2015-2016
Notice of Equal Opportunity

Thomas Jefferson University is committed to providing equal educational and employment opportunities for all persons without regard to race, color, national or ethnic origin, marital status, religion, sex, sexual orientation, gender identity, age, disability, veteran’s status or any other protected characteristic. The consideration of factors unrelated to a person’s ability, qualifications and performance is inconsistent with this policy. Any person having inquiries or complaints concerning Thomas Jefferson University’s compliance with Title VI, Title IX, the Age Discrimination Act of 1975, the Americans with Disabilities Act, or Section 504 of the Rehabilitation Act is directed to contact their Student Affairs Dean or Human Resources – Employee Relations, who have been designated by Thomas Jefferson University to coordinate the institution’s efforts to comply with these laws. Any person may also contact the Assistant Secretary for Civil Rights, U.S. Department of Education, Washington, D.C. 20202, or the Director, U.S. Department of Education, Office for Civil Rights, Region Three, Philadelphia, Pennsylvania, regarding the University’s compliance with the equal opportunity laws.

Required Background Check

Students who are offered admission to Jefferson are required to pass a criminal background check and child abuse clearance. Some departments within the College, as well as some clinical sites may require students to be fingerprinted and/or drug tested. The Office of Admissions will provide you with the appropriate information to complete these requirements.

Clinical rotation and fieldwork sites that require a criminal background check, child abuse clearance and/or fingerprinting may deny a student’s participation in the clinical experience, rotation or fieldwork because of a felony or misdemeanor conviction or a record of child abuse. Clinical sites may also deny participation in clinical experiences for other reasons, including but not limited to failure of a required drug test, or inability to produce an appropriate health clearance. As participation in clinical experiences, rotations or fieldwork is a required part of the curriculum and a requirement for graduation, denial of participation by a clinical site may result in delay of graduation or the inability to graduate from the program.

Regardless of whether or not a student graduates from Jefferson, individuals who have been convicted of a felony or misdemeanor may be denied certification or licensure as a health professional. Information regarding individual eligibility may be obtained from the appropriate credentialing bodies.

Thomas Jefferson University reserves the right to amend any regulations, fees, conditions and courses described herein as circumstances may require without prior notice to persons who might thereby be affected. The provisions of this handbook are not and may not be regarded as contractual between the College and the students or its employees.

Revised 2015
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JEFFERSON COLLEGE OF HEALTH PROFESSIONS
MISSION STATEMENT
The Jefferson College of Health Professions is committed to educating health care professionals of the highest quality and ethical standards for contemporary practice in the global community. By promoting faculty excellence in teaching, research and service, we prepare caring professionals who are competent in the use of evidence based practice, critical in their thinking, committed to lifelong learning and prepared to be leaders in diverse health care settings. In keeping with the mission of the University and the future of health care delivery, the Jefferson College of Health Professions is committed to interdisciplinary education and technologies that draw upon the strengths of all disciplines.

DEPARTMENT OF RADIOLOGIC SCIENCES
MISSION STATEMENT
The Department of Radiologic Sciences provides excellence and leadership in all aspects of radiologic sciences, by teaching, undertaking research and providing exemplary clinical practice skills in the broad field covered by this discipline.

The mission of the Department of Radiologic Sciences is to provide a comprehensive education preparing students for entry-level practice into the radiologic and imaging sciences, as competent, caring professionals, cultivating professionalism and life-long learning. Through innovative technology and pedagogy, critical thinking and problem-solving skills are developed and interprofessional teamwork and communication are enhanced.

DEPARTMENT OF RADIOLOGIC SCIENCES
GOALS
The didactic, laboratory and clinical components of the curricula within the Department of Radiologic Sciences (DRS), Jefferson College of Health Professions (JCHP), Thomas Jefferson University (TJU), provide an environment for students to develop and master:

- Knowledge, insight and skills required to produce optimal diagnostic images or develop and deliver therapeutic treatment plans.
- Effective communication techniques required to interact successfully with both patients and other members of the health care team.
- Self-assessment skills required to evaluate correctly the quality and quantity of their work.
- Critical thinking and problem solving skills required to meet the challenges of the dynamic healthcare environment.
- Values for commitment to life-long learning, public education and involvement in their professional organizations.
PET/CT PROGRAM

GOALS
The didactic, laboratory and clinical education experience for the PET/CT Program in the Department of Radiologic Sciences will provide a learning environment for students to develop and master:

- Knowledge, insight and skills required to produce optimal diagnostic images.
- Effective communication techniques required to interact successfully with both patients and other members of the health care team.
- Self-assessment skills required to evaluate correctly the quality and quantity of their work.
- Critical thinking and problem solving skills required to meet the challenges of the dynamic healthcare environment.
- Values for commitment to life-long learning, public education and involvement in their professional organizations.

PET/CT PROGRAM

OBJECTIVES
The objectives of the program are to develop a Nuclear Medicine Technologist who will be able to:

- Understand and practice the art and science of PET/CT.
- Produce images providing optimal information obtained with appropriate technique.
- Apply appropriate protection practices toward the patient, self, the health care team and the public.
- Apply critical thinking and problem solving in making decisions about imaging exams.
- Contribute to the physical and psychological comfort of the patient under the guidelines of the Patients’ Bill of Rights.
- Adhere to the SNMMI-TS and ASRT Code of Ethics in professional practice.
- Assume responsibility for professional development.
- Demonstrate communication ability by establishing rapport with patient and healthcare team.
- Work effectively as part of the PET/CT team.
THE HANDBOOK

This Academic Policies and Clinical Education Handbook serves as a guide for students enrolled in the Department of Radiologic Sciences, Jefferson College of Health Professions, Thomas Jefferson University.

A Thomas Jefferson University student is required to uphold a high standard of academic and nonacademic conduct. That standard is presented in this document and will be upheld by the Department of Radiologic Sciences. Academic and nonacademic misconduct at Thomas Jefferson University is subject to disciplinary action.

This handbook is given to matriculating students during orientation. The Department will obtain documentation of the receipt and review of the handbook.

Each student will be responsible for maintaining his/her knowledge of the information contained in the Academic Policies and Clinical Education Handbook, as well as the Jefferson College of Health Professions Student Handbook.

The Jefferson College of Health Profession Handbook is available online at:
www.jefferson.edu/handbook
While we have attempted to provide you with a comprehensive departmental handbook, it
does not stand alone.

All Thomas Jefferson University (TJU) and Jefferson College of Health Professions (JCHP)
policies, including the Academic Policies and Procedures, Conduct Policies and Procedures,
and Emergency Policies and Procedures, along with information on various University
services, can be found at www.jefferson.edu/handbook.

The JCHP Student Handbook can also be accessed from the JCHP home webpage
(http://www.jefferson.edu/university/health_professions.html).

Please review all of these resources, as they will help guide you through a successful student
experience at Thomas Jefferson University.
ACADEMIC POLICIES
POLICIES ON STUDENT PROGRESSION

COURSE REQUIREMENTS
1. Prerequisites for courses outlined in the curriculum must be met in order to follow the necessary educational sequence.
2. Students are responsible for accessing courses through Blackboard Learn (Jefferson.blackboard.com) and downloading all course syllabi, handouts and assignments for each course every semester.
3. Students are responsible for completing course evaluations for each of their courses at the end of the semester. A link will be provided to the students at the end of the semester.
4. Students are responsible for checking their Jefferson e-mail accounts daily.
5. Students must complete the Health Insurance Portability and Accountability Act (HIPAA) and Safety Modules prior to matriculation.

POLICIES ON STUDENT PROGRESSION IN THE RADIOLOGIC SCIENCES MAJOR

Students in the PET/CT track of the MS in Radiologic and Imaging Sciences should refer to the policies on student progression provided in the MS Program Academic Policies Handbook.

Students in the PET/CT Certificate Program must achieve a passing grade of C- or higher in all courses on the curriculum in order to receive a certificate of program completion.

NATIONAL CERTIFICATION EXAMINATIONS

Depending on clinical performance, students completing the program may be eligible to sit the NMTCB(PET), NMTCB(CT), and/or ARRT(CT) certification examinations.
CLINICAL EDUCATION
CLINICAL EDUCATION OPTIONS

ARRT(CT) Preparation
CT clinical education is competency-based. It is designed to permit accurate assessment of the knowledge, skills, and abilities of students in the clinical CT education component of the PET/CT program. Verification of students’ CT clinical competencies is completed by registered radiologic technologists under the direction of the Clinical Affiliate Supervisor. The name, address, and ARRT number of each verifier must be documented. All students must complete clinical competencies in accordance with the requirements of the American Registry of Radiologic Technologists (ARRT), which are listed at www.arrt.org.

NMTCB(PET) Preparation
PET clinical education consists of completion of 700 hours of training on a PET/CT scanner. Training hours must be verified by a certified nuclear medicine technologist, registered radiologic technologist certified in nuclear medicine, or physician. Training hours attended before the student becomes certified in nuclear medicine technology cannot be included in the 700 PET hours. This is in accordance with the requirements of the Nuclear Medicine Technologist Certification Board (NMTCB), which are listed at www.nmtcb.org.

NMTCB(CT) Preparation
CT clinical education consists of completion of 500 hours of training on a PET/CT, SPECT/CT or CT scanner. Training hours must be verified by a certified nuclear medicine technologist, registered radiologic technologist certified in nuclear medicine, or physician. Training hours attended before the student becomes certified in nuclear medicine technology may be included in the 500 hours. This is in accordance with the requirements of the Nuclear Medicine Technologist Certification Board (NMTCB), which are listed at www.nmtcb.org.

CLINICAL EDUCATION ELIGIBILITY

To be assigned to a Clinical Education Affiliate site, the student must meet the following requirements or obligations:

- Be a certified nuclear medicine technologist (ARRT(N) and/or NMTCB).
- Provide and maintain proof of certification in adult, child and infant cardiopulmonary resuscitation (BLS/CPR/AED for Healthcare Provider).
- Provide a current health certificate from a licensed physician indicating that the student is in good health. The document should include a description of any physical disability that may require monitoring during the student's course of study. If a disability interrupts the student's course of study, it should be discussed with the Program Director.
- Meet program specific technical standards. (Appendix A)
- Use personal or public transportation to clinical sites. Commuting time and costs are not determining factors for clinical assignments. These time and cost factors are borne solely by the student.
• All immunization requirements must be completed prior to commencing or resuming clinical courses. Failure to meet these health requirements will result in the delay of clinical practical or the failure of clinical courses.
• Be in compliance with the University requirements for influenza vaccination.
• Additional requirements may be needed.
• Students not in compliance are not permitted to attend classes or clinical

CLINICAL PRACTICES AND POLICIES

1. Attendance at clinical practical is mandatory.
2. A student who does not demonstrate safe clinical practice will be in violation of clinical practices and policies.
3. A student who does not demonstrate professional behavior and professional practice is subject to review by the faculty.
4. Safe clinical or professional practice is defined as:
   a. Adheres to the Patients’ Bill of Rights (Appendix B).
   b. Performs clinical duties consistent with the professional Code of Ethics (Appendix C).
   c. Receives passing grades on clinical evaluations as evaluated by qualified personnel. (See course syllabus)
   d. Adheres to the code of behavior/conduct outlined in the JCHP and Department of Radiologic Sciences handbooks.
   e. Adheres to all clinical practices and policies of the clinical site and JCHP and Department of Radiologic Sciences.
   f. Adheres to departmental radiation protection and monitoring practices (Appendix D).

VIOLATIONS OF CLINICAL PRACTICES AND POLICIES

Violations of Clinical Practices and Policies will typically be addressed through progressive discipline, as follows:
• First violation – written warning and counseling by the Program Director and Clinical Supervisor.
• Second violation – possible suspension or dismissal.
• Third violation – dismissal from the Department.

Depending on the particular circumstances, one or more progressive disciplinary steps may be skipped in instances of particularly serious violations of policies and/or practices, and some egregious violations may result in immediate dismissal from the Department.
POLICY GOVERNING CLINICAL EDUCATION
SCHEDULING

The purpose of the clinical assignment is to correlate didactic knowledge with practical skills. The student is subject to all rules and regulations of the clinical site. The clinical education center reserves the right to suspend or terminate from the clinical site a student who does not adhere to established policies of the program or the clinical site. A student who does not maintain appropriate behavior may be suspended or dismissed immediately.

If a student is suspended or dismissed from a clinical site, the Program Director will review the circumstances for this action. All parties are encouraged to address the issue promptly in writing (within five (5) business days whenever possible) so that resolution of grievance should require no more than three weeks. If the decision to dismiss is upheld, the clinical dismissal will result in a final grade of “F”.

Students who have reason to believe that the grade has been inappropriately assigned may request a review of the grade in accordance with the provisions of the Grade Appeal Protocol, which is published in the JCHP Student Handbook. For dismissal due to Unsafe Clinical Performance, students will follow the Policy on Dismissal for Unsafe Clinical Performance, which is published in the JCHP Student Handbook. The JCHP Student Handbook may be found at this link: www.jefferson.edu/handbook

CLINICAL SITE ASSIGNMENT

The Program Director determines student assignments at clinical sites. Scheduling is arranged individually to suit both the student and the Clinical Affiliate Supervisor. Assignments at the clinical sites are intended to provide the student with a comprehensive clinical education as deemed appropriate by the faculty, and serve to correlate didactic knowledge with practical skills.

Should a student be dismissed from his/her clinical site, the department does not guarantee replacement at an alternate site.
RESPONSIBILITIES OF THE CLINICAL SUPERVISOR

The Clinical Supervisor is available to students whenever they are assigned to a clinical setting. Responsibilities include:

- Providing appropriate clinical supervision.
- Student clinical evaluation.
- Providing orientation to the clinical department.
- Providing feedback to the Program Director and Clinical Coordinator.

CLINICAL SUPERVISION

Until a student achieves and documents competency in any given procedure, that procedure must be carried out under the direct supervision of a registered nuclear medicine technologist.

Direct supervision:

- A registered nuclear medicine technologist reviews the request for examination in relation to the student’s achievement;
- A registered nuclear medicine technologist evaluates the condition of the patient in relation to the student’s knowledge;
- A registered nuclear medicine technologist is present during the conduct of the examination; and
- A registered nuclear medicine technologist reviews and approves the images.

After demonstration of competency in a given procedure, students may perform that procedure with indirect supervision.

Indirect supervision:

Supervision is provided by a registered nuclear medicine technologist immediately available to assist the student, regardless of the level of student achievement. “Immediately available” is interpreted as the presence of a registered nuclear medicine technologist adjacent to the room or location where a nuclear medicine procedure is being performed.

RESPONSIBILITIES OF THE PROGRAM DIRECTOR AND CLINICAL COORDINATOR

The Department of Radiologic Sciences Program Director and Clinical Coordinator coordinate the daily operations of clinical education. Duties include, but are not limited to:

- Providing clinical education centers.
- Mentoring students.
- Supervising students.
• Advising students.
• Providing guidance to clinical instructors.
• Reviewing program policies and procedures with clinical affiliate supervisor/instructors.

RESPONSIBILITIES OF THE STUDENT

The student is responsible for:
• Displaying professional appearance in compliance with the dress code policy.
• Establishing harmonious working relationships and earning the respect of the radiologic sciences personnel through a professional and dignified posture and attitude.
• Using all equipment and materials responsibly and safely.
• Embodying the highest standards of civility, honesty, and integrity.
• Respecting and protecting the privacy, dignity, and individuality of others.
• Observing and assisting the clinical staff.
• Attending and participating in all scheduled clinical activities.
• Consulting with clinical site supervisors and/or departmental faculty for help with problems.
• Participating in the development of an individualized clinical education plan.
• Maintaining an accurate record of clinical examinations/competencies.
• Recording the number and types of evaluations required during each academic semester.
• Striving to broaden his/her knowledge and background on clinical subject matter by reading professional literature and attending conferences and seminars.
• Incurring all travel costs and expenses.
• Meeting with advisor at least once per semester.
DEPARTMENT POLICY ON CONDUCT

Students must comply with the rules and regulations of the Department of Radiologic Sciences. Deviation constitutes misconduct. This includes, but is not limited to:

• Sleeping during a clinical assignment.
• Failure to actively participate in clinical education.
• Leaving a clinical assignment or room/area assignment without qualified staff’s permission.
• Failure to notify the Clinical Supervisor and the Program Director/Clinical Coordinator of absence or lateness.
• Using a cell phone during clinical hours.
• Using the hospital computer for any reason EXCEPT hospital business.
• Violation of any duly established rules or regulations.

FAMILY/FRIENDS WORKING AT CLINICAL SITE POLICY

It may be deemed a conflict of interest for a student to be supervised or evaluated by family members or friends employed at his/her clinical site. If this situation arises, the student should inform his/her Program Director, so that alternative arrangements can be considered.

FAMILY/FRIENDS CLASSROOM, LABORATORY AND CLINICAL POLICY

At the Clinical Affiliate:

• Family and friends should be discouraged from visiting the clinical site. In particular, unsupervised children are not permitted.
• Family and friends must wait in a public area, and are not permitted in scanning or treatment rooms.
• It is not acceptable for students to entertain their family and friends and neglect their professional duties.
• Students may not ask clinical affiliate staff to baby-sit for them.
• TJU’s liability insurance does not extend to students’ family and friends.

In the RS Department:

• Students should discourage their family and friends from visiting the RS department while they (the students) are in class.
• Family and friends are not permitted to attend lectures or laboratory sessions.
• Unaccompanied children are not permitted in the RS department.
• Students may not ask faculty or administrative staff to baby-sit for them.
• TJU’s liability insurance does not extend to students’ family and friends.
In the Radiologic Science (RS) laboratories:

- Only Radiologic Science students with proper Jefferson ID are permitted in the laboratory.
- Students are not permitted to bring family members or friends in the laboratory at any time.
- Scanning or performing any procedures on family members or friends is not permitted.
- Other Jefferson students or employees who are not part of the Radiologic Sciences department are not permitted in the RS laboratory unless they have signed a waiver to be used as a student volunteer.
- TJU’s liability insurance does not extend to students’ family and friends.
- Students should inform the security guard on 1st floor Edison, both when entering and leaving the laboratory, outside of the regular assigned hours.

Failure to comply with the policy may result in disciplinary action up to and including dismissal from the program.

DRESS CODE POLICY

Uniforms and Appearance

- Uniform is not required by the Program, however students are expected to dress appropriately for the clinical setting.
- Students are required to wear a name tag identifying them as students, visible to patients and staff at all times.
- Students are required to practice good personal hygiene and present a professional appearance at all times.
- Students are required to wear radiation badges supplied by Thomas Jefferson University (and the Clinical Site, if provided) at all times.

STUDENT WORK POLICY

If a student is employed at any clinical site, he/she must abide by the following policies:

- Students must notify Program officials that they are working at the clinical site.
- Students are not permitted to work during scheduled clinical hours.
- Students may not wear student uniforms or Jefferson ID.
- Students may not accrue competencies during non-clinical hours.
- Students may not apply work time to make-up time.
- Students are not covered by Jefferson liability insurance during non-clinical hours.
CELL PHONE/PAGER POLICY

Cell phones and pagers must be placed on vibrate during lectures and laboratory sessions. Instructors will not tolerate interruptions from these devices and may ask the student to leave the classroom. Students may not carry cell phones or beepers with them during clinical hours. These devices must be placed in lockers. Any student in violation of this policy will be asked to leave his/her clinical site and will be marked absent for that day. In limited circumstances demanding immediate personal phone use, students should seek approval from their supervisor for any incoming communication, whether via call or text message, to ensure they are sanctioned.

COMPUTER POLICY

Students may not use computers for personal business during clinical hours. Personal business includes (but is not limited to) Internet surfing, shopping, emailing and instant-messaging.

Any student in violation of this policy will be asked to leave his/her clinical site and will be marked absent.

VENIPUNCTURE POLICY

Clinical competency requirements include performance of venipuncture for injection of contrast agents and radiopharmaceuticals. In order to participate in the performance of venipuncture on patients, students must:

- Have completed all immunizations as required by JCHP.
- Have current CPR certification, as required by the Department of Radiologic Sciences.
- Have health insurance, as required by JCHP.
- Attend and complete institutional venipuncture training, as required by clinical sites.
HEALTH INFORMATION CONFIDENTIALITY POLICY:
HEALTH INSURANCE PORTABILITY AND ACCOUNTABILITY ACT (HIPAA)

Students must maintain strict confidentiality of all health information of patients at clinical affiliate sites during and after the course of their clinical rotations. Students may neither use nor disclose health information of patients to which they have access, other than as expressly authorized by the clinical affiliate. Students may not record any patient-identifiable information on their personal documents (e.g. clinical logs). **Students may not download patient documents and/or digital media onto flashdrives or other electronic equipment.** Students must be familiar with and adhere to their clinical site HIPAA policy.

PREGNANCY POLICY

If a student becomes pregnant during the program, she may voluntarily inform the Program Director and Radiation Safety Officer (RSO), in writing, of her pregnancy. She will be counseled regarding the government regulations as they pertain to pregnant radiation workers/students. The student may “undeclare” her pregnancy at any time, resulting in exposure limits equaling that of a radiation worker.

INCIDENT REPORTS AT THE CLINICAL SITE POLICY

If a student is injured or involved in an incident during a clinical rotation, he/she must:

1. Report immediately to his/her supervisor and follow departmental protocol.
2. Report immediately to the Program Director or Clinical Coordinator.
3. Present a note to the Program Director or Clinical Coordinator from the Emergency Room Physician, University Health Physician, or family physician stating the date the student may resume normal duties.
4. Student must report to University Health Services as soon as possible (215-955-6835).

If a patient is injured while in the student's care, the student must:

1. Make sure that the patient is safe.
2. Report the incident immediately to the supervisor and follow departmental protocol.
3. Report the incident immediately to the Program Director or Clinical Coordinator.

INFECTIOUS DISEASES POLICY

Should a student be diagnosed as having an infectious disease, he/she must report such diagnosis to the Program Director or Clinical Coordinator and the Clinical Supervisor. The student may be asked to leave clinical until cleared by his/her physician. The student must present a physician’s note to the Program Director or Clinical Coordinator stating that the student may resume normal duties.
ATTENDANCE REGULATIONS
CLINICAL ATTENDANCE REGULATIONS

Clinical Attendance
Due to the nature of this program, clinical hours are arranged for students individually, by consultation with the Clinical Affiliate Supervisor.
Clinical training may occur during day, night or weekend shifts, or a combination of any of these.
Clinical training may take place at one or multiple clinical sites, depending on the needs of the individual student.
Students should inform the Clinical Supervisor and Program Director of planned absences and schedule changes.

Absences
If a student will be absent from a scheduled clinical assignment, he or she must call the Clinical Supervisor prior to the start of the shift.

If an emergency arises requiring an early departure from the clinical site, the student must notify the Clinical Supervisor.

Punctuality
Students are expected to arrive punctually for scheduled clinical training.
A student who is going to be late must notify the Clinical Supervisor prior to the start of the shift.

DIDACTIC/LABORATORY ATTENDANCE REGULATIONS

Each course syllabus details the attendance policy.
APPENDIX A
Technical standards for a nuclear medicine technologist

In order to complete the PET/CT program, a student must meet the following technical standards, which are based on recommendations by the ASRT.

1. Sufficient visual acuity to accurately prepare and administer radiopharmaceuticals, and other medications, and to monitor imaging equipment as well as provide the necessary patient assessment and care.
2. Sufficient auditory perception to receive verbal communication from patients and members of the healthcare team, and to assess the health needs of people through monitoring devices such as intercom systems, blood pressure gauges, and fire alarms.
3. Sufficient gross and fine motor coordination to respond promptly and to implement skills related to the performance of NM, such as positioning, transporting and imaging patients. NM technologists must be able to lift and transport lead blocks or radionuclide generators weighing up to 50 pounds. In addition, NM technologists must perform venipuncture on a regular basis.
4. Sufficient communication skills (verbal, reading, writing) to interact with individuals and to communicate their needs promptly and effectively, as may be necessary in the patient’s interest.
5. Sufficient intellectual and emotional function to plan and implement patient care.

Examples of specific technical standards the NM student must be able to meet are:

- Lift, transfer and/or move patients from wheelchair/stretcher to imaging table
- Lift, move, reach or push NM equipment
- Manual dexterity and ability to bend/stretch
- Distinguish colors and shades of gray
- Demonstrate effective interpersonal skills, including patient instruction
- Read and extract information from the medical chart or patient requisition
- Explain the clinical study verbally and/or in writing
- Physical and mental abilities to handle moderate and frequent exposure to infectious agents (blood, urine) and moderate exposure to ionizing radiation.

Technical standards for a Computed Tomography technologist

A Computed Tomography (CT) Technologist is typically employed in a hospital or a clinic to provide direct care for patients and must be able to apply verified knowledge and skillfully perform CT procedures. Clinical and laboratory assignment for the CT program require certain physical demands that are the technical standards of admission. These standards are based upon the minimum task performed by graduates of the program as recommended by the American Society of Radiologic Technologists. Listed below are the technical standards that all applicants must meet in order to participate and complete the CT portion of the PET/CT Certificate program.
1. Sufficient visual acuity to administer contrast agents accurately and to monitor imaging equipment as well as provide necessary patient assessment and care.
2. Sufficient auditory perception to receive verbal communication from patients and members of the healthcare team and to assess the health needs of people through the use of monitoring devices such as intercom systems, blood pressure gauges and fire alarms.
3. Sufficient gross and fine motor coordination to respond promptly and to implement skills related to the performance of CT, such as positioning, transporting and imaging patients. CT technologists must be able to manipulate equipment such as the scan console and power injectors. In addition, CT technologists must perform venipuncture on a regular basis.
4. Sufficient communication skills (verbal, reading, writing) to interact with individuals and to communicate their needs promptly and effectively, as may be necessary in the patient’s interest.
5. Sufficient intellectual and emotional function to plan and implement patient care.

Examples of specific technical standards that the CT technologist must be able to meet are:
- Lift, transfer and/or move patients from wheelchair/stretcher to scan table, including trauma patients.
- Physical agility: sitting (4-7 hours).
- Physical and mental abilities to handle moderate and frequent exposure to infectious agents (blood, urine, etc.)
- Manual dexterity and ability to bend/stretch.
- Distinguish colors and shades of gray.
- Demonstrate effective interpersonal skills, including patient instruction.
- Read and extract information from the medical chart or patient requisitions.
- Explain the clinical study verbally and/or in writing.
APPENDIX B
Patients’ Bill of Rights

We consider you a partner in your hospital care. When you are well informed, participate in treatment decisions, and communicate openly with your doctor and other health professionals, you help make your care as effective as possible. This hospital encourages respect for the personal preferences and values of each individual.

While you are a patient in the hospital, your rights include the following:

- You have the right to considerate and respectful care.
- You have the right to be well informed about your illness, possible treatments, and likely outcome and to discuss this information with your doctor. You have the right to know the names and roles of people treating you.
- You have the right to consent to or refuse a treatment, as permitted by law, throughout your hospital. If you refuse a recommended treatment, you will receive other needed and available care.
- You have the right to have an advance directive, such as a living will or health care proxy. These documents express your choices about your future care or name someone to decide if you cannot speak for yourself. If you have a written advance directive, you should provide a copy to your family, and your doctor.
- You have the right to privacy. The hospital, your doctor, and others caring for you will protect your privacy as much as possible.
- You have the right to expect that treatment records are confidential unless you have given permission to release information or reporting is required or permitted by law. When the hospital releases records to others, such as insurers, it emphasizes that the records are confidential.
- You have the right to review your medical records and to have the information explained except when restricted by law.
- You have the right to expect that the hospital will give you necessary health hospital services to the best of its ability. Treatment, referral, or transfer may be recommended. If transfer is recommended or requested, you will be informed of risks, benefits, and alternatives. You will not be transferred until the other institution agrees to accept you.
- You have the right to know if this hospital has relationships with outside parties that may influence your treatment and care. These relationships may be with educational institutions, other health care providers, or insurers.
- You have the right to consent or decline to take part in research affecting your care. If you choose not to take part, you will receive the most effective care the hospital otherwise provides.
- You have the right to be told of realistic care alternatives when hospital care is no longer appropriate.
- You have the right to know about hospital rules that affect you and your treatment and about charges and payment methods. You have the right to know about hospital
resources, such as patient representatives or ethic committees that can help you resolve problems and questions about your hospital stay and care.

- You have responsibilities as a patient. You are responsible for providing information about your health, including past illnesses, hospital stays, and use of medicine. You are responsible for asking questions when you do not understand information or instructions. If you believe you can't follow through with your treatment, you are responsible for telling your doctor.

- This hospital works to provide care efficiently and fairly to all patients and the community. You and your visitors are responsible for being considerate of the needs of other patients, staff, and the hospital. You are responsible for providing information for insurance and for working with the hospital to arrange payment, when needed.

- Your health depends not just on your hospital care but, in the long term, on the decisions you make in your daily life. You are responsible for recognizing the effect of life-style on your personal health.

- A hospital serves many purposes. Hospitals work to improve people's health; treat people with injury and disease; educate doctors, health professionals, patients, and community members; and improve understanding of health and disease. In carrying out these activities, this institution works to respect your values and dignity.
APPENDIX C
ASRT CODE OF ETHICS

1. The radiologic technologist conducts himself/herself in a professional manner, responds to patient needs and supports colleagues and associates in providing quality patient care.

2. The radiologic technologist acts to advance the principal objective of the profession to provide services to humanity with full respect for the dignity of mankind.

3. The radiologic technologist delivers patient care and service unrestricted by concerns of personal attributes or the nature of the disease or illness, and without discrimination, on the basis of sex, race, creed, religion or socioeconomic status.

4. The radiologic technologist practices technology founded upon theoretical knowledge and concepts, uses equipment and accessories consistent with the purpose for which they have been designed, and employs procedures and techniques appropriately.

5. The radiologic technologist assesses situations, exercises care, discretion and judgment, assumes responsibility for professional decisions; and acts in the best interest of the patient.

6. The radiologic technologist acts as an agent through observation and communication to obtain pertinent information for the physician to aid in the diagnosis and treatment of the patient, and recognizes the interpretation and diagnosis are outside the scope of practice for the profession.

7. The radiologic technologist uses equipment and accessories, employs techniques and procedures, performs services in accordance with an accepted standard of practice and demonstrates expertise in minimizing the radiation exposure to the patient, self and other members of the health care team.

8. The radiologic technologist practices ethical conduct appropriate to the profession and protects the patient’s right to quality radiologic technology care.

9. The radiologic technologist respects confidences entrusted in the course of professional practice respects the patient’s right to privacy and reveals confidential information only as required by law or to protect the welfare of the individual or the community.

10. The radiologic technologist continually strives to improve knowledge and skills by participating in educational and professional activities, sharing knowledge with colleagues and investigating new and innovative aspects of professional practice.


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SNMMI-TS CODE OF ETHICS

1. The Nuclear Medicine Technologist will provide services with compassion and respect for the dignity of the individual and with the intent to provide the highest quality of patient care.

2. The Nuclear Medicine Technologist will provide care without discrimination regarding the nature of the illness or disease, gender, race, religion, sexual preference or socioeconomic status of the patient.

3. The Nuclear Medicine Technologist will maintain strict patient confidentiality in accordance with state and federal regulations.

4. The Nuclear Medicine Technologist will comply with the laws, regulations, and policies governing the practice of nuclear medicine.

5. The Nuclear Medicine Technologist will continually strive to improve his/her knowledge and technical skills.

6. The Nuclear Medicine Technologist will not engage in fraud, deception, or criminal activities.

7. The Nuclear Medicine Technologist will be an advocate for his/her profession.

Revised and adopted by the Society of Nuclear Medicine Technologist Section, June 2004.
PURPOSE
To assess employee occupational radiation dose from ionizing radiation sources external to the body.

POLICY
Radiation dosimeters ("individual monitoring devices" as defined in 10 CFR 20.1203) are to be issued for the purpose of assessing occupational radiation dose as follows:

1. Radiation dosimeters are to be issued to anyone (employee/student/volunteer) whose assigned duties involve potential exposure to ionizing radiation and whom the Radiation Safety Officer has determined meets the requirements for individual monitoring devices as described in applicable federal or state regulations.

2. Radiation dosimeters may also be required for individuals in specific work areas or performing designated tasks, even if not required by state or federal regulations.

3. Radiation dosimeters may be offered as an option to individuals in areas where use of individual monitoring devices is not required by regulations, but where employees may have concerns about their level of radiation exposure. Optional use must be approved by the appropriate Department and/or Division Head and the RSO.

4. Radiation dosimeter readings are routinely reviewed by Radiation Safety Staff and appropriate follow-up action taken as may be indicated by the results.
Definition:
For the purposes of this Policy and related procedures, the following terms are defined.

“ALARA Investigation Levels” are pre-set dosimeter reading values that trigger formal reviews by Radiation Safety Staff. [ALARA stands for “as low as reasonably achievable” and is a radiation protection philosophy whereby the objective is to keep radiation doses to individuals and populations as far below (maximum) regulatory limits “as is reasonably achievable”.]

“ALARA Investigation Level 1” means total radiation doses in any single calendar quarter (e.g., January 1 to March 31) above the following:
- Effective Dose Equivalent (EDE) [“whole body”] above 125 mrem
- Lens Dose Equivalent (LDE) above 375 mrem
- Shallow (“Skin”) Dose Equivalent (SDE) above 1250 mrem
- Extremity Dose reading above 1250 mrem

“ALARA Investigation Level 2” means total radiation doses in any single calendar quarter (e.g., January 1 to March 31) above the following:
- Effective Dose Equivalent (EDE) [“whole body”] above 375 mrem
- Lens Dose Equivalent (LDE) above 1125 mrem
- Shallow (“Skin”) Dose Equivalent (SDE) above 3750 mrem
- Extremity Dose reading above 3750 mrem

“Dose Equivalent” means the absorbed radiation dose to a human being, modified by appropriate radiation weighting factors, depending on the type of ionizing radiation source, or tissue/organ weighting factors (as may be necessary).

“Effective Dose Equivalent” (for the purposes of this policy) means the deep dose equivalent (tissue dose from external radiation sources at 1 cm below the surface of the skin) as measured by a radiation dosimeter, adjusted where appropriate by mathematical formulas to take into account the wearing of protective lead garments in the presence of diagnostic energy x-ray radiation.

“Extremity Dose” means the dose equivalent (tissue dose from external radiation sources) to the hands or forearms (below the elbows), or to the feet or lower legs (below the knees) determined for a tissue depth of 0.007 cm, as measured by a radiation dosimeter (e.g., ring dosimeter).

“Lens Dose Equivalent” means the dose equivalent (tissue dose from external radiation sources) determined for a tissue depth of 0.3 cm, as measured by a radiation dosimeter.

“Millirem (mrem)” is a unit of measure for any “dose equivalent” terms.

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“Radiation dosimeters (individual monitoring devices”) means devices designed to be worn by a single individual for the assessment of dose equivalent such as film badges, thermoluminescence dosimeters (TLDs), pocket ionization chambers, etc.

“Shallow (“Skin”) Dose Equivalent” means the dose equivalent (tissue dose from external radiation sources) determined for a tissue depth of 0.007 cm, as measured by a radiation dosimeter.

Procedure:
[The following procedures and/or requirements have been approved by the Jefferson Radiation Safety Committee and instituted by the Radiation Safety Officer under his authority as established by federal and state regulations and institutional policy.]

Dosimeter Wearer Responsibilities
1. Regardless of whether the dosimeters are issued as required or optional, any employee who is issued any dosimeter is responsible for:
   a. Wearing the dosimeter while on duty in those areas where there is a potential for radiation exposure.
   b. Exchanging worn dosimeters for new ones on the first workday of each wear period (e.g., first day of month or calendar quarter, depending on assigned wear period), unless the new replacement dosimeters' arrival has been delayed, in which case the exchange may be made as soon as possible after the arrival of the new dosimeters.
   c. Taking proper care of dosimeters, as described by Office of Radiation Safety instructions, to avoid damaging or contaminating the dosimeters.
   d. Not storing dosimeters near radiation sources when not being worn.
   e. Not wearing dosimeters when being exposed to radiation sources for personal medical purposes (Notify Radiation Safety if this inadvertently occurs or you are administered a radiopharmaceutical).
   f. Notifying Radiation Safety immediately whenever dosimeters are lost, accidentally damaged, name change is required, place of work has changed, or any reason why accidental exposure may have occurred (i.e., dosimeter accidentally left near source when not worn).
   g. Returning all dosimeters and holders upon termination of duties with/near radiation sources.
   h. Notifying Radiation Safety/dosimeter distributor of pending employment termination.
   i. Otherwise wearing assigned dosimeters in accordance with any other Office of Radiation Safety instructions.
2. Failure to comply with guidelines and responsibilities listed above may result in forfeiture of (optional) dosimeters and/or disciplinary action.

3. Any inquiries related to dosimeter use should be directed to the individual’s supervisor, dosimeter distributor, or Radiation Safety.

Dosimeter Issuance:
Dosimeters are issued and distributed in accordance with internal Radiation Safety Department Procedure RSO-041: “Badging and Distribution”

Review of Dosimetry Readings
1. Dosimetry reports from Jefferson’s dosimetry provider (currently Mirion Technologies) are to be reviewed by Radiation Safety staff within 5 business days of receipt.
2. The purposes of such reviews are to:
   a. Determine if the reading is valid (accurately represents occupational radiation dose).
   b. Identify possible opportunities for intervention to reduce future dose.

3. The reviewer is to examine readings for the following:
   a. Individual readings substantially above others doing similar work.
   b. Individual readings substantially above the wearer’s past recorded readings.
   c. Evidence of misuse or damage to the dosimeter.
   d. Evidence of radioactive contamination to the dosimeter.
   e. Calendar quarter total dose readings above “ALARA Investigation Levels” (see definitions).
   f. Evidence that the wrong analysis algorithms were applied by the vendor in generating the reported reading.
   g. Evidence that the dosimeter had not been properly designated (e.g., “whole body” instead of “collar w/ EDE”).
   h. Any other contributing factor as may be identified in the vendor’s report notes.

4. The reviewer is to look for possible causes for high or unusual readings including:
   a. Badges not being properly worn (wrong location, wrong orientation, worn outside of holder, etc.).
   b. Sub-optimal work practices by the wearer.
   c. Dose to the dosimeter while not being worn (dosimeter left in room during procedures, dose stored near a radiation source or otherwise in a high background area, etc.).
   d. Dose due to the wearer undergoing a medical procedure involving radiation (e.g., wearer administered a Nuclear Medicine radiopharmaceutical as a patient).
   e. Dosimeter exposed to unusual environmental conditions (e.g., excessive heat).
   f. Any other potential cause.

5. Regarding the review/investigation process:
   a. Reviews/investigations may require personal contact with the wearer and/or wearer’s supervisor in order to perform an evaluation as per the preceding item 4.
b. All total readings above “ALARA Investigation Levels” are to be performed and documented. “Level 2” investigations should include direct contact with the wearer and evaluation of work practices where feasible, unless the readings are consistent with an historical pattern previously determined to be reasonable for the workload and practices employed.

c. All ALARA Level Investigations are to be documented.

d. Summary reports of readings above ALARA Investigation Levels are reported to the Radiation Safety Committee at its regular quarterly meetings.

6. Readings for dosimeters issued to specifically assess radiation dose to embryo/fetus of a pregnant individual are to be closely scrutinized with regard to cumulative dose being acquired through the gestation period, in case intervention (e.g., job reassignment) is necessary to assure that applicable dose limits are not exceeded.

**Dose History Adjustments:**

1. Readings determined to be due to non-occupational radiation sources, or to be inaccurate due to some identifiable cause may be adjusted.

2. Adjustments to the wearer’s occupational dose history are made after review by the Radiation Safety Officer by notifying the dosimetry vendor in writing, in accordance with the vendor’s procedures.

**Reports to Wearers:**

1. Dosimeter wearers will be notified of radiation doses as obtained as per the criteria specified in regulations contained in 10 CFR 19 or any other applicable state or federal regulation.

2. Individuals may be notified if their cumulative readings in any calendar quarter exceed pre-established ‘investigation levels’, or if any unusual or apparently ‘high’ dosimeter reading(s) are identified by Radiation Safety personnel.

3. Regular dose reports [excised of personal information other than dosimeter wearer id number] are provided to the dosimeter distribution group distributor for availability to wearers.

4. Individuals may also obtain their dosimeter results by making proper request to the Radiation Safety Department. Such requests generally are required to be made in writing to protect the individual’s personal information from release to unauthorized personnel.

**Confidentiality:**

1. Individual radiation dose readings are considered as protected information and access to this information is limited to Radiation Safety personnel, supervisors, program directors, management personnel, members of the Radiation Safety Committee, regulatory inspectors, or others (with RSO approval) with a legitimate need-to-know.

2. Release of individual dose information in any circumstances is limited to the minimum necessary.
3. Any other personal information obtained by the Radiation Safety Department in the administration of the dosimeter program is treated as confidential.

Attachment(s): na

References and Citations:
Internal Radiation Safety Department Procedure RSO-041 “Badging and Distribution”

[Copies of the above references may be obtained by contacting the Office of Radiation Safety, 215-955-7813.]

Original Issue Date: 11/01/2000
Revision Date(s): 07/31/2012; 08/07/2014
Review Date(s): 11/08/06, 05/16/2011, 07/31/2012, 7/01/14; 08/07/2014
Responsibility for maintenance of policy: John C. Keklak

[Signature on File]

Approved by:

John C.Keklak

Department Director
Thomas Jefferson University Hospitals, Inc.

Date: 07/31/2012
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Radiation Protection Practices

1. Students are required to exercise sound radiation protection practices at all times. At no time may a student participate in a procedure utilizing unsafe protection practices.

2. Students must be aware of and enforce the policies and procedures of radiation safety in keeping with institutional, state, and national standards.

3. Students will always wear radiation dosimeters in the Clinical Site.

4. Students will wear the whole body dosimeter outside the clothing, on the torso. A ring badge will be worn when handling radioactive materials.

5. Students will always remove personal radiation dosimeters while having diagnostic medical or dental radiographs taken.

6. Students who deliberately expose their radiation dosimeters will be suspended and/or dismissed from the program.

7. Students will use appropriate shielding.

8. Radiation protection of the patient and others within the examination room is the student's responsibility when he/she is performing a study.

9. Students may not perform procedures utilizing ionizing radiation on other students or staff at their request without a prescription for the exam by a physician. The student will be dismissed from the program for this violation.*

10. A technologist or physician may not procedures utilizing ionizing radiation on a student without a prescription for the exam from the student’s physician. The student will be dismissed from the program for this violation.*

*(PA Code, Title 25. Environmental Protection. Department of Environmental Protection, Chapter 211.11.)
Personal Radiation Monitoring

1. Each student is responsible for wearing properly dated radiation dosimeters (body and ring badges) at Clinical Sites.

2. Dosimeters will be exchanged on campus each month.

3. Each student is responsible for returning used dosimeters.

4. Dosimeter loss or accident must be reported immediately.

5. Radiation dose reports will be provided each month, and students informed of their exposures.

6. Monthly radiation exposures for students **must not** exceed the maximum permissible dosage to occupationally exposed persons as established by state and federal agencies for radiologic health.

7. The Office of Radiation Safety maintains a history of each individual’s exposure and anyone may examine his/her own radiation exposure record, or obtain a copy by sending a signed, written request to the Radiation Safety Office.

8. **“High” Radiation Dosimeter Readings**

   High or unusual radiation dosimeter readings are investigated by Thomas Jefferson University’s Radiation Safety Officer. Readings above designated “Investigation Levels” are evaluated with regard to workload and type of duties performed by the dosimeter wearer; adherence to proper work practices; proper care and use of the dosimeter; and possible exposure of the dosimeter to “non-occupational” radiation sources. In cases where it appears that the high readings may be due to inadequate safe work practices or improper use or storage of the dosimeter(s), the wearer is counseled by Radiation Safety Officer and/or the wearer’s supervisor(s).