NMT PROGRAM ACADEMIC CALENDAR 2018-2019*

Summer 2018
June 14
New Student Orientation
July 16
VA fingerprinting
July 25
VA Orientation
July 19
Griffin Orientation
July 30 – Aug 1
Success Strategies Workshops
Aug 3 – 10
Patient Care Orientation (PCO)

Fall 2018
August 28
First Day of Classes/Clinical
September 3
Labor Day (College Closed) No Clinical
September 4
Last Day to Add Classes (until 4:00PM)
October 16
Reading Day, No Classes or Clinical
October 19
Mid-Term Deficiency Reports Due from Faculty
November 2
Last Day to Make Up Incomplete Grades from

Spring 2018
November 9
Last Day to Withdraw from Individual Classes
November 21
Faculty Planning Day, No Classes or Clinical
November 22-25
Thanksgiving Recess, No Classes or Clinical
December 8
Last Day of Classes
December 10-15
Final Examinations, No Clinical
December 18
Last Day to Submit Final Grades (By 12:00 Noon)
December 23
Semester Ends

Winter Intersession
January 2, 2019 – January 18, 2019
Winter Clinical Internship M-F 40 hrs./week

Spring 2019
January 21
Martin Luther King Day (College Closed), No Clinical
January 24
First Day of Classes/Clinical
January 31
Last Day to Add Classes (Until 4:00PM)
February 15-18
President’s Day Recess (College Closed), No Clinical
March 8
Mid-Term Deficiency Reports Due from Faculty
March 11-17
Spring Recess, No Classes or Clinical
March 23
Last Day to Make Up Incomplete Grades from Fall 2017
April 1
Last Day to Withdraw from Individual Classes
April 19
Good Friday (College Closed), No Classes or Clinical
May 11
Last Day of Classes/Clinical
May 13-18
Final Examinations, No Clinical
May 21*
Last Day to Submit Final Grades (By 12:00 Noon)
May 23*
Graduation
May 27
Memorial Day (College Closed), No Clinical
June 1
Semester Ends

Summer Clinical Internship
May 22 – July 31
Clinical Internship II Begins M-F, 8a-3p or 3p-10p
May 27
Memorial Day (College Closed), No Clinical
July 3- 4
Independence Day (College Closed), No Clinical
July 31
Last Day of Clinical Internship II

*All dates are subject to change
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Nuclear Medicine Technology Program Student Handbook 2018-2019

Nuclear Medicine Technology (NMT) students are responsible for reading and complying with the information which appears in the current GCC Catalog and the GCC Student Handbook, the Nuclear Medicine Technology Program Student Handbook, the Affiliates’ code of conduct and department policies, and the Code of Ethics of the pertinent professional organizations (ARRT, NMTCB, ASRT, SNMMI-TS). It is the intent of this handbook to ensure patient safety and professional, ethical, and legal conduct of all nuclear medicine technology students. Failure to comply with College and Nuclear Medicine Technology Program policies will lead to a review of student behavior and possible disciplinary action, including dismissal from the NMT Program.

The NMT Program reserves the right to modify any statement in the handbook. Changes will be given to students through a NMTP Student Handbook Addendum.

Nuclear Medicine Technology Program Student Handbook Acknowledgement of Receipt and Agreement to Comply

I, ______________________________________, acknowledge receiving and reading the 2018-2019 Gateway Community College Nuclear Medicine Technology Program Student Handbook (a supplement to the GCC Student Handbook). I have read the standards and procedures of the NMT Program. I also have read the clinical objectives and evaluation process that will be used to assess my clinical training and clinical competency.

I acknowledge that prior to signing I have been provided the opportunity to seek further clarification.

I understand that this statement will be placed in my Nuclear Medicine Technology program student record.

Student Name (Printed): ____________________________

Banner ID Number: ________________________________

Signature: _______________________________________

Date: ___________________________________________
CONFIDENTIALITY AGREEMENT AND CONSENT TO VIDEO RECORD

During your participation in simulated clinical experience scenarios (SCES) while a student in the Gateway Community College Nuclear Medicine Technology Program (GCC-NMT) you will be both an active participant and an observer.

The primary objectives of the SCES are to support and enhance your clinical learning while a student in the NMT Program. The faculty believe that these experiences will provide you with an additional method to identify your learning needs and to improve your performance. SCES are designed to challenge your response and judgment in a variety of clinical situations. Due to the possible sensitive nature of any SCES as well as to maintain optimal simulation experiences for all learners, strict confidentiality regarding the specific scenarios, including what occurred during the simulation experience, is required by all participants and observers.

By signing this agreement, you agree to maintain strict confidentiality regarding the specific scenarios, and both your performance and the performance of others, whether seen in real time, on video or otherwise communicated to you as part of the SCES. You will be discussing the scenarios during debriefing, with the understanding that

“All that takes place in the simulation environment – stays in the simulation environment!”

Each student is asked to agree to the following conditions:

My signature on the Nuclear Medicine Technology Program Student Handbook Acknowledgement of Receipt and Agreement to Comply indicates my agreement to maintain strict confidentiality about the details of any SCES, its participant(s), and the performance of any participant(s). In addition, my signature indicates that I have authorized the GCC-NMT faculty and staff to video record my performance during SCES as a participant or as an observer. Furthermore, my signature indicates that I have authorized the GCC-NMT faculty and staff to use the video recording(s) of my participation in SCES for purposes including, but not limited to: debriefing me, faculty review and the educational support of other learners by displaying the recording.

By signing the Nuclear Medicine Technology Program Student Handbook Acknowledgement of Receipt and Agreement to Comply, I acknowledge that my agreement is truly voluntary and that I have been provided the opportunity to seek further clarification of this document prior to signing.
STUDENT STATEMENT OF RESPONSIBILITY- ACADEMIC ADJUSTMENT

Any student who feels s/he may need an adjustment based on the impact of a documented disability should contact Student Accessibility Services at 203-285-2231 in room S-202 (2nd floor of the South Building) to coordinate reasonable adjustments. Students then should contact the professor privately to ensure adjustments are received.

Students with a documented disability must self-disclose and provide appropriate documentation to an Accessibility Specialist. A request should be made every semester if the student requires reasonable adjustments. Please contact Student Accessibility Services prior to the beginning of the semester or as early as possible in the semester as any potential adjustments that may be made are not retroactive.

For more information contact Accessibility Specialists Ronald Chomicz or Samantha Kusiak at 203-285-2231, rchomicz@gatewayct.edu, or skusiak@gatwayct.edu.

Please see the GCC Policy regarding academic adjustments at http://www.gatewayct.edu/Offices-Departments/Student-Accessibility-Services/Requesting-Academic-Adjustments

My signature below signifies that I have received written directions on the procedure for requesting academic adjustments (including when the request must be made and who I can contact to make the request).

______________________________
Student Name (Please Print)

______________________________
Student Signature

______________________________
Date
PROGRAM INFORMATION

INTRODUCTION
The Gateway Community College Nuclear Medicine Technology Program Student Handbook contains the program specific guidelines and procedures in effect for the 2018-2019 academic year. It is the student’s responsibility to be familiar with the Nuclear Medicine Technology Program Student Handbook. The student will be held accountable for meeting the expectations outlined in the Nuclear Medicine Technology Program Student Handbook, College Catalog, College Student Handbook (on the College website at www.gatewayct.edu), the Affiliates’ code of conduct and department policies, and the Code of Ethics of the pertinent professional organizations (ARRT, NMTCB, ASRT, SNMMI-TS).

Student behavior with College and Clinical Affiliate faculty and staff, peers, technologists, physicians, patients, and members of the public must be courteous and appropriate for a professional in training. Students are expected to conduct themselves in a positive manner compatible with their desired profession and in accordance with the ASRT, SNMMI-TS, ARRT, and NMTCB Codes of Ethics.

The College or Program reserves the right to modify any statement contained herein. Students are responsible for compliance with all regulations contained in this Student Handbook and the dates cited in the official program academic calendar. Officially approved changes will be disseminated through the Student Handbook Supplement.

This Handbook is not intended to cover all topics and circumstances. We reserve the right to respond to specific situations in a manner that we believe best suits the needs of the program and the student(s) involved, and most closely follow our stated standards.

STATEMENT OF NON-DISCRIMINATION

The Nuclear Medicine Technology Program follows the non-discrimination statement of Gateway Community College which can be found in the Gateway Community College Student Handbook.

NUCLEAR MEDICINE TECHNOLOGY: ASSOCIATE OF SCIENCE DEGREE & CERTIFICATE PROGRAMS

This curriculum (see Appendix A) is designed to prepare students for employment as nuclear medicine technologists in hospitals, private offices and imaging centers. Upon completion of the program, the student will be eligible to apply for application to the certifying board examination administered by the American Registry of Radiologic Technology (ARRT-Nuclear Medicine) and /or Nuclear Medicine Technology Certification Board (NMTCB).

The Program is based on twenty-two months of full-time study. The structure of the curriculum is designed to include didactic and supervised clinical education to assure sufficient opportunity to achieve all didactic and clinical requirements. Students are assigned on a rotating basis to the clinical education centers. Required Program orientation begins in June.
Total Clinical Practicum I, II, III, IV, and Clinical Internships I, II, and III, hours are approximately 1,800 total.

**NUCLEAR MEDICINE PROGRAM MISSION STATEMENT, PHILOSOPHY, AND OUTCOMES**

The mission of the Gateway Community College Nuclear Medicine Technology Program is to achieve and exceed established educational and healthcare standards by continually providing students and the professional community with educational opportunities that reflect the current practice of nuclear medicine technology and results in high quality patient care.

**PROGRAM PHILOSOPHY**

Learning is an active process where the faculty engages the students to apply physical and cognitive abilities to meet and surpass academic and clinical requirements of a nuclear medicine program. Faculty, clinical staff, and students work together to nurture an environment that fosters mutual and respectful learning and sharing of information. The practical application of the theory of nuclear medicine facilitated during labs and the clinical environment, assist the students in moving from the didactic process to the clinical arena. We provide opportunities for students to excel through timely and ongoing academic and clinical evaluations.

Most important, we believe that Nuclear Medicine Technologists contribute to social change by working closely with the radiologist and various members of the healthcare team to promote patients’ satisfaction and the general health of our community.

Upon successful completion of all program requirements, graduates will:

- Be prepared to take the Nuclear Medicine Technology Exams offered by the American Registry of Radiologic Technologists (ARRT-N) and/or the Nuclear Medicine Technology Certification Board (NMTCB)
- Possess the skills necessary to fulfill the responsibilities of an entry-level staff technologist.

**PROGRAM ACCREDITATION**

The Nuclear Medicine Technology Program at Gateway Community College is accredited by the Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT), 820 W Danforth Rd, #B1 Edmond, OK 73003; web address: www.jrcnmt.org. In order to maintain this accreditation, the program must strictly follow the Accreditation Standards for Nuclear Medicine Technologist Education which is published by the JRCNMT. You will find these standards published in this Student Program Handbook for your convenience. (see Appendix W).

**NUCLEAR MEDICINE TECHNOLOGY SCOPE OF PRACTICE AND PERFORMANCE STANDARDS**

Nuclear medicine is a medical technology that utilizes sealed and unsealed radioactive materials for diagnostic, treatment, and research purposes. Nuclear medicine instrumentation may be
combined with, computed tomography (CT), or other modalities to generate attenuation correction and produce three-dimensional images with or without contrast (adjunctive medications) to enhance the evaluation of physiological processes at a molecular level.

Under the direction of an authorized user, the nuclear medicine technologist is responsible for the safe use of ionizing and nonionizing radiation for diagnostic, therapeutic, and research purposes. The technologist will review the patient’s medical history to understand the patient’s illness and pending diagnostic or treatment procedure; instruct the patient before, during, and following the procedure; evaluate the satisfactory preparation of the patient before beginning a procedure; and recognize emergency patient conditions and initiate lifesaving first aid when appropriate.

Administrative functions may include supervising other technologists, students, and other personnel; participating in procuring supplies and equipment; documenting laboratory operations; participating in radiation safety protocols and taking an active role in radiation reduction programs; participating in departmental inspections conducted by various licensing, regulatory, and accrediting agencies; participating in departmental quality assurance or quality improvement projects; and participating in scheduling patient procedures.

A certified nuclear medicine technologist is qualified to perform general nuclear medicine procedures, nuclear medicine therapy, nuclear cardiology procedures, and positron emission tomography (PET) procedures at entry level. The certified nuclear medicine technologist is an individual who is registered or certified by the Nuclear Medicine Technology Certification Board (NMTCB) or the American Registry of Radiologic Technologists (ARRT) in nuclear medicine technology or is a registered technologist with the Canadian Association of Medical Radiation Technologists (CAMRT).

**Education:**
Nuclear Medicine Technologists may complete a one- or two-year certificate program, a two-year associate’s degree, or a four-year bachelor’s degree. Didactic courses include but are not limited to the physical sciences, biological effects of radiation exposure, radiation protection and procedures, the use of radiopharmaceuticals and adjunct pharmaceuticals, imaging techniques, and computer applications. A structured clinical education component provides experience in the clinical environment. Clinical education is designed to meet the requirements of the certification exams. Graduates of accredited programs are eligible to sit for certification examinations offered by the NMTCB and ARRT.

The Joint Review Committee on Education Programs in Nuclear Medicine Technology accredits training programs in nuclear medicine technology.

**Licensure**
Requirements for licensure of all imaging technologists vary from state to state, so it is important that technologists check the requirements of the state in which they plan to work.

**Certification**
Certification is available from the NMTCB and the ARRT.
Continuing Education
In addition to the general certification requirements, certified technologists also must complete a certain number of continuing education hours to maintain certification. Continuing education is required primarily because of the frequent technological and radiopharmaceutical innovations.

The scope of practice in nuclear medicine technology includes, but is not limited to, the following areas and responsibilities:

Patient Care: Requires the exercise of judgment to assess and respond to the patient’s needs before, during, and after diagnostic imaging and treatment procedures and in patient medication reconciliation. This includes record keeping in accordance with the Health Insurance Portability and Accountability Act (HIPAA).

Instrumentation/Quality Control:
Involves the operation of:

Nuclear medicine and PET imaging systems:
With or without sealed sources of radioactive materials, x-ray tubes, or MR systems for attenuation correction, transmission imaging, or diagnostic CT or MR (when appropriately trained and/or credentialed).

Non-imaging instrumentation:
- Dose calibrators
- Survey instrumentation for exposure and contamination
- Probe and well instrumentation
- Ancillary patient care equipment as authorized by institutional policies
- Infusion systems
- Radionuclide generators

Quality control:
The evaluation and maintenance of a quality control program for all instrumentation to ensure optimal performance and stability.

Diagnostic Procedures: Requires the utilization of appropriate techniques, radiopharmaceuticals, and adjunctive medications as part of a standard protocol to ensure quality diagnostic images and/or laboratory results. Obtains biological samples to perform testing as required for the optimization of patient care and quality of diagnostic procedures.

Therapeutic Procedures: Requires the utilization of appropriate techniques, radiopharmaceuticals, and adjunctive medications as part of a standard protocol to ensure proper treatment of the disease process. Obtains biological samples to perform testing as required for the optimization of patient care.

Adjunctive Medications: Involves the identification, preparation, calculation, documentation, administration, and monitoring of adjunctive medication(s) used during diagnostic imaging, or therapeutic procedure. Adjunctive medications are defined as those medications used to evoke a specific physiological or biochemical response. Also included are the preparation and
administration of oral and IV contrast used in the performance of imaging studies.

**Radiopharmaceuticals:** Involves the safe handling and storage of radiopharmaceuticals. This includes, but is not limited to, the procurement, identification, dose calculation, and administration of radiopharmaceuticals. It also includes all associated documentation and disposal as appropriate.

**Radiation Safety:** Involves practicing techniques that will minimize radiation exposure to the patient, health care personnel, and general public, through consistently using protective devices, shields, dose reduction, and monitors consistent with ALARA principles and establishing Protocols for managing spills and unplanned releases of radiation.

### CONTACT PERSONS AND TELEPHONE NUMBERS

<table>
<thead>
<tr>
<th>Gateway Community College</th>
<th>Telephone</th>
<th>Cell Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheila Solernou, Allied Health &amp; Nursing Division Director</td>
<td>(203) 285-2393</td>
<td></td>
</tr>
<tr>
<td>Dr. AnnMarie Jones, Program Director, Nuclear Medicine</td>
<td>(203) 285-2381 (203) 752-8427</td>
<td></td>
</tr>
<tr>
<td>Roseanne Shore, Clinical Coordinator</td>
<td>(203) 285-2386 (203) 980-3086</td>
<td></td>
</tr>
</tbody>
</table>

**Clinical Affiliate Sites**

**Yale-New Haven Hospital:**
- Matthew Gregory, Affiliate Education Supervisor- Nuc. Med. (203) 200-5610 or (203) 200-2146
- Vera Tsatkin, Affiliate Education Supervisor- Nuc. Cardiology (203) 688-3571 or (203) 688-4134

**Yale-New Haven Hospital, Saint Raphael Campus:**
- Jamie Sheehan, Affiliate Education Supervisor 789-5110
- PET (203) 789-6096

**Yale University PET Center**
- Elisa Hidalgo, Affiliate Education Supervisor (203) 785-7172

**VA Connecticut Healthcare System, West Haven Campus:**
- Lori Daley, Affiliate Education Supervisor (203) 932-5711 Ext. 3267 or 4684

**Middlesex Hospital:**
- Carissa Carta, Affiliate Education Supervisor
- Nuclear Medicine (Hospital) (860) 344-6207
- Outpatient Facility (860) 358-2502
Griffin Hospital:
  • Regina Sheehan, Affiliate Education Supervisor (203) 732-7271

Cardinal Health Nuclear Pharmacy Services, East Hartford:
  • Karen Hoang, Affiliate Education Supervisor (860) 291-9027

Midstate Medical Center:
  • Thaibinh Dang, Affiliate Education Supervisor (Department) (203) 694-8636
  • (Reception) (203) 694-8405

William W. Backus Hospital:
  • Peggy Helfman, Affiliate Education Supervisor (860) 889-8331 x 4249 or 4244

Saint Francis Hospital and Medical Center: (No student rotation)
  • Robert Varsanik, Affiliate Education Supervisor (860) 714-4015

Milford Hospital:
  • Amy Barocsi, Affiliate Education Supervisor (203) 876-4248

Waterbury Hospital:
  • No Affiliate Education Supervisor (No Student Rotation) (203) 573-7124

Lawrence and Memorial Hospital:
  • Laura Quillia, Affiliate Education Supervisor (860) 444-5197

UCONN Health Center:
  • James Forcade, Affiliate Education Supervisor (860) 679-3120

Students are not allowed to contact any College or affiliate faculty or staff members via their home/personal phones or emails.

Students in the Nuclear Medicine Technology Program are expected to rotate through all/any clinical education affiliates. Students are responsible for transportation and parking expenses.
PROGRAM STANDARDS

STUDENT CONDUCT
Nuclear Medicine Technology students are entering a profession that requires academic honesty and integrity. The discipline of nuclear medicine requires assumption of personal responsibility and ethical behavior in all settings, in keeping with the American Society of Radiologic Technologists (ASRT) Code of Ethics (see Appendix C) and the Society of Nuclear Medicine & Molecular Imaging, Technologists Section Code of Ethics (see Appendix B). Any violation of conduct will be dealt with according to the standards outlined in this Nuclear Medicine Technology Program Student Handbook, the College Student Handbook located on the College website (www.gatewayct.edu), and the policy manual of the Connecticut Community Colleges available at: http://www.commnet.edu/Board-Docs/BPM_COMPLETE_Master.pdf, affiliates’ code of conduct and department policies. Students are expected to abide by these standards of professional behavior and clinical practice at all times. Any student found to be in violation of these standards may be dismissed from the Nuclear Medicine Technology Program.

Nuclear Medicine Technology Program students are guests of the Clinical Affiliates. As guests, students are required to adhere to the Clinical Affiliates’ policies as if they were employees of the Clinical Affiliates. Behavior that interferes with the operations of the College, Program or Clinical Affiliate, violates established policies and/or procedures, discredits the Program or is offensive to patients, visitors, Program staff, clinical staff or fellow students will not be tolerated. Appropriate action will be taken when a violation occurs and may include dismissal from the Program.

The use of cell phones/smartphones/blackberries or electronic devices for making calls or text messaging is not permitted in the clinical area, college laboratory or classroom. The devices must be on silent, if the student disrupts other students, faculty, or staff with the use of these devices or uses these devices inappropriately, the student may be subject to disciplinary action per college procedures.

Nuclear Medicine Technology students are reminded that posts to any and all social networking or social media (including personal Facebook, Twitter, personal blogs, and other types of social media accounts) must reflect the same behavioral standards of honesty, respect, consideration and professionalism that are expected in college and clinical environments. In any social media posts or communications, students must adhere to the same restrictions related to privacy for fellow students, faculty, and patients as they do in a classroom or clinical environment in accordance with federal Health Insurance Portability and Accountability Act (HIPAA) standards. Inappropriate use of social media by users with regard to the college, its faculty, students, clinical affiliates, or patients is subject to disciplinary actions.

A student’s written work is expected to be original and done independently unless otherwise indicated. Footnotes and references must be used to acknowledge the source and avoid plagiarism in accordance with the American Psychological Association (APA) standards.

Selected portions of the nuclear medicine technology curriculum are taught, reinforced, or reviewed through the use of educational software/instructional media such as videos, computer
programs and/or online learning activities. Students are required to adhere to all copyright policies.

Violations of academic integrity will be dealt with in accordance with College policy.

INCIDENT/ACCIDENT REPORTS
Students must report any incident or accident that occurs at the clinical affiliate immediately to the Clinical Instructor and Clinical Coordinator. An incident or accident report for each occurrence must be completed according to the guidelines of the clinical affiliate site. Students must provide a copy of the incident report from the clinical affiliate site to the Clinical Coordinator and the Program Director within 24 hours. Failure to report an occurrence to the Clinical Instructor, Clinical Coordinator, and Program Director will result in a disciplinary sanction. For any incidents or accidents that occur while on the Gateway Community College campus, the student should follow the guidelines outlined in the Gateway Community College student handbook.

PROGRAM CLINICAL DISCIPLINARY STANDARDS
The Program disciplinary standards and procedures may be initiated upon receipt by the Program Director of, but not limited to, the following: written evaluation, verbal report from Affiliate Clinical staff to College faculty/staff/administration, clinical observation by College faculty/staff, written and/or verbal comment from Clinical Affiliate and/or College faculty/staff, daily clinical performance log and/or time card, conference with College and/or Clinical Affiliate faculty/staff. This is not an all-inclusive list. Other mechanisms not listed here may be used to begin disciplinary procedures.

- Upon receipt of the report of a violation by a student, the Program Director will provide the student an opportunity to meet within (3) working days of the violation. The purpose of the meeting is to inform the student of the reported violation and to provide the student an opportunity to submit information for the Program Director’s consideration of whether the student has committed the reported violation.
- The student will be given an opportunity to submit information for the Program Director’s consideration within (3) working days.
- The Program Director will review and investigate allegations and render a decision within (5) working days of meeting with the student. During the investigation period, the student may be placed on temporary suspension from the clinical obligations of the Program. The decision of the Program Director as to whether the student committed the reported violation and the appropriate sanction is final.
- If the student is not satisfied with the resolution, the student may bring the concern to the Allied Health/Nursing Division Director within (5) working days. The Allied Health/Nursing Division Director will respond in writing within (5) working days of the receipt of the appeal.
- If the student is not satisfied with the decision of the Allied Health/Nursing Division Director, the student can initiate the college student grievance procedure as outlined in the College Student Handbook.
Student behavior, physical or emotional condition in the clinical teaching/learning setting that is a conflict with the expectations for Student Conduct will be managed in accordance with the judgment of teaching faculty present. In consultation with the Nuclear Medicine Technology Program Director or Clinical Coordinator, faculty may determine that the expertise of additional college personnel, healthcare professional or administrators is needed to establish direction appropriate to an individual situation. If the physical or emotional condition of the student is disability related and an Academic Adjustment has been granted by the college Accessibility Services Specialist and the clinical agency, then faculty must consult with the college Accessibility Services Specialist prior to making further determination. The actions of faculty are sanctioned based upon the overarching requirement to protect the student(s) and/or client(s), other students, and/or agency employees with whom they carry responsibility for delivering safe and competent nuclear medicine care.

The dismissal of a student from the clinical teaching and learning environment for unsafe nuclear medicine practice beyond one day (interim suspension) is made by the nuclear medicine faculty. If interim suspension from clinical is a consideration, the student is provided an opportunity to meet with designated college personnel to provide pertinent information for consideration prior to any decision.

The dismissal of a student from any course teaching/learning activities other than clinical beyond one day (interim suspension) must be made in collaboration with designated Nuclear Medicine Technology Program Director and the Dean of Student Services for the College. If interim suspension from any course teaching/learning activities other than clinical is a consideration, the student is provided an opportunity to meet with designated college personnel to provide pertinent information. The information provided by the student is considered by the designated college personnel in collaboration with the Dean of Student Services prior to any decision addressing interim suspension from course teaching/learning activities other than clinical.

**DISCIPLINARY SANCTIONS**

Disciplinary sanctions that may be imposed upon a finding that a violation of the Program rules of student behavior has occurred include but are not limited to, the following:

1. Documented verbal warning,
2. Disciplinary written warning,
3. Clinical/Academic disciplinary probation,
4. Programmatic dismissal.

Sanctions imposed are based upon the severity of the violation and the prior behavior of the student and are progressive in nature. However, when, in the judgment of the Program Director, the violation by a student or the student’s prior record in the Program or at the College warrants, more severe sanctions may be imposed, including dismissal from the Program.

If a student who is on Clinical Probation receives 2 failing clinical evaluations in a semester/winter or summer intersession, he/she may be immediately dismissed from the Program.

In addition, in circumstances, the Director may recommend to the College’s Dean of Students that the reported behavior of the student be addressed under the GCC Student Conduct, which may lead to the student’s interim suspension or expulsion from the College.
BEHAVIOR THAT ENDANGERS
In such cases where the continued presence of a student constitutes, in the judgment of the Clinical Affiliate, a danger to the health and safety of patients or staff, the Clinical Affiliate may temporarily or permanently remove a student from the patient area and refer the student immediately to the Program Director. Students in the Nuclear Medicine program are expected to rotate through all clinical sites.

The Clinical Affiliate may temporarily or permanently remove a student from their site for inappropriate or unethical behavior, unacceptable performance, impairment, health status or failure to comply with their policies. If the Clinical Affiliate does raise a concern about a student, that communication will go first to the Clinical Coordinator/Program Director.

An investigation by the Program/Division will ensue when a student has been temporarily or permanently removed from the Clinical Affiliate. The student must immediately deliver their film badge and hospital ID to the Clinical Coordinator/Program Director when they are removed from the Clinical Affiliate. The student will not be assigned to another clinical site during the investigation.

A student who is permanently removed from a Clinical Affiliate after the investigation will be dismissed from the Program, and will not be eligible for re-admittance to the program at any time in the future.

Academic Advising/Academic Improvement Guidelines
The Nuclear Medicine Technology Program provides academic advising and/or improvement as is necessary based on student performance outcomes. The procedure for academic advising and/or improvement is as follows:

Academic Advising/Academic Improvement Procedures
The following procedure shall govern the enforcement of the Academic Advising/Academic Improvement Procedures based on the minimum grade requirement of 75 or higher.

1. The Program Director, or designee, will provide academic advising to the student as needed and at mid-semester. An academic improvement plan will be developed. If, at mid semester, the student’s course grade is below the minimum grade requirement, the student will be placed on Academic Probation until the end of the semester.
2. The Program Director will refer the student to the Allied Health and Nursing Division Advisor. The student must set up an appointment with the ALH/NUR Advisor within (3) working days of initial meeting with Program Director.
3. The Program Director will submit an Academic Concern Report through the Counseling and Student Success Department as needed and within (3) days of initial meeting with student.
4. If the student does not meet the minimum grade requirement of 75 or higher in any program course, the student will be dismissed from the Program.
5. If the student is not satisfied with the final semester grade, the student can initiate the College Student Grievance Procedure as outlined in the College Student Handbook.
PROGRESSION STANDARDS

Students must meet all course requirements to progress to the next course. All nuclear medicine courses are sequential and have prerequisite and/or co-requisite course requirements which may include NMT and general education courses. All NMT and co-requisite course requirements must be successfully completed in the prescribed order according to the program of study (see Appendix A). The Program requires a minimum grade of C in all math and science courses. The Program requires a minimum numerical grade of 75% in all program specific courses to continue in the program.

A student whose GPA falls below the minimum requirement (2.0) will be dismissed from the Program. A student must wait at least one semester before applying for readmission. Dismissed students who wish to seek readmission must comply with the NMT Program Readmission Standards and Requirements. In addition, the student will be required to audit Nuclear Medicine courses previously taken and successfully completed during the semester of re-entry. For example, a student who readmits to the first year, spring semester, will register for any Program course not previously completed with the minimum grade requirement AND must register to AUDIT those Program courses previously completed successfully during that semester.

A student who earns an academic failure or withdraws from one or more NMT courses will be eligible for admission/readmission to the Allied Health Program as a new student only once.

To participate in clinical experiences, students must be in compliance with the health requirements, including but not limited to: tuberculin test, influenza vaccine, drug and background checks. A student who does not have current documentation of immunizations/tests on file or fails a drug or criminal background check will be ineligible to practice at that site and may not be able to complete Program requirements to be eligible for graduation.

NMT faculty are available during office hours and by appointment to provide the academic advisement to the program students. NMT Program students are encouraged to seek counsel for academic, personal or financial issues. Counseling services are available to students through Student Services.

NMT PROGRAM GRADES AND QUALITY POINTS

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<th>Grade Weight</th>
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<tr>
<td>90-93</td>
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LEAVE OF ABSENCE

A leave of absence may only be taken after satisfactorily completing the first semester of the Nuclear Medicine Technology Program. If a student decides to withdraw from the NMT Program before the successful completion of the first semester, he/she must reapply to the Program as a new student. In cases of extenuating circumstances such as extensive illness, hardship or emergency, a student may request a Leave of Absence from the Program for a period of no more than two semesters. This request must be made in writing to the Program Director. Students on leave who wish to re-enroll must comply with the NMT Program Readmission Policy.

READMISSION STANDARDS

Readmission to the Nuclear Medicine Technology Program is based on a review of, but not limited to, past academic and clinical evaluations, and evidence of interim efforts to strengthen areas of weakness. A student is eligible for readmission to the NMT Program once. Readmission is not guaranteed. Consideration for readmission to the program can only be granted if there are available openings, clinical resources and faculty. In the event there are more readmission applicants than available openings, a ranking system will be applied. Readmission applications are evaluated individually, and readmission may be made subject to special conditions to be met by readmitted students. The Program Director reserves the right to deny readmission to those students whose academic and/or clinical performance does not meet program standards.

READMISSION REQUIREMENTS

- All applicants for readmission must have successfully completed the first semester of the NMT Program
- Applicant for readmission cannot be on Clinical Probation at the time of leaving the Program
- Minimum GPA of 2.75
- Schedule an exit interview within 30 days of leaving the Program (see Appendix S).
- Written request for readmission must be received by the Program Director within 12 months of dismissal or withdrawal from the Program.
- The student must successfully complete Independent Study to maintain their clinical skills the semester prior to the semester he/she wishes to be considered for readmission. The student will be required to attend clinical 8 hours per week. The clinical rotation schedule will be determined by the Clinical Coordinator. The student must pass the clinical skills evaluation conducted by the Clinical Coordinator and the Program Director to be eligible for clinical reentry.
- Submission of documentation of completion of current health requirements upon notification of readmission and prior to the start of the program
- An applicant who was previously dismissed from the NMT Program due to academic failure (less than 75%) in a NMT, (C or less) in Radiologic Science, math or science course and is readmitted will be required to repeat the course.
- Students will be required to audit NMT courses previously taken.
- Students who withdraw because of personal or health-related problems and who are in good academic and clinical standing are eligible to readmit to the Program the following
year. Applications for readmission should be accompanied by a physician’s release certifying suitability for class and clinical attendance and participation (if applicable).

READMISSION PROCESS
The student must:
- Meet with the Program Director to complete the exit interview within 30 days of leaving the Program
- Submit a letter to the Program Director, requesting readmission to the Program by: April 1 for the fall semester, November 1 for the spring semester and January 1 for the summer session
- Describe in the letter efforts made by the applicant to strengthen the areas of concern identified during the exit interview.
- Complete the Independent Study prior to the semester he/she wishes to be considered for readmission.

INELIGIBILITY FOR READMISSION
- A student who receives a final grade of F (Fail) in any NMT clinical internship or practicum
- The student has been readmitted once
- Any applicant for readmission who has previously withdrawn or been dismissed from the NMT Program for more than 12 months.

REVIEW OF ACADEMIC STANDING (APPEAL OF GRADE)
Students in the Nuclear Medicine Technology Program must follow the policy as stated in the College Student Handbook, Policy on Student Rights for both didactic and clinical grades.

COMPLETION OF THE NMT PROGRAM AND GRADUATION
The Nuclear Medicine Technology Program is completed on the day of the GCC Commencement Ceremonies. In addition to the College’s general requirements for graduation, students of the Nuclear Medicine Technology Program must have completed all math and science courses with a C or better and program specific courses with numerical grade of 75% or better. Students must successfully complete all the required competencies (see Appendix K), including the exit competency (see Appendix N). The students must not owe any clinical time; if the student owes time, he/she must make up the time prior to published graduation date in order to complete the Program and be deemed registry eligible.

All clinical documentation, clinical affiliate ID badges and radiation monitors must be completed and/or turned to Clinical Coordinator before commencement for a student to graduate and be deemed registry eligible.

Students will be required to purchase a pin for the Pining Ceremony.

Students who have not met all program requirements for graduation may not be allowed to participate in the Pinning Ceremony, be considered for program awards, and be considered registry eligible.
STUDENT ATTENDANCE STANDARDS

Didactic Attendance
By enrolling in the College, the students accept responsibility to take full advantage of his/her educational opportunity by regular attendance at classes and laboratories. The College does not require that faculty administer a uniform system of attendance regulations. For purposes of record keeping, all program instructors should keep attendance.

At the beginning of each semester, the instructor will delineate clearly what he/she considers necessary for the successful completion of the course. The student is expected to meet his/her academic obligations or to assume the risks incurred by failure to do so.

School Closings/Inclement Weather
The student should refer to area radio and television stations, GCC School Closing Hotline (203-285-2049) or the College web site for class delays late openings, cancellations or school closings (see GCC Student Handbook, Section on Cancellation of Classes).

School Closings on Clinical Days
In the event that College classes are cancelled, clinical experiences for that date will be cancelled. Students follow the GCC closing/delay schedule for academic and clinical days, and should make a comment in the Time Exception area of the online clinical documentation system accordingly. The clinical affiliate staff members do not have the authority to allow students to be excused from attending clinical due to inclement weather. Students can use their available CTO time if they are concerned about the driving conditions. If the student chooses to use CTO time due to inclement weather, a full 8 hours will be deducted from their CTO bank.

CLINICAL HOURS/ASSIGNMENTS
Students are expected to follow the Clinical Rotation Schedules that are distributed by the Clinical Coordinator. Clinical rotations are designed to ensure an equitable education experience for every student, and are created at the discretion of the Clinical Coordinator and Program Director. Students are expected to attend clinical practicum in 8-hour shifts on scheduled clinical days. Students are required to rotate and travel to any/all of the clinical affiliate sites that are affiliated with the Program. Students are responsible for transportation and parking expenses at these sites.

Students are expected to maintain a routine schedule while at all affiliates. Each student should attend the regular 8:00am-4:30pm shift, and may also rotate to the earlier and/or later shifts of the department to maintain skills in quality control/assurance and radiopharmacy. The shift schedules will be assigned by the AES, and are based on educational objectives. Each student needs to participate in the tasks that occur throughout the working day to meet the educational objectives and outcomes required of the course or rotation. Students cannot alter their time schedule to meet their personal needs on a day-to-day basis.

The following is a summary of the clinical hours depending on the student’s clinical assignment: Please note, students are sometimes expected to report to the clinical site as early as 6:00 am to observe or participate in HOT LAB DUTIES.
YNHH Regular Hours  8:00am-4:30pm
  • QC/QA (Nuclear Cardiology Only) & Radiopharmacy: the student must check with the technologist assigned to the same rotation (before the rotation begins) regarding the proper time to arrive in the department. The student will leave the clinic 8 hours after their arrival. The clinical rotation schedule will indicate which department (Nuc. Med. or Nuc. Card.) the student is assigned to when attending a Radiopharmacy rotation.

YNHH- St. Raphael Campus Regular Hours  8:00am-4:30pm
  • an earlier or later shift may be assigned by supervising technologist

VA Connecticut Healthcare System, West Haven Campus, Nuclear Medicine Department
  • a later shift may be assigned by supervising technologist. Students may not arrive earlier than 7:30am.

Griffin Hospital Regular Hours  8:00am-4:30pm
  • an earlier or later shift may be assigned by supervising technologist

Middlesex Hospital Regular Hours  8:00am-4:30pm
  • an earlier or later shift may be assigned by supervising technologist

Cardinal Health Nuclear Pharmacy Services*
  • Rotation lengths and shifts will vary; all students will rotate varying day and night shifts (ex.6am-2pm and 12am-8am)
  • *the assigned rotation schedule is determined by the supervising Pharmacist and Clinical Coordinator

Midstate Medical Center Regular Hours  7:30am-4:00pm
  • an earlier or later shift may be assigned by supervising technologist

Waterbury Hospital Regular Hours  8:00am-4:30pm
  • an earlier or later shift may be assigned by supervising technologist

Milford Hospital Regular Hours  8:00am-4:30pm
  • an earlier or later shift may be assigned by supervising technologist

William W. Backus Hospital Regular Hours  8:00am-4:30pm
  • an earlier or later shift may be assigned by supervising technologist

Lawrence & Memorial Regular Hours  8:00am-4:30pm
  • an earlier or later shift may be assigned by supervising technologist

Saint Francis Hospital & Medical Center Regular Hours  7:30am-4:00pm
  • an earlier or later shift may be assigned by supervising technologist

UCONN Health Center Regular Hours  8:00am-4:30pm
  • an earlier or later shift may be assigned by supervising technologist
CLINICAL ATTENDANCE

1. Students are scheduled for eight (8) hours of clinical practicum per day. Report to your clinical assignment on time and be ready to start when your shift begins.

The student must contact the Clinical Coordinator if he/she is told to leave a clinical assignment (including venipuncture) after being there less than 7 hours. The Clinical Coordinator will attempt to re-assign the student for the remainder of the day on an individual basis.

2. The student’s daily attendance record is included in the online clinical documentation system, and the hard copies of the time cards are to be kept as additional verification. Students are responsible to keep track of their clinical hours to submit onto an online clinical documentation system.

3. It is the student’s responsibility to clock in and out each day. Students who are assigned to a clinical affiliate that does not allow them to access the Internet must enter their entry and exit times from another computer by the end of each day. Please note that this data will be part of your clinical grade. Failure to clock in/out by the end of each day will result in loss of Clinical Time Off (CTO) hours for the rotation, as well as a failure in clinical attendance for that semester. (see Appendix G for Attendance and Punctuality Evaluation Form for Clinical Practica I-IV and Clinical Internships I-III).

4. Hours worked must be verified on a weekly basis either by the staff technologist in your assigned area or by the AES in the area; i.e., the AES approves the times in the online clinical documentation system on a weekly basis.

5. If the student fails to record their time accurately, they will not receive credit for the hours of training and will lose CTO time. It is student responsibility to note the time of arrival and/or departure from clinical site. Any inaccuracies entered in the online clinical documentation system as determined by the Supervising Technologist/Clinical Coordinator, will be considered falsification of documents and will result in immediate dismissal from the Nuclear Medicine Technology Program.

6. Students are required to fulfill their clinical obligations. Therefore, no one is permitted to leave the clinical site before the shift ends unless the Clinical Coordinator /AES has granted approval. The Clinical Coordinator/AES will approve the times in/out for each day that the student receives permission to leave early. Chronic absenteeism, lateness and leaving early will be dealt with in accordance of the disciplinary policy for the Program.

7. Lateness is defined as reporting to your assigned area any time later than the scheduled start time or returning late from your scheduled break. Lateness will not be tolerated. Three (3) incidents of lateness will result in a loss of 8 hours CTO.
8. Students MUST complete their hours in their assigned area. Changes of scheduled clinical sites are not permitted. Any student initiating changes with the clinical site or other students will be removed from the clinical site and the program. Because of the necessity to complete competencies in all areas, this policy will be strictly enforced. The program reserves the right to alter the assignment schedule as needed to insure all students have adequate rotations in all areas. The Clinical Coordinator/Program Director reserves the right to change clinical assignments due to educational and/or staffing concerns.

9. Students who do not report for clinical duty at the start of their scheduled shifts must notify their Clinical Coordinator and the AES/Technologist assigned to the clinical area within one half hour of the scheduled shift.

**CLINICAL TIME OFF (CTO)**

- Students may only take CTO time in four (4) or eight (8) hour blocks.
- Students are allotted two (2) CTO days per clinical practicum.
- Students are allotted three (3) CTO days for the summer internship.
- Students are allotted one (1) CTO day during the winter internship.
- CTO days cannot be accrued or carried over from semester to semester.
- CTO cannot be borrowed or donated from/to other students.
- When a student plans to use their CTO hours:
  - they must submit a CTO form (see Appendix H) or send an email to the Clinical Coordinator, 24 hours in advance requesting time off.
  - CTO time must be approved by the Clinical Coordinator and students need to receive confirmation of approval before taking time off.
  - the CTO time must be recorded in the online clinical documentation system. Time entered “0800-1600” and comment documented “1 CTO 8 hours used”
  - student is responsible for informing the AES of scheduled time off that has been approved.
  - students must notify both the AES and the Clinical Coordinator whenever they are late, absent, or leave early.
- An absence of more than two (2) consecutive days requires a physician’s note before returning to your clinical site. A student absence without notification for three (3) consecutive days on which the student was scheduled for clinical duty is considered a voluntary resignation from the program without notice.
- Three (3) incidents of lateness will result in a loss of 8 hours CTO. Continued tardiness will be dealt with in accordance of the disciplinary procedures of the Program.
- Students who do not notify their clinical AES and the Clinical Coordinator of CTO, tardiness or leaving early, will be dealt with in accordance of the disciplinary procedures of the Program.
• If a student exceeds the allotted CTO days per practicum/internship, the excess must be made up on the next clinical day off and before the end of the semester. Make up time is for the sole purpose of bringing the student back into compliance with Program standards. Time cannot be made up without appropriate authorization from the Clinical Coordinator. The student will receive a failing grade for the attendance portion of the clinical grade for that semester. Students cannot bank or add time to their CTO balance by “making up” hours in advance. Any owed time must be made up before the student will be allowed to graduate or progress to next semester.

CTO days should be reserved for illness and emergencies, not for routine appointments. Students should not schedule appointments during clinical time. If appointments must be scheduled on a clinical day, students are encouraged to schedule them at the beginning or the end of a clinical shift. If the student must come in late or leave early for an appointment, four (4) hours of their CTO time will be deducted, and he/she must follow the procedures for scheduling CTO time.

BEREAVEMENT TIME
It is the procedure of the Allied Health & Nursing Division to grant students reasonable bereavement time off without loss of CTO days when a death occurs in a student’s immediate family.

a. Definitions:

Immediate Family- Spouse, parent, step parent, daughter, son, step child, brother, sister, mother-in-law, father-in-law, daughter-in-law, son-in-law, grandparent, grandchild, a person who is legally acting in one of the above capacities, or another blood relative living in the student’s residence.

b. Guidelines:

Benefit Provisions- When a death occurs in a student’s immediate family, the bereaved student will be granted bereavement time off up to three consecutive days to attend the funeral, to make arrangements relating to the death or as other circumstances require.

The Program Director reserves the right to require verification of the death and relationship of the student to the deceased.

Additional bereavement time off may be granted per the discretion of the Program Director.

STUDENT CHANGE OF ADDRESS & CONTACT INFORMATION

It is very important that the Program, as well as the College know the students’ place of residence, their contact information and any change of name, address or contact information. If any changes occur, please notify the Program Director, Clinical Coordinator and the College Registrar’s Office.
WITHDRAWAL FROM THE PROGRAM

Any student who wishes to withdraw from the NMT Program will discuss his or her decision with the Program Director, as well as the Allied Health & Nursing/College Counselor (see GCC Student Handbook). If the decision is final, a written notice of withdrawal with explanation from the student is required.

HEALTH AND SAFETY POLICIES

HEALTH REQUIREMENTS

All students are required to submit a current health assessment completed by a primary care provider within the last twelve (12) months. Documentation of specific student health requirements is mandatory prior to participation in any clinical experiences. Failure to complete and submit the required Health Assessment Form, by the required deadline (June 15th) and the signed Student Statement of Responsibility may result in dismissal from the Nuclear Medicine Technology Program. Clinical affiliate contracts state the student must be in good physical and emotional health and free of communicable diseases. Certain items may require additional follow-up during the Program (i.e. Hepatitis B immunization, Influenza vaccine, and Tuberculin testing). The student is required to follow all instructions for documentation of immunization status with the required laboratory reports, and to obtain the signature of the health care provider as indicated. The student is strongly encouraged to receive the Hepatitis B immunization series; any student who refuses to receive the immunization must submit the Hepatitis B waiver form. Tuberculin tests (PPD) and Influenza vaccination must be updated on an annual basis and more frequently if required by the clinical affiliate. Each student must have on file current documentation of PPD and Influenza vaccine results. Non-compliance will result in removal of the student from the clinical affiliate, and may result in a disciplinary sanction. Students who have a history of positive PPD must submit one of the following: CXR report within the past year or Quantiferon Gold lab test.

TECHNICAL STANDARDS

Technical Standards reflect reasonable expectations of the nuclear medicine technology student for the performance of common functions of the registered nuclear medicine technologist. The nuclear medicine technology student must be able to apply the knowledge and skills necessary to function in a board variety of clinical situations (see Appendix E).

CLINICAL BACKGROUND CHECKS & TOXICOLOGY SCREENING

Due to clinical learning affiliate requirements, criminal background checks and toxicology (drug) screening is required for all Nuclear Medicine Technology students prior to participation in clinical experiences. Due to this requirement, student refusal of either the background check or drug screening, will result in dismissal from the Nuclear Medicine Technology program due to the inability to complete clinical learning requirements. Students must follow all instructions for obtaining criminal background checks and toxicology screenings. Students who are found guilty of having committed a felony, misdemeanor and/or are found to have a positive toxicology screen may be prevented from participating in clinical experiences. Please note, in accordance with federal law, a positive toxicology screen for legally prescribed marijuana may prohibit a student from being placed in a clinical setting that
accepts federal funding. Results of student background checks and toxicology screening do not become a part of the student’s educational record, as defined by the Family Educational Rights and Privacy Act (“FERPA”).

Please note: The student is responsible for all fees associated with this.

Procedures and Guidelines for Student Toxicology (Drug) Screening and Criminal Background Checks

Confidential toxicology (drug) screening and/or criminal background checks may be required for students prior to participation in the initial clinical rotation utilizing the vendor(s) adopted by the College (i.e. Certified Background, Connecticut League for Nursing/CLN, etc.). The following guidelines are applicable to Toxicology Screening and/or Criminal Background Checks for any student:

1. The need for additional screening/assessment beyond the initial screening/assessment is related to clinical affiliate requirements and/or results of the initial screening/assessment.
2. Notification and recordkeeping of toxicology screening results and/or criminal background checks are performed in a manner that insures the integrity, accuracy and confidentiality of the information.
3. Students are not allowed to hand-deliver results of either toxicology screening or criminal background checks.
4. Students are required to sign a release for results of toxicology screenings and criminal background checks to be sent to their program.
5. Results of toxicology screenings and criminal background checks are NOT a part of the student’s “educational record” as defined by the Family Educational Rights and Privacy Act (“FERPA”).

TOXICOLOGY SCREENING STANDARDS AND GUIDELINES

The following guides the response to a positive Toxicology Screening for any student:

1. All specimens identified as non-negative/positive on the initial test shall be confirmed, reviewed, and interpreted by the vendor.
2. The student is required to provide documentation by a healthcare provider in the event there is a medical explanation for a positive test result (i.e. a result of a legally prescribed medication).

Toxicology Screening that requires Retesting:

1. Vendor reports that the screening specimen was diluted.
2. If a student challenges a result, only the original sample can be retested.

Response to a Confirmed Positive Toxicology Screen

If a student tests positive for drugs that are illegal substances, non-prescribed legal substances, or the student is deemed unsafe for the clinical setting by a healthcare provider, the student will be immediately dismissed from the NMT Program. Students will be given an opportunity to discuss the results of the non-negative/positive screen with the Program Director.
Readmission following dismissal from the program in response to a confirmed positive toxicology screen is guided by the following conditions:

1. The student provides documentation from a qualified healthcare professional indicating status of abuse, addiction or recovery and/or documented rehabilitation related to the alcohol/drug abuse.
2. A confirmed negative toxicology screen is documented immediately prior to readmission, and
3. The student meets all other requirements for readmission.

Reasonable Suspicion Screening

Students may also be required to submit to additional toxicology screening during the program in accordance with clinical affiliate contracts when reasonable suspicion of impairment exists. Reasonable suspicion testing may include, but not be limited to, the following:

1. Physical symptoms such as slurred speech, unsteady gait, confusion or other manifestations of drug/alcohol use.
2. Presence of an odor of alcohol or illegal substance.
3. Abnormal conduct or erratic behavior during clinical or on-campus learning activities, chronic absenteeism, tardiness, or deterioration of performance regardless of any threat to patient safety.
4. Suspected theft of medications including controlled substances while at the clinical facility, and
5. Evidence of involvement in the use, possession, sale, solicitation or transfer of illegal or illicit drugs while enrolled in the NMT Program.

Criminal Background Checks Standards and Guidelines

Students who are found guilty of committing a felony will be prevented from participating in clinical experiences by clinical learning facility policy. If a student cannot participate in a clinical rotation at an assigned facility, s/he will not be able to complete the objectives of the course and program.

If a criminal background check reveals that a student has been found guilty or convicted as a result of an act which constitutes a felony and the student is unable to be placed at a clinical learning site, then the student is unable to meet the clinical objectives/outcomes of the course. The Program Director notifies the student and the student is provided with the opportunity to withdraw from the program. Should the student refuse to withdraw, the student will be terminated from the program.

Smoking Guidelines

Gateway Community College is a smoke free campus/workplace. Students are required to follow hospital policy regarding smoking. Please be advised that we require all students to come to
clinical free from any tobacco product odor. If a student smells of tobacco products they will be asked to leave clinical immediately and will lose CTO time. Any student looking for smoking cessation resources may visit the following website for further information: http://www.cdc.gov/tobacco/campaign/tips/quit-smoking/ or call 1-800-Quit-Now.

STANDARD PRECAUTIONS AND HIPAA
Students enrolled in the Nuclear Medicine Technology Program must adhere to all policies and procedures concerning Standard Precautions and Infectious Disease Policies and Health Insurance Portability and Accountability Act of 1996 (HIPAA) as practiced at the assigned clinical affiliate. The defined policy is located in the office of the designated AES or through the Personnel Health Center at the clinical affiliate. Students will be provided with this information during the program orientation and may also have site specific orientation regarding these policies.

Students must never disclose confidential information including anything pertaining to the medical history, diagnosis, treatment, and prognosis to anyone not directly involved in the care of the patient. In addition, students are required to follow HIPAA regulations on “Protected Health Information” which includes any “individually identifiable health information”. This includes information such as the individual’s past, present or future physical or mental health or condition, the provision of health care to the individual, or the past, present, or future payment for the provision of health care to the individual, and that identifies the individual or for which there is a reasonable basis to believe it can be used to identify the individual. Individually identifiable health information includes many common identifiers (e.g., name, address, birth date, Social Security Number).

Please visit http://www.hhs.gov/hipaa/for-professionals/index.html for more information. Failure to adhere to this code constitutes a violation of the “Right to Privacy Act,” as well as HIPAA and is professionally unacceptable, as well as potentially compromising from a medical/ legal standpoint.

Latex Allergies: College NMT laboratories and many clinical sites are not latex-free. Students who enter the Program with latex sensitivity/allergy must notify the Program Director and Clinical Coordinator and develop a plan of action.

HEALTH AND SAFETY TRAINING, BASIC LIFE SUPPORT AND VENIPUNCTURE

Students are required to successfully complete the online CT Hospital Association (CHA) Health and Safety Training Course and Patient Care Orientation (PCO) prior to participation in clinical experiences. Students must successfully pass the PCO training course with a numerical grade of 75% or higher to proceed in the NMT Program. The course for CHA is available at: http://www.hhs.gov/hipaa/for-professionals/index.html

Students are required to provide documentation of current professional level certification in Basic Life Support for adult, child and infant. Certification can only be earned through the American Heart Association or the American Red Cross and must remain current throughout the Program. Courses meeting this requirement are:
Online CPR courses will not be accepted. A copy of the current certification card must be submitted prior to the start of the first semester in the Program. Failure to comply will result in exclusion from the clinical learning experience.
All students must also participate in venipuncture training provided by the NMT Program and/or the clinical affiliate, regardless of previous certifications or training.

TRANSPORTATION AND PARKING

Students are responsible for transportation to and from the college and clinical education sites. Students will travel to clinical affiliates located throughout Connecticut.

Students are subject to the parking regulations established by the clinical affiliates and are expected to park in designated areas only. If a violation occurs, the car may be towed at the student’s expense. The College and the NMT Program are not responsible for parking or towing expenses or injury to property sustained at a clinical affiliate site.

MALPRACTICE INSURANCE

Professional liability insurance is provided for students by the College. Students may also purchase additional professional liability insurance on their own.

PREGNANCY STANDARDS-VOLUNTARY NOTIFICATION

The declaration of pregnancy is a voluntary program intended to provide an option for pregnant students who are considered to be occupationally exposed to ionizing radiation. Pregnancy during the course of the Program may present problems for completion of objectives/competencies in the expected time due to the number and variety of courses in the Program curriculum and the necessary clinical assignments required of students in meeting the clinical educational objectives for each clinical course. All Program requirements must be met in order for a student to graduate. The Program Director cannot sign the certification/registry board exam application(s) and/or graduation verification form until the student has met all requirements and has graduated from the Program.

Note: Experience shows that the radiation workers in this Program generally receive to the whole body well below 500 mrem per year, 50 mrem per month, and it is most unlikely that there will be any problems adhering to the fetal exposure limits. Through proper instruction, strict adherence to safety precautions and through personnel monitoring, it is possible to limit occupational exposure to under 0.5 rem during the period of gestation.

In the event, however, that a student becomes pregnant, she has the option to declare or not declare her pregnancy. Declaration of pregnancy is a voluntary option and may be withdrawn at any time. The student has the right to not declare pregnancy and remain in the Program with no modifications. The student may revoke a declaration of pregnancy at any time (this must be submitted in writing). Choosing not to declare a pregnancy will result in no exemption from the
specific radiation protection regulations limiting the exposure to the embryo/fetus. Whether or not pregnancy is declared, the pregnant student is advised to consult with her physician. The Program will not assume liability in any case of pregnancy.

In the event of a suspected or confirmed pregnancy, it is the responsibility of the student to advise her Program Director in writing of her condition if she chooses to declare her pregnancy. **Pregnancy will not affect the student’s enrollment in the academic courses in the Program.** However, due to the physical requirements placed upon the student in the clinical courses and assignments, and in order to comply with 10 CFR Part 20.1208 to keep the radiation exposure to the fetus as low as reasonably achievable (no more than 500 mrem and 50 mrem per month during the gestation period), the following procedures will apply:

1. The student may voluntarily report a suspected or confirmed pregnancy to the Program’s Radiation Safety Officer (Michael Bohan, 203-688-2950).
2. The RSO will determine the estimated radiation dose from the time of conception to the date of declaration based on dosimetry records and calculate the permissible remaining dose to the embryo/fetus for the remainder of the pregnancy.
3. Upon review of the findings and recommendations of the RSO, current and future clinical assignments will be reviewed by the Program faculty. Clinical assignments will be altered if the fetus received the maximum permissible dose as stated by 10 CFR Part 20.1208. Any clinical competencies not completed for reasons related to pregnancy must be successfully completed prior to graduation.
4. If a student voluntarily decides to declare her pregnancy she must complete and sign the Declaration of Pregnancy Form (see Appendix F). The original form will remain with the RSO. A copy will be provided to the student, and a copy must be submitted to the Program Director to place in the student file.
5. Within 1 week of voluntary declaration of pregnancy, the declared pregnant student must provide the Program Director with written indication of intent to:
   a. Continue in the program with or without modifications, or
   b. Take a medical leave of absence with intent to complete the Program, or
   c. Withdraw from the Program
6. The declared pregnant student must provide the program director with written letter from her physician including the estimated date of conception and estimated date of delivery as well as providing medical clearance for:
   a. Continuing in the Program as a full-time student, and/or
   b. Any limitations placed upon the student while enrolled in the Program.
7. All clinical days/hours missed by the student must be made up which may result in a delay in the completion of the Program.
8. The student will be expected to complete all the requirements for any sequential, didactic course(s) in which she is enrolled prior to enrolling in the next semester’s coursework. Prerequisite courses must be completed prior to the beginning of the next course.

Note: Experience shows that the radiation workers in this program generally receive to the whole body well below 500 mrem per year, 50 mrem per month, and it is most unlikely that there will be any problems adhering to the fetal exposure limits.
Through proper instruction, strict adherence to safety precautions and through personnel monitoring, it is possible to limit occupational exposure to less than 0.5 rem during the period of gestation.

The pregnant student will be expected to complete all the requirements for any sequential, didactic course(s) in which she is enrolled prior to enrolling in the next semester’s coursework. Prerequisite courses must be completed prior to the beginning of the next course. All clinical days/hours missed by the student must be made up prior to graduation.

If a leave of absence is taken, the student must comply with the NMT Program Readmission Policy.

If the student wishes to return to the Program within six weeks after the pregnancy is complete, she must submit to the Program Director verification of medical clearance from her physician.

**RADIATION POLICY**

**MONITORS FOR RADIOLOGY STUDENTS OCCUPATIONALLY EXPOSED TO IONIZING RADIATION (updated 6/2017)**

I. **POLICY**

   It is the policy of all clinical affiliates to adhere to both State and Federal regulations regarding the bioassay services and use of personnel monitoring devices by students occupationally exposed to ionizing radiation. The information gained through their use will be used to keep individual and collective exposures As Low As Reasonably Achievable (ALARA).

II. **APPLICATION**

   This policy applies to any Gateway Community College Radiology student occupationally exposed to ionizing radiation who, in any calendar quarter, receives or is likely to receive, a dose greater than 10% of the applicable maximum permissible dose limit as recommended by the National Council on Radiation Protection and Measurements (NCRP), and incorporated in State and Federal regulations (see Table I). Personnel monitors will be issued on a monthly or quarterly basis as determined by the Yale- New Haven Hospital Radiation Safety Officer (RSO), according to expected exposure levels.

III. **ADMINISTRATIVE GUIDELINES**

   A. Radiation monitors will be issued and bioassays performed by the Hospital’s Radiation Safety Officer (RSO) to:

      1. All Radiology students who in the course of their work may receive external or internal radiation exposures greater than 10% of the maximum permissible limit.
      2. Bioassay services will be provided to students when necessary as determined by the Radiation Safety Officer (RSO).
3. Internal doses received will be modified according to the weighting factors identified in Table II and the summed with external doses to determine the Total Effective Dose Equivalent (TEDE).

4. All occupational dosimetry results will be kept on permanent file by the Radiation Safety Office. Duplicate copies of the monthly or quarterly monitoring results will be distributed to the Clinical Coordinator for review with students to keep them informed of their personal exposure history. Individual exposure summaries will be provided to each monitored student who exceeds 0.1 REM annually and upon request.

5. Quarterly exposures that exceed 10% of the quarterly maximum permissible limit will be highlighted in yellow on the duplicate reports and a summary of the results will be presented at the quarterly Radiation Safety Committee meeting. Quarterly exposure levels that exceed 30% of the quarterly maximum permissible limit will be highlighted in red on the duplicate reports and reported to the individual involved and the Clinical Coordinator and Program Director. The RSO will investigate these exposures to determine their cause and implement measures to reduce such exposures, consistent with the ALARA policy. The results of these ALARA investigations will be presented at the quarterly Radiation Safety Committee meeting.

B. Students, who believe that they are occupationally exposed to levels greater than 10% of the applicable maximum, may request an assessment of their situation by the Radiation Safety Officer. If, in the Radiation Safety Officer’s judgment, these students are potentially exposed to more than 10% of the applicable maximum, radiation monitors will be issued for a three-month trial period. At the end of the trial period, the RSO will determine if the exposures received indicate that permanent monitoring is necessary.

C. The RSO may terminate existing monitoring if the student’s exposure history indicates that he/she is not likely to be exposed to radiation in excess of 10% of the applicable maximum.

D. It is recommended that occupationally exposed students, i.e. those who are monitored for radiation exposure, who become pregnant, should notify the RSO as soon as their condition is confirmed. The RSO will then schedule a meeting with the student to discuss her radiation-exposure history, the risks to the fetus, and measures that can be taken to minimize the dose to the fetus.

If the student’s previous radiation history indicates that her occupational exposure may exceed 0.5 Rem during the gestation period, she may voluntarily decide to formally declare her pregnancy to the Program and clinical affiliates by signing a letter that includes her name and estimated date of conception. If a student formally declares pregnancy, the Program/clinical affiliates will take reasonable steps to avoid substantial variation above a uniform monthly exposure rate to assure that fetal exposure will not exceed 0.5 Rem during the gestation period. If the dose to the fetus is found to have exceeded 0.5 Rem or is within 0.05 Rem of this dose by the time the student declares her pregnancy, the Program/clinical
affiliates will limit additional dose to no more than 0.05 Rem during the remainder of the pregnancy. This may be accomplished by a modified clinical training schedule, withdrawal from the Program, or by a leave of absence.

a. If the student chooses to not make a formal declaration of her pregnancy, she may remain in her present position, and will be subject to the normal occupational dose limits (see Table 1), and the program/clinical affiliates will not be required to limit the exposure to the embryo/fetus to 0.5 Rem.

IV. RESPONSIBILITY

E. Radiation Safety Officer (RSO)

Shall be responsible for the issuance, collection, termination and record keeping requirements of the radiation monitoring program. The RSO will investigate unusual or unexpected exposures to ensure that ionizing radiation exposure is kept As Low As Reasonably Achievable (ALARA). The RSO will consult with students, supervisors, management and others as necessary to assist them to make informed decisions regarding occupational exposure and keeping exposure ALARA.

F. Occupationally Monitored Students

Shall be responsible for wearing their radiation monitors as instructed during all scheduled work hours. Students shall not engage in any radiation procedures without wearing their radiation monitors. Monitors should not be worn while the student is off duty or during medical treatments or examinations requiring exposure to radiation. To assure the quick and efficient exchange and reading of monitors, they should be returned to the RSO within one week after receipt of replacement monitors.

G. Program Director/Clinical Coordinator

The Program Director/Clinical Coordinator will make a reasonable effort to find a suitable accommodation for declared pregnant students who have exceeded the 0.5 Rem during their gestation period. This may be accomplished by a modified clinical training schedule, withdrawal from the Program or by a leave of absence.

H. Contact Persons:

Yale-New Haven Hospital - Mike Bohan – (203) 688-2950

V. DISCIPLINARY ACTION

I. Failure to return the radiation monitor to the Clinical Coordinator or RSO within one week after the receipt of a replacement monitor shall be considered a minor offense in accordance with Radiation Policy located in this Student Handbook and may result in a disciplinary sanction. Late return of monitors and/or loss of monitors may result in a disciplinary sanction.
J. Tampering with the radiation monitor or exposing it to ionizing so as to cause a false positive reading shall be considered a serious offense in accordance with Radiation Policy and will result in immediate dismissal from the Program.

<table>
<thead>
<tr>
<th>TABLE I</th>
<th>MAXIMUM PERMISSIBLE OCCUPATIONAL RADIATION EXPOSURE LIMITS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quarterly Limit</td>
</tr>
<tr>
<td>1.</td>
<td>Total Effective Dose Equivalent (TEDE) including Weighted Internal Doses</td>
</tr>
<tr>
<td>2.</td>
<td>Lens of Eye</td>
</tr>
<tr>
<td>3.</td>
<td>Extremity, Skin or Individual Organ Dose</td>
</tr>
<tr>
<td>4.</td>
<td>Skin of the whole body</td>
</tr>
<tr>
<td>5.</td>
<td>Embryo/Fetal Dose (Declared Pregnancy)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TABLE II</th>
<th>ORGAN DOSE WEIGHTING FACTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organ or Tissue</td>
<td>Weight Factor</td>
</tr>
<tr>
<td>Gonads</td>
<td>0.25</td>
</tr>
<tr>
<td>Breast</td>
<td>0.15</td>
</tr>
<tr>
<td>Red Bone Marrow</td>
<td>0.12</td>
</tr>
<tr>
<td>Lung</td>
<td>0.12</td>
</tr>
<tr>
<td>Thyroid</td>
<td>0.03</td>
</tr>
<tr>
<td>Bone Surfaces</td>
<td>0.03</td>
</tr>
<tr>
<td>Remainder</td>
<td>0.30*</td>
</tr>
<tr>
<td>Whole Body</td>
<td>1.00</td>
</tr>
</tbody>
</table>

*Remainder – 0.30 results from 0.06 for each of 5 “remainder” organs (excluding the skin and lens of the eye) that receive the highest doses.
Film badges are an important part of the radiation safety program at Yale-New Haven Hospital. The results from the film badges are used to measure your personal exposure, and also to identify radiation exposure trends within your department and in the hospital as a whole. In order to maintain a safe radiological environment, your cooperation with the film badge program is essential. If you are issued a film badge or other dosimeter, please follow the instructions below.

1. Radiation monitoring badges are distributed on the first of the month to all Hospital departments. Identify the person in your department who distributes the film badges. You should exchange your film badge with them within a week after the arrival of new badges.

2. Wear your radiation monitor **AT ALL TIMES DURING DUTY**. Your monitor is supposed to measure your exposure at work. If you don’t wear it at all times, it will not represent a true measure of your occupational exposure. You may not always anticipate when exposures may occur.

3. The monitor must be placed in the holder so it can be worn properly. Make sure the monitor is clipped into the holder properly. The two notches in the badge must be aligned with the two clips on the holder. Radiation monitors are sensitive to heat, moisture, and light. Do not allow your monitor to go through the laundry, be left in a hot car on a sunny day, or puncture the protective packet. All these may affect the accuracy of results.

5. Do not share your monitor with someone else. If someone needs a new monitor or has lost his/her badge, contact the Radiation Safety Officer (RSO) at 688-2950 for a replacement.

6. Do not wear your monitor if you personally undergo a diagnostic or therapeutic procedure. The monitor is meant to measure your occupational exposure only. If you wish to know what doses you may receive from a medical procedure, contact the RSO. The RSO can supply average dose estimates for these studies.

7. If you are involved in fluoroscopic procedures and are issued only one monitor, wear it at the collar outside of your protective apron. If you are issued two monitors, the monitor designated "WAIST" should be worn under the apron at the waist, the other monitor should be worn at the collar outside of the apron.

8. Ring monitors are issued to people who may receive exposures to the hands. If you are issued one ring it should be worn on the hand which is closest to the source of radiation for the longest time. The face of the ring badge should be worn so it points toward radiation source if possible. Please be consistent in wearing your ring monitors, they can provide the RSO with clues as to where exposures are occurring so protective measures can be improved. Rings should be worn under gloves to prevent them from becoming contaminated. If you need sterile rings, they can be soaked in a liquid sterilizing solution and rinsed in sterile water before use.

9. The radiation monitor results are examined monthly by the RSO for evidence of excessive or unusual exposures. The results are examined quarterly by the Radiation Safety Committee to maintain exposures **As Low As Reasonably Achievable (ALARA)**. If your exposure is greater than expected, you will be notified by the RSO and an investigation into the circumstances of the exposure will be conducted. Depending on the results of the investigation, new equipment or procedures may be recommended to keep exposures ALARA.

10. Copies of the monitor results are distributed to the individual departments for posting. Exposures greater than 10% of the quarterly limits are highlighted in yellow. Exposures greater than 30% of the quarterly limits are highlighted in orange or red. On the back of the report, you will find information
explaining the report and the information it contains. You may also request your cumulative exposure history at any time from the RSO directly.

11. Yale-New Haven Hospital follows the recommendations of the National Council on Radiation Protection and Measurements (NCRP) and the regulations of the United States Nuclear Regulatory Commission, Title 10, Part 20, concerning maximum permissible doses. These limits are listed below:

<table>
<thead>
<tr>
<th>Type of Exposure</th>
<th>Maximum Permissible Exposure</th>
<th>Level I 10%</th>
<th>Level II 30%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Effective Dose Equivalent</td>
<td>1,250 mRems/3 months</td>
<td>or 125</td>
<td>375 (mRem/Quarter)</td>
</tr>
<tr>
<td>(Includes deep whole body dose plus weighted single organ doses)</td>
<td>5,000 mRems/year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lens of the Eye</td>
<td>3,750 mRems/3 months</td>
<td>or 375</td>
<td>1,125</td>
</tr>
<tr>
<td></td>
<td>15,000 mRems/year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual Organ Limit</td>
<td>12,500 mRems/3 months</td>
<td>or 1,250</td>
<td>3,750</td>
</tr>
<tr>
<td>(Includes hands, forearms, feet and ankles)</td>
<td>50,000 mRems/year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Declared Pregnant Occupation</td>
<td>500 mRems/9 months</td>
<td>less than 50 mR/month</td>
<td></td>
</tr>
<tr>
<td>Occupationally Exposed Personnel</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12. The ALARA program tries to maintain exposures below 10% of the limits listed above. Within the Hospital, these levels are generally easily achievable with proper techniques and use of protective equipment. Past experience at Yale-New Haven Hospital has shown that 96% of all badged personnel receive less than 10% of the annual limits.

13. If you are actively planning a pregnancy or become pregnant, notify the RSO as soon as possible. Request an appointment with the RSO so you can review your past exposure history to determine if further measures are needed to minimize dose to the fetus.

14. If you are not familiar with radiation safety techniques, contact the RSO. The RSO can provide you with the information you need to minimize your exposure.

15. You can contact the RSO at 688-2950 or at Winchester Bldg. Rm. 204

MJB (Jul07)
PROFESSIONAL APPEARANCE

NMT PROGRAM DRESS CODE REQUIREMENTS FOR CLINICAL
Be aware that your personal appearance is as important in good patient care as are your words and actions. Professional dress codes are designed to assure appropriate clothing for the work involved, as well as to project the necessary clean and professional image that is so valuable in building patient confidence.

An established dress code serves two purposes:
• Creates a professional atmosphere that ultimately leads to patient confidence.
• Provides for and maintains staff and student safety.

Attire: Navy blue uniform or scrub pants and tops. White t-shirt can be worn underneath to ensure no chest hair or cleavage is visible. Uniform attire designated by program should be properly maintained. Uniforms must be clean and free of stains, wrinkles and odors. Tattoos must be covered. There are to be no other combinations worn.

Lab coats: Long white lab coat embroidered with the GCC logo and Program name in navy blue embroidery (long sleeves and it must be 37-40” in length to fall below the knee cap). The nuclear medicine student must wear a long white lab coat while in a nuclear medicine department and during the clinical labs.

Shoes: White closed toe and closed heel non-skid sole shoes and white socks. No logos. No clogs. No high heels. Regulation white leather uniform shoes (purchased at a uniform shop) or white leather low top sneakers can be worn. Sneakers should be all white-no color stitching or colored laces. High top sneakers are not allowed. The shoes must be polished at all times.

Hair: Hair longer than shoulder length will be securely tied back to keep it from coming into contact with patients. Hairstyles and accessories are to be conducive to the professional atmosphere of the clinical affiliate. Hair ornaments, such as bows, decorative barrettes or combs may not be worn with the student uniform.

Personal Hygiene: Individual hygiene practices should assure the lack of personal odors that may be offensive to others. Male students are to be clean shaven. If a student has a beard or mustache it must be neat, clean and well-trimmed.

Jewelry: For purposes of safety and protection, earrings must not extend beyond ear lobes and ornamental rings are not permitted in direct patient care areas. Necklaces, excessive rings and ornamental jewelry of any kind are not permitted. Any type of nose, facial, tongue, or visible body jewelry is not permitted during clinical labs and at the clinical site. These may be hazardous to the patient, as well as the student.

Fingernails: Fingernails shall be kept at a length of no more than ¼ inch, as recommended by the CDC, clean and well-manicured for both patient protection and good infection control (the ¼ inch measurement pertains to the white part of the nail extending from the nail bed at the distal end of the finger). Nail polish, if worn, must be neatly maintained (free of cracks and chips). Polish must be either clear or pastel in color. Bright or dark colors are not acceptable.
Rhinestones, sparkles, designs or foreign bodies/nail jewelry are not permitted. Artificial nails and nail tips are prohibited.

**Cosmetics:** Cosmetics, including perfume/cologne/after shave is not to be worn.

**Identification:** Radiation monitors and student ID badges from GCC and the clinical affiliate must be worn at all times. Lanyards are not allowed. All IDs must be visible and attached to the lab coat. All hospital ID badges must be returned to the clinical site or the clinical coordinator at the designated site upon completion of the clinical rotation.

**Smoking, chewing tobacco, chewing gum or the smell of tobacco products on students are not permitted in the clinical setting.**

**Other Required Supplies:** The student is also required to have the following:

- a small notebook that will fit in the student’s lab coat pocket for clinical notes.
- a binder to keep all clinical handouts from Clinical Practicum labs.

Program faculty and Clinical staff/AES reserve the right to dismiss or restrict a student from the clinical setting for failure to comply with the dress code and/or extremes in personal grooming. A student who does not comply with the Dress Code while at any of the clinical affiliates will be dismissed from the affiliate site until the next clinical day, will receive a written warning and student’s clinical evaluation for that rotation will be affected. Each day the student is out of compliance with the Dress Code will result in a loss of CTO time.

**CHANGE IN STUDENT INFORMATION**

It is very important that the Program Director has the most up-to-date contact information for each student. Any change in name, address, phone number or email address should be immediately provided to the Program Director, Clinical Coordinator, and College Registrar’s Office.

**STUDENTS’ ADDITIONAL PAYMENTS RESPONSIBILITIES:**

In addition to tuition, student financial responsibilities include:

- The student is responsible for all fees associated with the following Program requirements:
  - Textbooks - $1500
  - Uniforms - $200
  - Clinical Markers - $30
  - Toxicology Screening - $65
  - Background Check-$65
  - Trajecsys online clinical documentation system - $150
  - Castle Branch/Certified Background online health management system - $35
  - Pin for pinning ceremony - $30
  - Transportation and associated costs – Variable
  - Health care immunizations and titers – Variable
  - BLS or CPR/AED – Variable
*These fees are approximate and subject to change. If a student takes a leave of absence from the program, they will need to cover additional program fees as needed.

**CLINICAL GUIDELINES**

**CLINICAL EDUCATION SYSTEM**

**Rationale:**

The clinical aspect of the Nuclear Medicine Technology Program is of utmost importance. Clinical skills must be performed regularly in an accurate, professional, and caring manner. The GCC program has developed competencies and an evaluation system to meet these standards. Clinical education is broken down into specific categories:

- Equipment
- Technical Skills
- Patient Care Skills
- Behavioral Skills
- Radiopharmaceutical Skills

In addition, clinical objectives specific to each semester or course have been developed. Refer to the Nuclear Medicine Technology Program’s Clinical Objectives.

The student is instructed and gains knowledge in a logical sequential manner. Basic skills are taught and knowledge is demonstrated before more complex ones are introduced. Once these individual skills are mastered and documented (daily log sheets), the student then proceeds to be tested in an orderly manner. Competency testing occurs after the student has met the following requirements*:

- lecture on the subject matter
- simulated lab practical or demonstration
- lab exam
- course exam
- documentation of observation and knowledge of specific skills (clinical log record).

*Students are allowed to attempt competency testing without meeting all of the above requirements on procedures which are performed infrequently (at the discretion of the Program Director and/or Clinical Coordinator).

Once the student attains a competency in any area or procedure, he/she shall maintain and practice their skill, or the competency will be revoked and will need to be repeated successfully in order to graduate from the program. Competencies are not assigned a percentage of the clinical grade, but are assessed on a Pass/Fail basis. Students must complete the required number of competencies required per semester (including winter and summer sessions) to remain in the program.
At the completion of the Program, the student will have demonstrated and documented entry-level skills for a nuclear medicine technologist.

**Method of Training:**

The student will rotate through the Nuclear Medicine Departments of the clinical affiliates in such a manner as to provide for sufficient exposure to a variety of exams and procedures. During the rotation the student observes, assists, and demonstrates each skill as it is taught and acquired. Each assigned area is considered a clinical learning lab, and each area is assigned a clinical instructor. Strengths are discussed, and weak areas are addressed. Students are afforded ample opportunity to complete all assigned task objectives and competencies.

**Goals for Clinical Practicum:**

The clinical practicum in the Nuclear Medicine Technology Program serves a twofold purpose. First, the student will learn to perform all imaging procedures and patient interaction skills. Secondly, the clinical practicum will allow the student to gain competence to perform at expected entry level necessary to face the responsibilities the student will need as a future technologist and employee.

The only way the faculty can assess the student’s skills and anticipated behavior as a technologist is by observing the student’s performance in the clinic. The skills the student develops during the time spent in this Program, are skills that will follow the student in the future as an employed technologist.

**CLINICAL OBJECTIVES**

**Gateway Community College and Hospital Orientations:**

The student is required to attend all hospital orientation sessions in the summer before the freshmen fall semester. During this time the student should become familiar with the affiliates, and will attend a variety of lectures and workshops. The student may also be assigned to their clinical rotation for a period of observation during the College orientation period.

During the GCC Orientation the student is responsible for Radiation Safety, Medicolegal Ethics, Patient Care, Medical Terminology and Program Specific Lectures.

It is the student’s responsibility to master all material covered during the College and hospital orientations in order to continue in the Program.

**Goals for Orientation and Observation:**

Student will be able to:

1. Describe the position of the nuclear medicine department in the organizational chart of a health care institution.
2. Name the major divisions within a radiology/diagnostic imaging department, and describe their function and location.
3. Describe the personnel policies of the institutions that are relevant to students.
4. Name the “Code” numbers used at the clinical affiliates, and state the emergency dialing procedures for fire, cardiac arrest, security, etc.
5. Describe the location of the emergency equipment within the nuclear medicine departments.
6. Describe the physical layout of the clinical affiliates, and the system used to locate patient rooms.
7. Describe the physical layout of the nuclear medicine departments. Name and identify the equipment (cameras, computers, etc.).
8. Describe how to use the telephone system in the departments.
9. Describe the lines of communication in the nuclear medicine departments, and in the Nuclear Medicine Technology Program.
10. Describe what is expected in the clinical education segment of training.
11. Describe the Patient Care Partnership, the Radiologic Technologist’s Code of Ethics, and the Nuclear Medicine Technologist’s Code of Ethics, and how they apply to the everyday practice of nuclear medicine technology.
12. Complete with a 75% or better the course work and exams by the end of the orientation period.

**Freshmen/Fall at Secondary Level:**
At this level the student observes, assists and takes clinical notes. In some areas, this level overlaps with orientation activities. The student will attend clinical practicum 16 hours per week, and follow the assigned clinical rotation.

**Goals for Freshmen/Fall Semester:**
Student will be able to:

**Departmental Procedures:**
1. Describe the departmental procedures for; patient scheduling, dose administration, room assignments, images, data, or report processing, patient record filing system, and retrieval of previous reports/films.
2. Describe the departmental daily area survey routines, and regulations for storage, waste disposal, and general supplies access regulations.

**Imaging Procedures:**
1. When given a routine imaging requisition:
   a. locate and review requisition
   b. retrieve and/or prepare patient file
   c. identify relevant patient data from medical record and record on requisition, as appropriate
   d. obtain positive patient identification
2. Correctly positions patient for procedures.
3. At the time of imaging, use correct body mechanics to move patient on and off the imaging table, as well as during the study.
4. Correctly label and assemble all images for presentation to the physician or technologist (this includes notation of anatomical landmarks as appropriate).
5. Correctly complete all departmental forms/documentation.
6. Conduct study in an ethical, safe and professional manner.
Nuclear Instrumentation- Scintillation Cameras:

Student will be able to:

1. Given an imaging examination requisition to be performed on a scintillation camera, correctly prepare the instrument for the procedure, to include:
   a. selection and attachment of proper collimator
   b. selection and adjustment of imaging parameters, according to department protocol

2. For a given scintillation camera, perform and analyze a field uniformity check to include:
   a. selection of a radionuclide source of appropriate quantity and energy
   b. check photopeak and energy spectrum.
   c. obtain uniformity images using identical standardized imaging parameters, including counts and intensity
   d. comparison of current field uniformity image with previous images, and identification of any nonuniformities

3. For a given scintillation camera field uniformity image that demonstrates nonuniformity, differentiate and determine the source of nonuniformity using correct procedures, to include:
   a. collimator check for image or foreign objects
   b. flood source check for homogeneous distribution of radioactivity, as appropriate
   c. check photopeak
   d. scintillation detector check for probability of cracked crystal, or loss of hermetic seal

4. Given a scintillation camera quality control results that are abnormal, evaluate the results, and notify the supervising technologist.

5. Given a scintillation camera, perform and analyze a detector linearity check, to include:
   a. placement of a parallel line phantom and uniformity check source in correct position, with the phantom closest to the detector
   b. obtaining at least two images oriented 90° to each other, using the standardized imaging parameters from the field uniformity check.
   c. evaluation of the images and identification of any line distortion on the image

6. Given detector linearity check images on a scintillation camera which demonstrate line distortion, determine the source of nonlinearity to include consideration of the following:
   a. camera system
   b. components of the system
   c. detector source geometry
   d. consistency of protocol with previous checks
   e. notification of supervising technologist, if necessary

7. For a given scintillation camera, performs, and analyze a spatial resolution check, to include:
   a. use of a field uniformity check source and high resolution phantom compatible with the specified resolution of the camera
   b. obtaining resolution images oriented 90° to each other, using standardized imaging parameters according to departmental protocol
   c. comparison and evaluation of images with prior resolution images and determination of unacceptable change in resolution
   d. as appropriate, contacting the chief technologist for determination if service is needed
8. When assigned to complete quality control procedures on the departmental camera(s), demonstrate an appreciation for the importance of quality functioning by maintaining instrumentation, to include:
   a. performing each quality control exam with the accepted frequency
   b. using standardized protocols for each exam
   c. recording the results of each quality control procedure
   d. comparing each result with a series of previous results to determine whether significant variation occurs
   e. contacting the supervising technologist if any questionable results are obtained.

Radiation Safety and Protection: Personnel Monitoring Devices:

Student will be able to:

1. Consistently wear whole-body and ring badges.
2. Consistently follow dress code, including lab coat and closed toe and heel shoes.
3. Regularly review the monthly and cumulative personnel exposure records with regard to occupational dose limits.
4. Recognize and take appropriate measures to reduce exposure.
5. Keep exposure as low as reasonably achievable by using appropriate protection parameters continuously.

Radioactive Waste Disposal:

Student will be able to:

Consistently use the correct waste disposal methods for syringes, vials, needles, contaminated articles, and radioactive waste, as defined by the radioactive materials license and departmental design and protocol.

Licensing Requirements:

Student will be able to:

1. Identify and locate parameters of the department’s radioactive materials and license.
2. Demonstrate an appreciation of the license and federal requirements and parameters by consistently performing the following tasks:
   a. disposing of radioactive waste in the appropriate manner
   b. maintaining levels of radiation to the limits identified by the radiation signs in all areas

Patient Care and Preparation for Nuclear Medicine Procedures:

Nonemergency:

Student will be able to:

1. Use correct body mechanics and support holds when moving or assisting patients.
2. Use side rails on stretcher, locks on wheelchair and step stool for patients, as appropriate.
3. Monitor the disoriented, unconscious, sedated, or pediatric patient.
4. Provide for patient comfort before, during, and after performing the nuclear medicine procedure.
5. Use correct isolation procedures (standard precautions), as indicated.
6. Correctly care for, observe, and know when to ask for help when caring for a patient with: intravenous tubing; nasogastric (NG) tubing; chest tubes; urinary retention catheters; surgical dressings; CVP lines; colostomy; oxygen tubing, etc.
7. Assist patients with use of bedpans/urinals or emesis basins, as needed.

**Emergency:**

Student will be able to:

1. Determine vital signs, as needed, including blood pressure, pulse, respiratory rate, and temperature.
2. Recognize an emergency that requires immediate notification of a physician, and make the proper notification.
3. Recognize an emergency that requires immediate notification of the hospital “code” team, and make the proper notification.
4. Perform cardiopulmonary resuscitation techniques appropriately, if necessary.
5. Find and assist with the use of the emergency cart, as appropriate.
6. Maintain life support equipment, as appropriate.
7. Provide appropriate care in response to patient seizures, hemorrhage and/or fainting.

**Professional Behavior and Concern for Patient:**

Student will be able to:

1. Welcome the patient to the department, making the proper introduction and addressing the patient by name.
2. Address patients, families, co-workers, and the faculty and staff members (clinical and academic) by appropriate names or titles.
3. Demonstrate no ridiculing, degrading, or discriminatory attitudes, comments, or behaviors in the clinical affiliates.
4. Avoid the display of emotional reactions, such as distaste, disgust, and/or surprise.
5. Refrain from discussing anything confidential or potentially alarming to the patient within the patient’s hearing.
6. Refrain from any discussion of a patient with colleagues in patient areas, and/or in any way that is not pertinent or relevant to the procedure or patient care.
8. Work proficiently and schedule carefully in order to minimize patient waiting periods as much as possible.
9. Provide an explanation and apology when a patient must be kept waiting, and assure the patient that he/she is not forgotten.
10. Make certain that the patient is comfortably warm, and not exposed to drafts.
11. Provide support for various parts of the patient’s body by using pillows, wedges, etc. in order to position the patient as comfortable as possible.
12. Display understanding, cheerfulness, and interest in the patient.
13. Hold in confidence any information offered by the patient, unless considered important to the physician’s diagnosis.
14. Provide safe storage for the patient’s personal belongings during the examination.
15. Report any changes in the patient’s condition to the appropriate person.
16. Follow the rules and regulations of the department.
17. Recognize personal limitations and responsibilities in the clinical situation, seeking assistance, suggestions, and approval as appropriate.
18. Use medical terminology appropriately.
19. Relate to the patient before the examination begins, what the examination involves, what the patient will feel, and what is required of the patient.
20. Adapt the explanation to the age, degree of illness, intelligence, and possible language difficulties of the patient such that it is consistent with the patient’s ability to understand.
21. Communicate with the patient throughout the procedure to ensure patient comfort and cooperation.
22. Demonstrate sensitivity to the feelings, fears, doubts and embarrassment of the patient.
23. Provide comfort through a constant presence, a gentle touch, and a calm approach, as needed by the patient.

**Administrative/Management Functions:**

Student will be able to:

1. Inventory supplies and determine when to restock routine items, as well as radiopharmaceuticals that have specific shelf lives.
2. Develop a personal procedure manual through clinical notes to reflect the level of knowledge of procedures performed at the clinical affiliates.

**Freshmen/Winter & Spring- Hands-on Secondary Level:**

At this level, the student should perform procedures step-by-step as the technologist gives directions and assistance. During this phase, the role of the evaluator diminishes as the proficiency of the student increases. The student must maintain and improve on Freshmen Fall objectives while striving to attain Freshmen Spring objectives. The student will attend clinical practicum 40 hours per week during intersession, and 16 hours per week during the semester, and will follow the assigned rotation. The student will also begin rotating through the radiopharmacy.

**Goals for Freshmen Winter & Spring Semester:**

**Imaging Procedures:**

Student will be able to:

1. When given a routine imaging requisition:
   a. establish whether the patient has undergone the necessary pre-examination procedures, as appropriate
   b. determine whether the patient has received any medication or had any examination that would interfere with or contraindicate the nuclear medicine study
   c. select proper functioning instrument, collimator, and auxiliary equipment for the study
d. as appropriate, select the correct parameters for data acquisition using a computer

2. Given a set of images that are unlabeled, and the type of imaging study, correctly label each view.

**Radiopharmacy: Radionuclide Generator Systems (can be simulated in a Clinical Practicum) and unit doses:**

Student will be able to:

1. Given a Mo-99/Tc-99m generator, demonstrate the correct procedure for elution, to include:
   a. assembly of shield, vials, and all materials necessary for aseptic elution of the generator
   b. performance of complete procedure behind a lead shield using gloves
   c. attachment of vials to correct input and output needles
   d. use of shield on vial that will contain the eluate
   e. assay of eluate in the dose calibrator, and recording of eluate activity in the appropriate radiopharmaceutical accountability log/radiopharmacy computer system
   f. mental check to determine if volume and activity eluted are appropriate to volume used and activity expected for that day
   g. label and verify the vial/shield with the appropriate information, to include: activity; volume; concentration; date and time of assay; and, the type of radiopharmaceutical

2. Given a Mo-99/Tc-99m generator eluate, correctly perform a Moly breakthrough test, to include:
   a. determination of the Tc-99m activity per volume using the appropriate dose calibrator setting
   b. determination of the Mo-99 activity per volume using the appropriate dose calibrator setting
   c. calculation of Mo-99 activity per mCi of Tc-99m
   d. determination as to whether this concentration is acceptable for use
   e. in the event that this is an unacceptable level of Mo-99, determine why this occurred, and take appropriate measures (contact the supervising technologist)
   f. record results

3. Verify and adjust unit doses according to departmental procedures and policies.
4. Discard all waste from the preparation of radiopharmaceuticals in the radioactive or nonradioactive waste, as appropriate.

**Radiation Safety and Protection: Surveys**

Student will be able to:

1. Perform area surveys of the radiopharmacy and department, to include:
   a. calibration and check of survey instruments
   b. use of departmental protocol to determine areas for survey
   c. use the correct survey instrument for each level of radiation
   d. interpretation of results and notification of personnel, as appropriate
   e. wipe tests and decontamination procedures, as appropriate
2. Receive and process radioactive shipments, including the generator, in the laboratory, as follows:
   a. logging in the receipt of radioactive shipments
   b. visually determining damaged packaging, and taking appropriate precautions
   c. monitoring packaging materials
   d. contacting the Radiation Safety Officer (RSO) in the event of receipt of contaminated material
   e. performing wipe tests, as appropriate, on exterior packaging and radioactive material containers
   f. defacing the radiation sign on all uncontaminated discarded packaging
   g. storage of the radioactivity in the appropriate area according to the storage needs and activity level of the material
   h. notification of the manufacturer in the event of receipt of damaged goods

Licensing Requirements:

Maintaining records of radioactive material use and disposal (accountability).

Administrative/Management Functions:

Student will be able to:

1. Interact with hospital and departmental staff to schedule patient studies effectively to include the determination of the correct sequence for multiple procedures, both in nuclear medicine and in radiology.
2. Maintain appropriate records of patient doses, QC procedures, radioactive waste disposal, patient reports, film reports, and all other records required by the hospital, JC, NRC, or licensing body.

Freshmen /Summer at Primary Level:

At this level, the student should continue improving on his/her ability to perform exams with less direct supervision or assistances from the technologist. The student must maintain all previous levels’ objectives while striving to attain competency requirements. The student will attend clinical practicum 40 hours per week, and will follow the assigned clinical rotation. The student will begin dose administration, I.V. insertions, kit preparation, and attain required competencies.

Goals for Freshmen/Summer Internship:

In Vivo Nonimaging Procedures- Operation and Quality Control of Laboratory Equipment:

Student will be able to:

Given a requisition for a routine thyroid uptake, perform the procedure, to include:
   a. questioning the patient regarding previous medications, radiology studies using contrast media, pregnancy, and previous nuclear medicine procedures before performing this procedure
   b. measurement of thyroid background
   c. oral administration of radioactive iodine and patient instruction to return at appropriate time
   d. preparation of the standard equivalent to patient dose
e. upon patient return, counting each of the following for standard time according to
departmental protocol
i. thyroid gland at standard distance
ii. standard activity in the thyroid phantom (at standard distance)
iii. blood background
iv. room background
f. calculation of thyroid uptake at that specific time
g. repeat (e) and (f) as required by department protocol

In Vivo Imaging Procedures:

Student will be able to:

1. When given a routine imaging requisition:
   a. calculate the correct radiopharmaceutical dose to be used
   b. set up injection tray, and measure the correct radiopharmaceutical and dose
   c. correctly select and adjust instrument parameters for the images as each view is
      performed
   d. correctly position the patient for all views normally performed with the study
   e. objectively evaluate the study for technical mistakes, and identify necessary
      repeats or changes (notifying supervising technologist first), as appropriate
   f. conduct patient interview, explain study, and obtain formal consent when needed

2. Demonstrate routine acquisition of data on the computer for appropriate studies. To be
   acceptable:
   a. perform startup procedure
   b. select and enable appropriate work area for acquisition
   c. enter appropriate patient data, creating a patient file
   d. select/enter appropriate program for acquisition
   e. if applicable, set up special program for acquisition
   f. select/enter appropriate parameters for the type of acquisition
   g. check accuracy of previously selected parameters
   h. acquire study
   i. verify that the study has been stored on the computer, and on the archival system,
      if appropriate

3. Demonstrate routine computer analysis of dynamic data. To be acceptable:
   a. select appropriate study for analysis
   b. generate output study, if necessary
   c. select appropriate images for requisite region(s) of interest
   d. select appropriate region(s) of interest for type of analysis to be done
   e. generate curves from region(s) of interest
   f. analyze curves for necessary data

In Vivo Imaging Procedures:

Student will be able to:

1. When given a routine imaging requisition:
a. take appropriate corrective action or make appropriate notation on requisition if patient has either not undergone necessary pre-examination procedures, or, has had any medication or examination that would interfere with the nuclear medicine study
b. identify localization time, and determine injection time and time at which imaging should be performed
c. correctly administer radiopharmaceutical according to procedure protocol, where permitted by law or policy
d. correctly position patient for all views in the study, considering specific patient situation and instrument used

2. Given a request for a lung ventilation scan using Xe-133, set-up and determine functional status of the trap or special ventilation system to be used, and use it correctly during the procedure.

3. When preparing for cisternography, set-up the injection tray and assist in preparing and maintaining a sterile field for intrathecal injection by the physician.

4. Given a request for a dual radiopharmaceutical study, correctly sequence the injections for the study, and perform the study according to department protocol.

5. When performing cardiac stress testing, correctly place ECG leads and use and calibrate auxiliary equipment, including ECG machine and exercise/stress equipment.

6. When performing cardiac stress testing, recognize and correctly respond to signs and symptoms of patient stress. Note: a student should not be expected to participate in stress testing without the presence/assistance/supervision of a physician.

7. When performing cardiac stress testing with pharmaceuticals, properly calculate and prepare stressor and antidote drugs and recognize symptoms indicating need for an antidote to the stressor.

8. When performing a PET/CT procedure, obtain correct information during the interview process, explain the study to the patient and/or parents of a pediatric patient at a level that can be understood, perform glucose testing, administer the appropriate dosage of radiopharmaceutical and contrast media, allow sufficient time for the uptake, prepare patient for the imaging procedure, perform the study according to department criteria, follow appropriate radiation safety procedures during emission and transmission imaging.

9. Given a set of labeled images from a routine imaging study, describe the image and identify region(s), if any, of abnormality, and determine whether the abnormality is attributable to artifacts from radiopharmaceutical problems, system malfunction, technically induced artifacts from incorrect administration of the radiopharmaceutical, positioning, patient movement, prosthesis or radiation therapy portals, or an abnormality of the patient himself/herself.

10. Demonstrate an appreciation for the importance of technical quality and the role of the nuclear medicine technologist by consistently:
    a. performing a given study using identified departmental protocol
    b. evaluating images for artifacts, and repeating if necessary
    c. presenting to the physician any information relative to the study that might assist in the diagnosis
d. maintaining a professional approach to all patients, peers, and other hospital and academic personnel.

Dose Calculation and Administration:

Student will be able to:

1. Given a request to calculate the exact dose of a specific Tc-99m labeled radiopharmaceutical for a certain study, a calculator for Tc-99m:
   a. verify patient name and age, and the study requested from the requisition
   b. identify from the label on the radiopharmaceutical vial the following information:
      i. concentration
      ii. total activity
      iii. total volume
      iv. assay time
      v. date of assay
      vi. expiration date
   c. determine the elapsed time between assay calibration and required dose calculation time
   d. calculate activity remaining using the appropriate decay factor for the time elapsed
   e. calculate the activity needed for the procedure
   f. determine the volume of the radiopharmaceutical required for the patient dose
   g. log appropriate data into radiopharmaceutical dispensing records for the radiopharmaceutical assay

2. Given a patient requisition for a study using a radiopharmaceutical other than Tc-99m, plus a calculator:
   a. verify patient name, study requested, age and dose range required of the radiopharmaceutical from the label on the radiopharmaceutical container, identify, and cross-check with the radiopharmaceutical accountability log/software, the following:
      i. concentration at assay time/date
      ii. specific activity
      iii. lot number
      iv. assay time
      v. assay date
      vi. total activity
      vii. total volume
   b. determine the actual elapsed time between assay calibration and required dose calculation time
   c. calculate the activity remaining using the appropriate decay factor (pre or post) for the time elapsed and the appropriate equation
   d. calculate the activity needed for the procedure
   e. determine the volume of the radiopharmaceutical required for the patient dose

3. Demonstrate concern for accuracy by consistently double-checking:
   a. radiopharmaceutical dose calculation
   b. radiopharmaceutical dose withdrawal
c. labels on all radiopharmaceutical vials

4. Demonstrate the correct methods for dispensing a liquid radiopharmaceutical, to include:
   a. use of aseptic technique throughout the procedure
   b. use of gloves to minimize self-contamination problems
   c. drawing up the radiopharmaceutical behind a lead shield to within +/- 0.5 calibrated unit on the syringe, of the volume identified in the initial calculation
   d. verification of the radioactive dose using the dose calibrator
   e. recording patient name, examination, activity, volume, lot number, time, and date into the radiopharmaceutical accountability records for that radiopharmaceutical
   f. labeling the syringe of radioactivity with the patient’s name, radiopharmaceutical, and dose within the syringe
   g. placement of readied dose inside a syringe shield on an injection tray for administration

5. Demonstrate the correct method for calculating doses, dispensing, and administering capsules of radioactivity, to include:
   a. verifying patient name, study requested, age, and dose range to be given
   b. from the label on the container, identify the following:
      i. activity per capsule at assay time/date
      ii. specific activity
      iii. lot number
      iv. assay time
      v. assay date
      vi. total number of capsules
      vii. total activity
   c. determining the actual time elapsed between assay calibration and required dose calculation time
   d. calculating the activity remaining in each capsule, using the appropriate decay factor (pre or post) for the time elapsed, and the appropriate equation
   e. calculating the activity needed for the procedure
   f. determining the number of capsules to be used for the patient dose
   g. setting aside an equivalent number of capsules to be used as a standard, as appropriate
   h. dispensing capsule(s) to patient with a glass of water, for oral administration

6. In the clinical setting, demonstrate an appreciation for radiation safety procedures by consistently:
   a. wearing gloves when preparing and administering radioactivity
   b. logging in all radiopharmaceutical doses
   c. administering all doses to within +/- 10% of the original calculated dose
   d. correctly disposing of all materials used in dose administration

7. Administering no higher than the accepted maximum dose level of a radiopharmaceutical.

8. Uses correct medical asepsis techniques during venipuncture procedures.

Tc-99m Labeling:

Student will be able to:
1. For each of the radiopharmaceuticals (sulfur colloid, microspheres of MAA, phosphates/phosphonates, DTPA, glucoheptonate, DMSA, biliary agents, etc.) correctly compound the radiopharmaceutical using a kit and Tc-99m pertechnetate, to include:
   a. determination of the amount and volume of radioactivity to be added to the kit, with special attention to any limitation for level of activity or volume
   b. recording radioactive dose and volume used in log under daily elution for Tc-99m pertechnetate
   c. preparing the radiopharmaceutical with strict adherence to manufacturer’s discretion on heating, sequence of additions, and mixing
   d. checking total activity in radiopharmaceutical vial with dose calibrator
   e. calculating and recording the concentration of radioactivity of the compound, time and date of preparation, total activity, and volume
   f. labeling the vial with time and date of preparation, lot number, radiopharmaceutical form, concentration, and total volume

2. For each radiopharmaceutical prepared, check for proper pH, color, clarity, and particle size, as appropriate. Record results.

3. Given radiopharmaceutical QC data, determine whether the material can be used, or if preparation must be repeated.

4. Given an imaging procedure that demonstrates a radiopharmaceutical biological distribution different than expected, evaluate all data available to determine the probable cause for such distribution.

5. Perform chromatography for the determination of radiochemical purity, to include:
   a. assembly of all materials for the procedure
   b. expediency in performing all tasks due to great instability of some radiopharmaceuticals
   c. correct inoculation technique
   d. adherence to specified department protocol throughout the procedure
   e. appropriate separation of finished chromatogram to allow for accurate determination of various forms of Tc-99m
   f. appropriate use of counting instrumentation in the determination of percent free, percent hydrolyzed, and percent bound
   g. recording of data for each radiopharmaceutical

**Senior Students at Primary Level:**
At this level the student should perform routine clinical procedures without instructional assistance, but under supervision. The student must maintain competency in all previous levels while striving to complete competencies and obtain the status of an entry–level technologist. The student will attend clinical practicum 24 hours per week during the fall and spring semester, and 40 hours per week during winter intersession and summer internships. The student will follow their given clinical rotation schedule.

**Goals for Senior Fall, Winter & Spring Semesters:**
**Instrumentation:** Scintillation Cameras:

Student will be able to:
1. For a given scintillation camera, perform and analyze the following quality control procedures:
   a. sensitivity check
   b. center of rotation
   c. pixel calibration
   d. high count uniformity correction.
2. Given an imaging examination using the scintillation camera, recognize imaging artifacts that reflect malfunctioning, or incorrectly adjusted instrument (this will include artifacts attributable to inappropriately peaked pulse-height analyzer-PHA), damaged scintillation crystal, or malfunctioning photomultiplier (PM) tubes, incorrect COR.

Instrumentation- PET/CT:

Student will be able to:

1. For a given PET or PET component of PET/CT imaging system, perform and analyze the following quality control procedures:
   a. reference scan
   b. energy window calibration
   c. gain setting
   d. coincidence timing window
   e. normalization
   f. absolute activity calibration
2. For a CT component of PET/CT imaging system, perform and analyze the following quality control procedures:
   a. calibration
   b. filed uniformity
   c. water phantom
   d. tube warm-up
   e. air calibration
   f. water phantom checks of slice thickness, accuracy and positioning.
3. Given an imaging examination using the PET/CT scanner, recognize imaging artifacts that reflect a malfunctioning/incorrectly adjusted instrument, misregistration of images or incorrect attenuation correction.

Scintillation Counters:

Student will be able to:

1. As appropriate, perform and record energy linearity check and volumetric calibration on a scintillation counter. To be acceptable, evaluate these results with respect to the performance indicated by the data and expected impact on routine studies, using the scintillation counter.
2. Given a procedure that requires the use of a scintillation counter consistently follow departmental protocol when performing the study.
3. Given a scintillation counter, periodically conduct and record chi-square evaluation, and analyze these results for acceptable instrument performance.
4. Given a procedure that requires the use of a scintillation counter with well detector or probe, demonstrate an appreciation for the statistics of counting and decay by counting a minimum of 10,000 counts for each sample.

5. Given a procedure that requires the use of a scintillation counter with well detector or probe, demonstrate an appreciation of geometry in counting, by maintaining exact geometry from one count to another and/or using aliquots and correction factors appropriate for large volumes.

6. Given a procedure that requires the use of a scintillation detector and recorder, demonstrate an appreciation for the instruments functioning capabilities by never using a source with a count rate exceeding the limitations of dead time response.

Gas-Filled Detectors:

Student will be able to:

1. Given a G-M survey meter, periodically:
   a. calibrate it according to Nuclear Regulatory Commission (NRC) specifications
   b. perform a reference check-source test
   c. compare results with those previously obtained
   d. maintain records of calibration and testing for each G-M survey meter
   e. change batteries as appropriate for continued function

2. Given a dose calibrator, periodically:
   a. determine linearity of response over entire range of radionuclide activity to be measured
   b. test for significant geometrical variation in activity measured as a function of sample volumes or configuration, and determine correction factors as necessary
   c. test the accuracy for commonly used radionuclides that have adequate reference standards available
   d. check for constancy by using a long-lived radionuclide standard
   e. evaluate results from these tests by comparison with previously obtained results, and request service if necessary
   f. maintain records for each of the above tests

3. Given a scintillation or gas detector, demonstrate an appreciation for the effect of instrument contamination by identifying such contamination in floods, hot spots, or background counting.

4. Given a contaminated detector, demonstrate an appreciation for the effect of contamination and function of the instrument by correctly decontaminating the instrument.

5. Given a survey meter, demonstrate an understanding of its function by using an appropriate count/dose range for the survey.

6. Given a dose calibrator, demonstrate an appreciation of the function of the instrument by always using parameters appropriate for the energy and activity level of the radionuclide used.
Decontamination Procedures:

1. Given a contaminated surface or area in the department, demonstrate correct de-contamination procedures, to include:
   a. reduction of access to area and confining the spill as indicated
   b. use of protective clothing, as appropriate
   c. removal and/or decontamination of non-disposable articles
   d. storage of contaminated articles, as appropriate
   e. decontamination or reduction of activity to acceptable levels on immovable materials or equipment including porous or nonporous areas, repeating as necessary
   f. record cleanup and final survey results after decontamination

2. Given a situation in which the student is personally contaminated (clothing and/or body surface), demonstrate correct decontamination procedures, to include:
   a. removal and storage of contaminated clothing
   b. correct washing of contaminated body surface until level of activity is acceptable

Radioactive Waste Disposal:

Student will be able to:

1. Monitor the stored radioactive materials, including generators, routinely, to determine if the level of activity is acceptable for discarding. This will include routine hospital waste disposal of non-radioactive waste, as well as radioactive waste disposal through a particular contracted agency.
2. Decontaminating and/or reorganizing storage areas as appropriate.

In Vivo Imaging Procedures:

Student will be able to:

1. When given a routine imaging requisition, prepare patient with pre-medications and instruct patient as to any particular preparation necessary for the imaging procedure.
2. Analyze patient information to determine contraindications, interfering medications and potential adverse reactions prior to administration of radiopharmaceuticals, pharmaceuticals and contrast media.
3. Demonstrate correct computer processing and analysis of SPECT, PET/CT or any quantitative study.
4. Archive acquired data on picture archival communicating system (PACS).

Dose Calculation and Administration:

Student will be able to:

1. Given a procedure that requires the intravenous administration of radioactive material, demonstrate the correct method of administration for that radiopharmaceutical, to include:
   a. assembling injection tray with all necessary materials for venipuncture, including shielded syringe of radioactive material and gloves
b. positioning of patient appropriate for the study to be performed and/or radiopharmaceutical to be injected
c. select a suitable vein and attach tourniquet
d. select a suitable needle or angiocatheter
e. communicate with and reassure patient, as appropriate
f. using aseptic technique throughout procedure
g. perform the venipuncture and administer the dose
h. observing patient for reactions/extravasation
i. disposing of waste in appropriate radioactive waste or non-radioactive waste containers

Radiation Safety and Protection:

Student will be able to:

1. Perform periodic leak test on sealed sources, as appropriate.
2. Use proper radiation protection procedures when handling PET radiotracers.
3. Use proper radiation safety methods when performing PET/CT procedures.

Administrative/Management Functions:

Student will be able to:

1. Participate in the maintenance and updating (as necessary) of the department procedure manual.
2. Participate in the department Quality Control and Quality Assurance Programs.

In Vitro Testing: Operation and QC of Laboratory Equipment

Student will be able to:

1. Identify and use correctly: glassware; pipettes; centrifuges; water baths; pH meters; laboratory scales and balances; vortex mixers; shakers; and, counting equipment (single sample and automated).
2. Balance centrifuges, when used.
3. Calibrate pH meters, scales, and balances.
4. Monitor and record refrigeration temperatures.

Sample Collection and Preparation:

Student will be able to:

1. Review requisitions to determine volume of sample needed, type of sample needed, and anticoagulant that should be used (where applicable).
2. Identify procedures where special collecting techniques and/or time factors must be observed.
3. Proficiently interact with patient to explain procedure and perform venipuncture.
4. Properly label blood sample with patient name, number, and other identifying data according to department protocol.
5. Correctly dispose of waste materials using universal precautions.
7. Store samples according to protocol if assays are not to be done promptly.

Radionuclide Therapy Procedures:

Students must not take responsibility for administration of therapeutic quantities of radiopharmaceuticals at any time during their tenure as a student. However, it is vitally important that students observe and assist with the administration of therapeutic doses in accordance with departmental policy.

The student will be able to:

1. Determine the purpose for the therapeutic procedure from the requisition and/or the patient’s chart.
2. Inspect all paperwork including informed consent and written directive.
3. Consult with the nuclear medicine physician regarding the procedure and appropriate dosage.
4. Correctly identify the patient according to the quality management program of the institution.
5. Review pertinent lab reports such as pregnancy test results.
6. Determine whether the patient is to be hospitalized, and if so, consult with the hospital staff and radiation safety officer about room preparation and staff training.
7. Calculate the amount of radiopharmaceutical to be administered and assemble all materials for administration.
8. Authorized user to verify the correct radiopharmaceutical and the dosage.
9. Assist the authorized user to supply proper patient care instructions and the radiation safety aspects of the procedure to the patient and/or the patient’s family or hospital staff, and be sure all questions have been answered.
10. Observe administration of the therapeutic dose to the patient.
11. Dispose of and store all radioactive waste according to departmental protocol.
12. Monitor administration area to ensure there is no contamination and document radiation surveys of designated patient areas when indicated.
13. When a patient is hospitalized, monitor the patient and the room according to department protocol to determine when the patient can be released, and when the room can be occupied by another patient.
14. Perform thyroid bioassays on personnel who have assisted with administration of therapeutic Iodine-131 according to department protocol.

**CLINICAL ROTATION EVALUATIONS**

Students must complete objectives and fulfill competencies in accordance with the syllabi and clinical evaluation system. Students will be evaluated on a regularly scheduled basis by the primary evaluator in his or her assigned clinical area using the online clinical evaluation system. The purpose of the evaluation is to assess the student’s clinical knowledge, problem solving, technical and behavioral skills.

The evaluation is reviewed by the clinical coordinator, who may in turn review it with the student to assure understanding and to offer direction to improve areas of deficiency.
All evaluations are saved in the online clinical documentation system. Students can access and review their clinical evaluations and records at any time.

A student who fails to meet the required objectives or competencies at the end of term/semester will receive a grade of F for the clinical which may result in immediate dismissal from the Program.

A student who fails 2 or more clinical rotation evaluations in a semester or summer session will result in program dismissal and receive a grade of F for clinical. A student who fails the clinical rotation evaluation during winter intersession will result in program dismissal and receive a grade of F for clinical.

**Utilizing the Evaluation System:**

1. The End of Rotation Evaluation forms contain general and specific task objectives that are used to assess the student’s progress in the clinical area (see Appendix I).
2. On the last day of each evaluation period the student is evaluated according to the expected clinical performance objectives. However, technologists and GCC faculty/clinical instructors have the right to complete a clinical evaluation at any time.
3. During Fresh/Fall and Fresh/Spring semesters there will be one (1) End of Rotation Evaluation (EOR) completed for every 2-week rotation (4 clinical days).
4. During Senior/Fall and Senior/Spring semesters there will be one (1) End of Rotation Evaluation (EOR) completed for every 1-week rotation (3 clinical days).
5. During Winter Intersessions and Summer Internships, clinical evaluation forms are completed once a week for each week (5 days) completed.
6. These evaluations may be discussed with the student pointing out strengths as well as weaknesses. Failed objectives are documented.
7. Clinical Education Plans are created for students who need to improve on specific objectives (see Appendix K). These plans are forwarded to the AES who will be working with the student at the clinical affiliates.
8. Evaluations are a percentage of the overall clinical grade (see clinical syllabi for percentage).

**The clinical task objectives are to be scored as follows on the End of Rotation Evaluations:**

- **Y** = yes, the student has consistently and without any deviation met the objective.
- **U** = needs improvement for current level (or semester). The technologist needs to note the deviation(s) and the area(s) the student needs to improve on.
- **N** = no, the student has not met or has deviated from the objective. The technologist needs to note the deviation(s) and the area(s) the student needs to improve in.
- **N/A** = not applicable at this time.

2 or more **N’s** in any combination of the following sections of the Student Evaluation will result in a Failure (zero): Patient Care, Equipment and Procedure Protocol, Radiation Safety, Safety, Student Professionalism, Fusion Imaging.

1 or more **N’s** in the Pharmacy Assessment section of the Student Evaluation will result in a Failure (zero).
Clinical Grade:
While in the clinical setting the student must successfully complete and document all performance objectives prior to the last day of the semester to earn a passing grade.

To remain eligible for continuance of clinical studies, students must show progressive advancement of skills. As this is a competency-based program, the student must master and maintain all past performance objectives through to the final rotation.

**METHOD OF COMPETENCY**
Students are expected to master and document competency in the procedures identified on the NMT Program Procedure Checklist (see Appendix K). The student is responsible to reinforce the material presented in classroom lecture and labs through active participation in the clinical setting. Once a student has documented thorough knowledge of a procedure, he/she must demonstrate that knowledge to a qualified clinical instructor/evaluator. The instructor evaluates the student’s ability according to the Program’s criteria for performance evaluation. The competency evaluation is completed and saved in the online documentation system.

The student must complete a student intent form when assigned to an affiliate during the following semesters: Clinical Practicum I, Winter Clinical Internship I, Clinical Practicum II, and 2 intent forms will be required during Summer Clinical Internship II (see Trajecsys: Clinical Documentation System for each individual form). This form must be completed during the first week of the rotation. The intent form identifies at least 3 objectives to be completed by the end of the rotation at the affiliate. See syllabi and Trajecsys for due dates and intent form details. The AES will assign the student to the appropriate area(s).

The student must complete assigned clinical checklists, processing competencies and quality control procedures. See syllabi and Trajecsys for due dates and details. The clinical check lists, processing competencies and quality control procedures are graded on a pass/fail basis. Students must pass the assigned clinical checklists, processing competencies and quality control procedures to successfully complete each clinical practicum or internship.

During Clinical Practicum IV all published and defined Program clinical goals must be mastered and maintained. Upon completion of the practicum, documentation of successful completion of all Program objectives and competencies will qualify a student for an exit competency evaluation. The successful completion of the final evaluation will establish that the student has met all the clinical requirements for the Program.

At the discretion of the Program Director, any student who does not maintain competency on any task objective(s) through the last rotation shall extend their clinical education. The student cannot exit the Program until such time that all stated performance objectives and competencies are met to the satisfaction of the Program Director.

Students will perform competencies according to the guidelines for each semester, and are responsible to complete the appropriate number of competencies for Program completion.

**Total = 26: 17 mandatory, 8 elective, 1 Exit Competency**
**Semester:**

*Number of competencies needed for the semester*
Fall/Senior (NMT211)  8
Spring/Senior (NMT212)  7  and 1 Exit Competency

*Candidates must successfully complete the above number of competencies to graduate from the Nuclear Medicine Program. The following skills must be mastered to pass the procedures; patient instructions, preparation and care, selection, handling, and administration of radiopharmaceutical, equipment configuration and patient positioning, radiation safety, and image processing and evaluation (this list is not all inclusive). All procedures must be performed on patients, with the exception of therapies which may be simulated.

Students are allowed to begin injecting as of June 1\textsuperscript{st} (if they have successfully completed the venipuncture training at the College and affiliate requirements). Between June 1\textsuperscript{st} and August 1\textsuperscript{st} the student is expected to administer the radiopharmaceutical at the discretion of the supervising technologist in order to successfully pass a competency. The lung perfusion and 3-phase bone scan competencies cannot be attempted until August 1\textsuperscript{st}. By August 1\textsuperscript{st}, every student must perform the radiopharmaceutical administration in order to successfully pass any competency. A student must be performing the procedure at a primary level from start to finish in order to successfully pass a competency.

The ARRT requirements specify that certain clinical procedures may be simulated. Simulations must meet the following criteria: (a) the student is required to competently demonstrate skills as similar as circumstances permit to the cognitive, psychomotor, and affective skills required in the clinical setting; (b) the program director is confident that the skills required to competently perform the simulated task will generalize or transfer to the clinical setting.

The mandatory number of competencies must be successfully completed to continue in the Nuclear Medicine Technology Program.

STANDARDS GOVERNING COMPETENCY FORMS

1. To demonstrate clinical competence, the student must perform the scan independently, consistently, and effectively on a patient per the ARRT standards. A student who cannot appropriately complete the task will fail the competency.

2. The student who does not complete the required number of competencies for a particular semester (including summer session) will be dismissed from the NMT Program and will not be ineligible for readmission.

3. The student may begin achieving Senior Only competencies as of August 1\textsuperscript{st} during Clinical Internship II (freshmen/summer). The student must successfully perform all aspects of the procedure to achieve a Senior Only competency (including, but not limited to, administration of the radiopharmaceutical, processing, etc.).

4. Student must refer to competencies on an online clinical documentation system. Competency requirements and performance criteria for each competency are outlined on the Trajecsys online clinical documentation system (See Appendix L).

5. Prior to asking the technologist to attempt the competency, students must ensure that they have completed the appropriate number of studies at the specific participation level.

6. The student must ask the technologist to attempt the competency prior to the patient arrival.

7. The student must respect the decision of the technologist if he/she refuses to allow the student to attempt a competency.
8. Students must keep track of the department schedule for the competency they wish to attempt.

9. After an exam is complete, it is the student’s responsibility to check Trajecsys online system to ensure the competency was entered by the technologist and that the student passed the competency.

10. The student is expected to keep track of competencies successfully completed by verifying on Trajecsys online system.

11. If the student does not pass a competency, the student can attempt to repeat the competency again when their skills have improved or at the discretion of the technologist. The student must complete appropriate number of competencies by the end of the semester.

12. The student is not allowed to go over the maximum number of competencies per semester or interval. There will be no exceptions.

13. Competencies are a pass/fail portion of the clinical grade and the required number of competencies per semester (including summer internships) must be successfully completed in order to pass the clinical course.

14. The student who does not complete the mandatory number of competencies will not be allowed to progress into the next term of their clinical training.

15. If for any reason the student is not completing the necessary number of competencies, it is the student’s responsibility to notify the clinical coordinator and ask for assistance to complete competencies by required time frame.

**SKILL SUMMARY SHEETS (Patient Log Sheets)**

**Daily Skill Summary Form:** Students must keep a record of all procedures performed in the clinical setting and the level of participation when performing these procedures. Students are also required to document hours for PET/CT, CT and SPECT/CT procedures. Students who are assigned to a clinical affiliate that does not allow them to access the online clinical documentation system must enter their daily skill summary sheets (patient log sheets) from another computer by the end of each week. All students must keep a hard copy of their skill summary sheets at all times. The hard copies do not need to be submitted to the Clinical Coordinator, but the students must keep these as a verification to assist in solving any discrepancies between the online skill summary sheet and the hard copy. The AES at each site will be approving the students’ skill summary sheets online on a weekly basis.

**To enter the procedure information on the Clinical Daily Skill Summary Sheet in online clinical documentation system:**

- choose the study from the pull down menu
- select student’s level of participation:
  - 1 = observed
  - 2 = partially assisted technologist
  - 3 = assisted technologist
  - 4 = performed with minimal assistance
  - 5 = performed with indirect supervision
Absolutely no patient identifiers are to be included on the skill summary sheets (see Appendix M, Sample Daily Skill Summary Form).

Levels 1-4 participation is consistent for freshmen level students who need direct supervision.

Level 5 participation is the goal for each student beginning with Clinical Internship II (freshmen/summer). The student must be operating in level 5 status in order to begin working towards successful completion of his/her required competencies.

Clinical Notes: The student must also take notes for each room and each procedure he/she observes during freshmen year. The technologists will expect the student to be able to refer to his/her notes when the student returns to each room throughout his/her training. A clinical faculty or staff member will ask to see student’s notes on a continuous basis. If the student does not comply with these procedures, a written warning will be issued.

All notes taken during clinical time are subject to review by the College and clinical affiliate staff, and should only be educational in nature. No personal information of any kind may be recorded by the student.

As agents of the College, the staff of the clinical affiliates has the right to review the student’s evaluations, competencies, and clinical education plans at any time. The College faculty and staff have the right to discuss the student’s progress with the staff at the clinical affiliates in support of the student’s educational goals.

One CTO day will be deducted from the CTO balance, if a student does not have the clinical notes with all required documents, including the radiation badges, with him/her at the clinical affiliate or during clinical lab.

SUPERVISION STANDARDS

Direct Supervision - Student supervision under the following parameters:
- A qualified nuclear medicine technologist reviews the procedure in relation to the student’s performance;
- A qualified nuclear medicine technologist evaluates the condition of the patient in relation to the student’s knowledge;
- A qualified nuclear medicine technologist is present during the student’s performance of the procedure;
- A qualified nuclear medicine technologist reviews and approves the procedure;
- A qualified nuclear medicine technologist is present during student performance of any repeat of any unsatisfactory procedure.

Indirect Supervision:
Supervision provided by a qualified nuclear medicine technologist immediately available to assist students regardless of the level of student achievement. Immediately available is interpreted as the presence of a qualified nuclear medicine technologist adjacent to the room or
location where a nuclear medicine procedure is being performed. This availability applies to all areas where ionizing radiation and equipment is in use.

**IMAGING/TREATMENT SIGN OFF**

No student, regardless of competency level, will perform any diagnostic or treatment procedure without first reviewing the request with an ARRT/NMTCB certified staff technologist. No student will pass a radiograph/digital image or scan, complete a treatment without the written verification of an ARRT/NMTCB certified staff technologist. All radiographs, scans and treatments must be reviewed and initialed by the supervising technologist. **There are no exceptions.**

**REPEAT POLICY**

No student will repeat a radiograph or scan without the direct consultation, approval and supervision of an ARRT/NMTCB certified staff technologist. **There are no exceptions.**

**CLINICAL PRACTICE REQUIREMENTS FOR NMT STUDENTS**

A. **Lines of Authority**

Respect lines of authority, recognizing that reliable execution of the physician’s orders for the patient is essential and a proper medical ethic. In the clinical setting, observe the appropriate line of authority with respect to clinical assignments and activities. The AES and technologist instructor are the immediate authority in the clinical setting. These individuals work with and under the guidance of the Program Director and Clinical Coordinator.

B. **Treatment Decisions are made by Physicians**

Diagnostic interpretation of imaging and/or the decision with respect to therapeutic radiation dosage and treatment parameters is always made by the physician. A student or technologist should make no diagnoses or interpretative diagnostic judgments to anyone under any circumstances unless his/her opinion is solicited by the physician. To do so is a serious breach of medical ethics and scope of practice, and also potentially compromising to the technologist from a medical/legal aspect.

C. **Confidentiality**

Students must never disclose any patient confidential information to anyone not directly involved in the care of the patient. Failure to respect this code constitutes a violation of affiliate site policy, violation of HIPAA, is professionally unacceptable, as well as potentially compromising from a medical/legal aspect. Students may not discuss the diagnosis or prognosis with the patient, family members, or family friends. However, once students are sufficiently informed through classroom instruction, they may explain protocols and diagnostic/therapeutic procedures with the patients. Initially such questions should be referred to a staff technologist.

D. **Radiation Protection and Safety**

It is the student’s personal responsibility to practice all appropriate radiation protection procedures for his/herself, the patient, and other members of the health care team. This includes utilizing personnel radiation monitoring devices, observing rules such as utilization of equipment safety devices, protective shielding and clothing, safety precautions with respect to radioactive materials, measures for protection of nonmedical assisting personnel, and all other radiation protection measures.
In addition to radiation protection practices, observation of all appropriate general safety, fire regulations, and institutional regulations in effect for standard precautions should be considered part of the student’s personal responsibility in delivering safe, competent patient care. It is the student’s responsibility to know and understand these regulations.

E. **Student Initiative**
A student is not allowed to attempt a procedure on his/her own initiative if he/she has not received permission from the supervising technologist. Some behaviors that demonstrate initiative and a willingness to participate include:

- Student’s attentiveness to those who are explaining procedures, case studies or other like situations to either the student or others in the vicinity.
- Asking questions pertinent to the clinical situation at the appropriate time.
- Recognizing and learning the major duties and responsibilities applicable to the student’s assigned clinical area, followed by consistent performance of these duties without the need for a constant reminder.
- Recognizing when student’s assistance is needed in an area other than the assigned area and recognizing when it is appropriate for a student to leave his/her assigned area to help others.

F. **Following Orders**
Proper professional conduct calls for the student to follow the instructions of the student’s immediate supervisors. Do not hesitate to request clarification of any written or verbal order that the student does not understand. Questions, conflicts, and concerns which the student may have with respect to what is required of him/her in the clinical setting are never debatable at the time of a patient procedure in the presence of a patient. Should the student have concerns about clinical requirements at an affiliate site, such matters should be brought to the attention of the AES, Clinical Coordinator or Program Director in an orderly and professional manner, as soon as possible after the immediate patient care requirements have been met. See Section on Proscribed Conduct in the NMT Program Student Handbook in regards to disciplinary sanctions that will be applied due to insubordination.

G. **Dependability/Accountability**
Providing quality care depends on all members of the health care team knowing their role, responsibilities and scope of practice. The student is expected to arrive at the clinical site prior to the start time and give advance notice if it is unavoidable that he/she will be late or absent from class or clinic. Student is required to adhere to the attendance and the CTO procedures.

H. **Accepting Critique/Limitations**
Since the student will be in a learning capacity for some time, there is no need to feel hesitant about asking questions, seeking clarification, or advice and assistance at any time if it is necessary in regards to the clinical aspect of student’s training. Also, constructive critical analysis of student’s work and progress is an essential part of the educational process. The student will have the opportunity to comment freely and respond to the periodic evaluative reports completed by faculty and clinical instructors during meetings with the Clinical Coordinator and/or Program Director. The student is not allowed to challenge or confront the technologist evaluators in the clinical setting. **A student who confronts a technologist regarding his/her evaluation may be immediately dismissed from the Program.**
I. Medical Records
From an ethical and medical/legal standpoint, proper medical record notation and documentation is a fundamental responsibility and obligation of the student. Proper form, legibility, accuracy, correct terminology, avoidance of jargon and irrelevancy are required of all forms of documentation.

J. Attitude towards Patients
A patient must feel that those participating in his/her medical care are competent, confident, and otherwise worthy of the trust placed in them. The impression that the student gives to the patient as to his/her level of professionalism is an important factor in engendering a feeling of confidence and trust. The successful completion of a procedure is dependent upon the patient having confidence in those he/she has entrusted to participate in his/her medical care. Student’s ability to correctly being interpreted by the patient are important tasks. Behaviors which patients interpret as earmarks of professionalism may include:

- Inform the patient that you are fully aware of what is occurring. Explain each step of the procedure to the patient as you perform it.
- Maintain composure at all times. If you encounter a situation where you are not sure about what to do next, excuse yourself from the patient and ask for assistance in a manner which will not affect the patient’s trust in you. However, do not leave the patient alone, make arrangements to have someone stay with the patient in your absence.

K. Communicating with Patients
Address the patient by name and introduce yourself and any other person participating in the procedure is a student’s duty. With the possible exception of small children, patients are not to be called by their first names or familiar endearments. Use the prefix Mr., Mrs., Ms., etc. and the patient’s last name.

The patient should always be treated courteously and in a manner consistent with his or her age. Further, it is the patient’s right to have the procedure explained in a manner that is understandable, and to know what is expected of him or her. Provide for maximum privacy, comfort, and safety for the patient and his/her belongings.

Patients frequently need to talk, and it is entirely appropriate for the student to be an empathetic and encouraging listener. It is unacceptable professional conduct to engage in gossip about other institutions or medical personnel.

The student should not discuss details of patient’s diagnosis or treatment. In such instances, the student should inform the patient that he/she is not the doctor, and cannot assume that role.

L. Personal Appearance
Professional dress codes are designed to assure appropriate clothing for the work involved, as well as to project the necessary clean and professional image which is so valuable in building patient confidence.

M. Honesty and Integrity
Nothing characterizes the healthcare provider more completely than the trust that develops when taking care of other human beings. In the personal therapeutic relationship that exists between
caregiver and client, practitioner and patient, there is no room for small, medium, or large
dishonesties of mind, spirit, or substance. From being honest with oneself with respect to one’s
talents (and limitations), to the most exquisite honesty and care in making treatment records, or
reporting events related to patient care, the onus is on the healthcare provider to be worthy of the
trust placed in the caregiver, and to exemplify the quality of character such a profession
demands. Nothing characterizes the healthcare provider more, or serves ones better in the
professional live as the quality of honesty and integrity.

N. Additional Clinical Requirements:

1. Always ARRIVE ON TIME and be ready to begin assigned clinical training. The student
needs to listen to traffic and weather reports in the morning, prior to arriving at the clinical site.
The student is not allowed to start their shift early just so they can leave early for the day.

2. The student must always notify the technologist with which he/she is working with, the AES
AND the Clinical Coordinator when the student is going to be late, leave early or be absent. It is
not the Clinical Coordinator's responsibility to notify the clinical affiliate when the student has
scheduled time-off. The student is responsible for reminding/notifying the clinical staff when
he/she has a scheduled CTO day.

3. The student must be a RELIABLE and DEPENDABLE. The student must be ready to begin
work in the clinic immediately upon arrival.

4. Purchase a date book/planner, and look ahead to the following week for required clinical
dates. The student should put all of his/her clinical assignments, deadlines, exam dates, meeting
dates, etc. in the date book/planner. The student is responsible for knowing
where he/she has to
be at all times. Missing the first day of a rotation is unacceptable.

5. Check the schedule, set-up the room for the next procedure without being told, stock rooms
(linens, supplies, etc.). Do anything that can make the day go smoother without being told. The
student should not stop stocking rooms when he/she becomes more competent in other clinical
tasks. Adequate supplies are an integral part of being able to run a room efficiently.

6. The student is only allowed a half-hour for lunch. It doesn’t matter if the technologists take
an hour lunch. The student should still arrive back in the clinic a half-hour later from time when
he/she left (if this is acceptable at the clinical affiliate-check with the AES). The student can
prepare the rooms for the first patients after lunch, stock rooms, clean, etc.

7. Do not leave personal items in the staff bathroom. The student should only use his/her locker
(if a student is assigned one) to store personal items. Please remember that the AES have the
combinations to the student’s lockers. Do not use technologists’ personal items.

8. Do not socialize or congregate in the hallways.

9. Do not congregate in the staff lounges if the technologists are having a meeting or eating
lunch.

10. The student is to clean up after him/her-self after eating in any of the staff lounges.

11. Students are not to leave old, moldy lunches/containers in the staff refrigerator.
12. The student should ask the technologists to teach him/her during slow times.

13. Treat the clinical training as if it were a JOB!!!!

14. Schedule doctor appointments, etc. at the very beginning, or the very end of the day, and notify the Clinical Coordinator well in advance. Try to make all appointments during the breaks on college days, evenings, or weekends if at all possible.

15. The student should ALWAYS notify the technologist/AES if they leave the clinical area.

16. The student must take notes for each room, and study them the night before beginning his/her next rotation in that room. It would also be helpful to study the chapters in the imaging procedure textbook which are pertinent to the room the student is assigned to the week before each rotation.

17. If the student has trouble with a particular clinical task(s) that he/she know, he/she should have mastered already, the student should contact the Clinical Coordinator about tutoring or remediation.

18. Constantly check the room’s schedule because scans are added on all the time in nuclear medicine departments.

19. The student should assist in other rooms if needed when his/her room is slow.

20. DO NOT STUDY DURING CLINICAL TIME.

21. It is not permitted to read magazines or non-nuclear medicine materials during clinical.

22. Always be PREPARED for clinic.

**STANDARDS GOVERNING THE USE OF THE ONLINE CLINICAL DOCUMENTATION SYSTEM**

- Some clinical affiliates will allow students to access www.trajecsys.com in order to enter the times that they enter and exit the clinical site (time card).
- Students are only allowed to enter www.trajecsys.com at these sites. They are NOT allowed to use the Internet for any other purpose.
- Students who are assigned to a clinical affiliate that does not allow them to access the Internet must enter their entry and exit times from another computer by the end of each day. The AES at each site will be approving the students’ time cards online on a weekly basis.
- Failing to enter clinical time daily can result in loss of CTO.
- All students should keep a hard copy of their time card in their clinical binder at all times. The hard copies do not need to be submitted to the Clinical Coordinator, but the students must keep these as verification to assist in the solving any discrepancies with the online timecard.
• All students must sign Agreement to Abide by Internet Use Procedures at Clinical Affiliate (see Appendix O) and submit it to the Clinical Coordinator before entering the clinical setting in the first semester of the NMT Program.
• Disciplinary sanctions may be applied if a student does not abide by this policy.

Students will ONLY be able to access the Online Clinical Documentation System (Trajecsys) while they are active students in the NMT Program. Students are encouraged to copy their Trajecsys records prior to their graduation date or withdrawal from the NMT Program.

**Student Instructions for using the Online Clinical Documentation System:**

1. Go to http://trajecsys.com/
2. Click on **System Log In**
3. Enter your **Username** and **Password**
4. Click on **Change Password** during your initial log in to change it to a more secure password. Make sure you write it down somewhere!

**Time Card:**

- Click on **Clock in/out** to clock in or out in “real-time” while at the clinical site.
- Choose your clinical site by clicking on the arrow to the right of the **Site** box.
- When you Clock In or Clock Out at the clinical site, the system will automatically log you out. If you need to get back in to work on your Daily Logsheet, you’ll need to log in again.
- Click on **Clock In** or **Clock Out** as appropriate
  a. If you are not allowed on the Internet at your clinical site, if you make a mistake, or you can’t get to the computer to clock in/out:
    i. Click on **Time Exception**
    ii. Choose the appropriate clinical **Site**
    iii. Click on the arrow to the right of the **Exception for** box, and choose **clock IN** or **clock OUT**, as appropriate
    iv. Enter the appropriate **Time** in or out using the 24 hour format without any spaces or colons (hhmm), for example: 1:00pm is 1300; 7:30am is 0730.
    v. Click in the box in front of the **Reason** you needed to use the Time Exception.
    vi. Enter an explanation if appropriate.
    vii. Click **Submit**

**Daily Logsheet:**

- Click **Daily Logsheet** to begin entering procedures.
  a. Choose your **Clinical Site**
  b. Click on the arrow to the right of the **Major Study Area** to choose either Imaging, Simulation, Intent Form, Checklist, Radiopharmacy, etc.
  c. Click on the arrow to the right of the **Skill** box to choose the specific procedure.
  d. Click on the arrow to the right of the **Participation Level** box to choose the appropriate level of participation.
  e. Click on the arrow to the right of the **Amount** box to choose the number of procedures that you performed that day at that participation level.
f. Click on the arrow to the right of the Repeats box to choose the number of procedures you had to repeat, if appropriate.
g. Select a Date by clicking on the little calendar icon to the right of the date box, and then clicking on the appropriate date.
   i. If you are entering the procedures on the same day that you performed them, you will not have to change the date.
h. Click Submit

**Reporting Hours for PET/CT, CT and SPECT/CT Procedures:**
- After logging into Trajecsys, choose ‘Daily Logsheet’ on left-sided menu
- Where it says Supervising Employee choose from your list which of the 3 you are logging for the day
  a. Click Add Logsheet button
  b. Under Major Study choose Computed Tomography
  c. Under Skill choose which of the 3 you are logging for the day
  d. In the next pop-up choose your participation level
  e. Enter the amount of studies performed that day
  f. In the next pop-up enter the amount of time you spent performing the studies

**Example:** You have performed 5 PET/CT scans with minimal assistance from the technologist in your 8 hours at the clinical site:
- Supervising Employee: PET/CT
- Major Study: Computed Tomography
- Skill: PET/CT
- Participation Level: Performed with minimal assistance
- Amount: 5
- Time: 8 hours*

**If you spend the whole clinical day performing just the studies with CT then you can log 8 hours. If you only perform a few SPECT/CTs while doing all general studies then try to estimate the time spent performing CT related studies (round up).**
ENTERING TIME TOWARDS CT (SPECT/CT OR PET/CT) HOURS:

- A typical CT scan for SPECT/CT or PET/CT only takes 1 to 2 minutes
- The typical time for a SPECT/CT or PET/CT study is 20 to 30 minutes
- When entering CT (SPECT/CT or PET/CT) time you must enter it accurately.
- This means if you work in PET/CT for an 8-hour day there is no possible way you worked the CT portion for 8 hours, entering that will be considered falsification of time.
- I can allow you to enter the time the study took, example 20 to 30 minutes’ maximum.
- In an 8-hour day then the maximum time you could possible perform CT would be approximately 4 to 5 hours IF you spent the entire day doing patients in the SPECT/CT or PET/CT room (and you did 8 to 10 studies that day).
- None of your days/time entered should be over the above time accumulation.
- Your Logsheet/skill summary should reflect how many patients in PET/CT you did to accumulate your hours.

Site Evaluation:

- **Site Evaluation** - at the end of each semester you will be asked to complete a site evaluation for each site that you attended. You simply click on **Site Evaluation**, choose the **Site**, click **Next**, choose the rotation ending **date**, complete the survey by clicking in the appropriate buttons: **Strongly Disagree, Disagree, Agree or Strongly Agree** and click **Submit**.

Reports:

- Click on **Reports** to see reports on your time, log sheets, evaluations, etc.

Competency Evaluations:

- Click on **Comp Evals** to see the objectives for each competency, checklist, student intent form, etc.

Don’t forget to **Logout** when you’re finished.

KEEPING YOUR OWN RECORDS

Students are strongly advised to keep a copy of their clinical evaluation reports and recorded hours, including CT hours for their personal records. This concept is recommended for verifying hours when original sheets are “lost” or misplaced and for reference when applying for board examinations and employment. Students will have access to the online clinical documentation only while they are active students in the NMT Program. Clinical records and evaluations cannot be removed from the college once they are submitted. Students are encouraged to print copies on a continuous basis, and are responsible for making the copies at their own expense.
Appendix A

NUCLEAR MEDICINE TECHNOLOGY PROGRAM OF STUDY: AS DEGREE

PROGRAM REQUIREMENTS

Freshman Year - (NOTE: Required orientation sessions will be scheduled during the summer before entry into the program.)

Fall Semester - (Practicum at affiliates Tuesday and Thursday, simulated labs are held in the NMT lab at the GCC campus and are scheduled on lecture days)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG* 101</td>
<td>Composition</td>
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<tr>
<td>MAT* 172</td>
<td>College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>NMT* 101</td>
<td>Introduction to Nuclear Medicine</td>
<td>3</td>
</tr>
<tr>
<td>NMT* 102</td>
<td>Nuclear Medicine Procedures I</td>
<td>3</td>
</tr>
<tr>
<td>NMT* 111</td>
<td>Clinical Practicum I</td>
<td>1</td>
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<tr>
<td>PHY* 111</td>
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<tr>
<td><strong>Total Semester Credit Hours</strong></td>
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Winter Intersession – (Practicum at affiliates Monday through Friday, 40 hrs./week)

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</table>

Freshman Year - Spring Semester - (Practicum at affiliates Tuesday and Thursday simulated labs are held in the NMT lab at the GCC campus and are scheduled on lecture days)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENG* 102</td>
<td>Literature &amp; Composition or</td>
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<tr>
<td>ENG* 200</td>
<td>Advanced Composition</td>
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<td>CHE* 111</td>
<td>Concepts of Chemistry</td>
<td>4</td>
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<tr>
<td>NMT* 112</td>
<td>Clinical Practicum II</td>
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<tr>
<td>NMT* 121</td>
<td>Physics in Nuclear Medicine</td>
<td>3</td>
</tr>
<tr>
<td>NMT* 201</td>
<td>Nuclear Medicine Procedures II</td>
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<tr>
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Summer Session - (Practicum at affiliates Monday through Friday, May through August, 40 hrs./week at clinical affiliates)

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<th>Credits</th>
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</thead>
<tbody>
<tr>
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<tr>
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Sophomore Year - Fall Semester - (Practicum at affiliates Monday, Wednesday, and Friday, simulated labs are held in the NMT lab at the GCC campus and are scheduled on lecture days)

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<td>General Psychology I</td>
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<tr>
<td>NMT* 211</td>
<td>Clinical Practicum III</td>
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</tr>
<tr>
<td>NMT* 202</td>
<td>Nuclear Medicine Instrumentation</td>
<td>3</td>
</tr>
<tr>
<td>NMT* 203</td>
<td>Radiopharmacy</td>
<td>3</td>
</tr>
<tr>
<td>RST* 200</td>
<td>Cross Sectional Anatomy</td>
<td>3</td>
</tr>
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<td><strong>Total Semester Credit Hours</strong></td>
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Winter Intersession - (Practicum at affiliates Monday through Friday 40 hrs./week)

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<tbody>
<tr>
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<td><strong>Total Semester Credit Hours</strong></td>
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<td><strong>0.5</strong></td>
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Sophomore Year - Spring Semester - (Practicum at affiliates Monday, Wednesday, and Friday, simulated labs are held in the NMT lab at the GCC campus and are scheduled on lecture days)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
</table>
NMT* 212 Clinical Practicum IV  2
NMT* 221 Nuclear Medicine Procedures III  3
NMT* 222 Intro. to Computers and Nuclear Medicine Apps.  3
NMT* 223 Nuclear Medicine Seminar  3
**Total Semester Credit Hours**  11

**Total Credit Hours 60**

**NUCLEAR MEDICINE TECHNOLOGY PROGRAM OF STUDY: CERTIFICATE**

**PROGRAM REQUIREMENTS**

**Freshman Year - Fall Semester** - (Practicum at affiliates Tuesday and Thursday, simulated labs are held in the NMT lab at the GCC campus and are scheduled on lecture days)

<table>
<thead>
<tr>
<th>Course #</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>NMT* 102</td>
<td>Nuclear Medicine Procedures I</td>
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</tr>
<tr>
<td>NMT* 111</td>
<td>Clinical Practicum I</td>
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<tr>
<td><strong>Total Semester Credit Hours</strong></td>
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<td><strong>4</strong></td>
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**Freshman Year - Spring Semester** – (Practicum at affiliates Tuesday and Thursday, simulated labs are held in the NMT lab at the GCC campus and are scheduled on lecture days)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td>NMT* 112</td>
<td>Clinical Practicum II</td>
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</tr>
<tr>
<td>NMT* 121</td>
<td>Physics in Nuclear Medicine</td>
<td>3</td>
</tr>
<tr>
<td>NMT* 201</td>
<td>Nuclear Medicine Procedures II</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Semester Credit Hours</strong></td>
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**Summer Session** (Practicum at affiliates Monday through Friday, May through August, 40 hrs./week at clinical affiliates)

<table>
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<th>Course #</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
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<td><strong>Total Semester Credit Hours</strong></td>
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**Sophomore Year - Fall Semester** - (Practicum at affiliates Monday, Wednesday, and Friday, simulated labs are held in the NMT lab at the GCC campus and are scheduled on lecture days)

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<tr>
<th>Course #</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NMT* 202</td>
<td>Nuclear Medicine Instrumentation</td>
<td>3</td>
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<tr>
<td>NMT* 203</td>
<td>Radiopharmacy</td>
<td>3</td>
</tr>
<tr>
<td>NMT* 211</td>
<td>Clinical Practicum III</td>
<td>2</td>
</tr>
<tr>
<td>RST* 200</td>
<td>Cross Sectional Anatomy</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Semester Credit Hours</strong></td>
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<td><strong>11</strong></td>
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</table>

**Winter Intersession** (Practicum at affiliates Monday through Friday, 40 hrs./week)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NMT* 216</td>
<td>Clinical Internship III</td>
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<tr>
<td><strong>Total Semester Credit Hours</strong></td>
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<td><strong>0.5</strong></td>
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**Sophomore Year - Spring Semester** - (Practicum at affiliates Monday, Wednesday, and Friday, simulated labs are held in the NMT lab at the GCC campus and are scheduled on lecture days)

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<tbody>
<tr>
<td>NMT* 212</td>
<td>Clinical Practicum IV</td>
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<td>NMT* 221</td>
<td>Nuclear Medicine Procedures III</td>
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<tr>
<td>NMT* 222</td>
<td>Intro. to Computers and Nuclear Medicine Apps.</td>
<td>3</td>
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<tr>
<td>NMT* 223</td>
<td>Nuclear Medicine Seminar</td>
<td>3</td>
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<tr>
<td><strong>Total Semester Credit Hours</strong></td>
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**Total Credit Hours 36.5**
Appendix B

SOCIETY OF NUCLEAR MEDICINE & MOLECULAR IMAGING,
TECHNOLOGIST SECTION

CODE OF ETHICS for the Nuclear Medicine Technologist (6/2013)

Technologists qualified to perform nuclear medicine procedures are members of the health care profession and must strive as individuals and as a group to maintain the highest of ethical standards by adhering to the Nuclear Medicine Technologist Code of Ethics approved by the Society of Nuclear Medicine and Molecular Imaging Technologist Section (SNMMITS).

The principles of the Nuclear Medicine Technologist Code of Ethics as listed below are not laws, but standards of conduct to be used as ethical guidelines by nuclear medicine technologists.

**Principle 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.

**Principle 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.

**Principle 3:** The nuclear medicine technologist will maintain strict patient confidentiality in accordance with state and federal regulations.

**Principle 4:** The nuclear medicine technologist will comply with the laws, regulations, and policies governing the practice of nuclear medicine.

**Principle 5:** The nuclear medicine technologist will continually strive to improve his or her knowledge and technical skills.

**Principle 6:** The nuclear medicine technologist will not engage in fraud, deception, or criminal activities.

**Principle 7:** The nuclear medicine technologist will be an advocate for his or her profession.
Appendix C

AMERICAN SOCIETY OF RADIOLOGIC TECHNOLOGISTS and
The American Registry of Radiologic Technologists

CODE OF ETHICS (2012)

1. The radiologic technologist acts 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 principle 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 socio-economic status.

4. The radiologic technologist practices technology founded upon theoretical knowledge and concepts, uses equipment and accessories consistent with the purposes for which they were 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 that 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 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 continuing education and professional activities, sharing knowledge with colleagues, and investigating new aspects of professional practice.
Appendix D

AMERICAN HOSPITAL ASSOCIATION

This document replaced the “Patient’s Bill of Rights” in 2003, and is distributed to patients in the form of an easy to read brochure.

1. **High quality hospital care.** Our first priority is to provide you with the care you need, when you need it, with skill, compassion and respect. Tell your caregivers if you have concerns about your care or if you have pain. You have the right to know the identity of doctors, nurses and others involved in your care, and you have the right to know when they are students, residents or other trainees.

2. **A clean and safe environment.** Our hospital works hard to keep you safe. We use special policies and procedures to avoid mistakes in your care and keep you free from abuse and neglect. If anything unexpected and significant happens during your hospital stay, you will be told what happened, and any resulting changes in your care will be discussed with you.

3. **Involvement in your care.** You and your doctor often make decisions about your care before you go to the hospital. Other times, especially in emergencies, those decisions are made during your hospital stay. When decision-making takes place, it should include:
   a. **Discussing your medical condition and information about medically appropriate treatment choices.** To make informed decisions with your doctor, you need to understand:
      i. The benefits and risks of each treatment.
      ii. Whether your treatment is experimental or part of a research study.
      iii. What you can reasonably expect from your treatment and any long-term effects it might have on your quality of life.
      iv. What you and your family will need to do after you leave the hospital.
      v. The financial consequences of using uncovered services or out-of-network providers.
      vi. Please tell your caregivers if you need more information about treatment choices.
   b. **Discussing your treatment plan.** When you enter the hospital, you sign a general consent to treatment. In some cases, such as surgery or experimental treatment, you may be asked confirm in writing that you understand what is planned and agree to it. This process protects your right to consent to or refuse a treatment. Your doctor will explain the medical consequences of refusing recommended treatment. It also protects your right to decide if you want to participate in a research study.
   c. **Getting information from you.** Your caregivers need complete and correct information about your health and coverage so that they can make good decisions about your care. That includes:
      i. Past illnesses, surgeries or hospital stays.
ii. Past allergic reactions.

iii. Any medicines or dietary supplements (such as vitamins and herbs) that you are taking.

iv. Any network or admission requirements under your health plan.

d. **Understanding your health care goals and values.** You may have health care goals and values or spiritual beliefs that are important to your well-being. They will be taken into account as much as possible throughout your hospital stay. Make sure your doctor, your family and your care team know your wishes.

e. **Understanding who should make decisions when you cannot.** If you have signed a health care power of attorney stating who should speak for you if you become unable to make health care decisions for yourself, or a “living will” or “advance directive” that states your wishes about end-of-life care; give copies to your doctor, your family and your care team. If you or your family need help making difficult decisions, counselors, chaplains and others are available to help.

4. **Protection of your privacy.** We respect the confidentiality of your relationship with your doctor and other caregivers, and the sensitive information about your health and health care that are part of that relationship. State and federal laws and hospital operating policies protect the privacy of your medical information. You will receive a Notice of Privacy Practices that describes the ways that we use, disclose and safeguard patient information and that explains how you can obtain a copy of information from our records about your care.

5. **Preparing you and your family for when you leave the hospital.** Your doctor works with hospital staff and professionals in your community. You and your family also play an important role in your care. The success of your treatment often depends on your efforts to follow medication, diet and therapy plans. Your family may need to help care for you at home. You can expect us to help you identify sources of follow-up care and to let you know if our hospital has a financial interest in any referrals. As long as you agree that we can share information about your care with them, we will coordinate our activities with your caregivers outside the hospital. You can also expect to receive information and, where possible, training about the self-care you will need when you go home.

6. **Help with your bill and filing insurance claims.** Our staff will file claims for you with health care insurers or other programs such as Medicare and Medicaid. They will also help your doctor with needed documentation. Hospital bills and insurance coverage are often confusing. If you have questions about your bill, contact our business office. If you need help understanding your insurance coverage or health plan, start with your insurance company or health benefits manager. If you do not have health coverage, we will try to help you and your family find financial help or make other arrangements. We need your help with collecting needed information and other requirements to obtain coverage or assistance.
Appendix E

NUCLEAR MEDICINE TECHNOLOGY PROGRAM TECHNICAL STANDARDS

The Gateway Community College Nuclear Medicine Technology Program has established technical standards that must be met by each student admitted into the Program. Each student must be able to:

- Operate nuclear medicine equipment which will include lifting, pushing and reaching.
- Verbally communicate in a clear and concise manner while operating equipment, positioning patients, and performing other duties as assigned.
- Read and apply appropriate instructions in treatment charts, procedure requisitions, treatment prescriptions, notes and records.
- Lift a minimum of forty (40) pounds of weight, (shields, collimators, imaging receptors and ancillary aids used for patient procedures), up and overhead the level of the head.
- Move a patient and equipment into accurate positions to insure proper exposure/treatment.
- Move immobile patients from stretcher to treatment table with assistance from departmental personnel.
- Understand and apply clinical instructions given.
- Enter clinical data into computer system for specified procedures.
- Monitor patients during nuclear medicine procedures.
- Monitor audio and video equipment during nuclear medicine procedures.
- Monitor equipment and background sounds during equipment operations.
- Complete all required competencies in a manner that demonstrates accuracy, consistency and retention of learned skills and information.
Appendix F

DECLARATION OF PREGNANCY

Student Data:

Name: [Name]
Declaration Date: [Date]

Established Conception Date: [Date]
Recorded Conception Date: [Date]
Established Delivery Date: [Date]

Department: [Department]
Department Mail Address: [Address]

Supervisor: [Supervisor]

Phone – Work: [Phone]
Home: [Home]

Radiation History Review:

Radiation Sources:
Dx X-ray: [Amount]
Rx X-ray: [Amount]
Other?: [Amount]
Nuclear Medicine: [Amount]
Sealed Sources: [Amount]

Min. (mRem) Avg. (mRem) Max. (mRem) Based on: Individual records

Monthly:
Quarterly:
Annually:

Fetal Dose Pre-Declaration

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<th>mRem</th>
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<tbody>
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Fetal Dose Post-Declaration

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Recommendation:

[Recommendation]

Declaration of Pregnancy:

Student Signature: [Signature]
Date: [Date]

RSO Signature: [Signature]
Date: [Date]
Appendix G

ATTENDANCE AND PUNCTUALITY EVALUATION FORM
FOR CLINICAL PRACTICA I-IV AND CLINICAL INTERNSHIPS I-III

NUCLEAR MEDICINE TECHNOLOGY PROGRAM

Attendance and Punctuality Evaluation Form for Clinical Practica I-IV and Clinical Internships I-III

Student Name: __________________________  Semester: _____  Yr.: _____

Clinical Practicum:  I  II  III  IV  Clinical Internship:  I  II  III

The following objectives are graded on a Pass/Fail basis. If a student fails one of the objectives, he/she will receive a 0 (zero) for the attendance and punctuality portion of the Clinical Practicum grade.

P  F  1. Meets Program attendance and punctuality requirements to insure proper clinical training and consideration to patients and co-workers.

P  F  2. Incurs no more than 2 absences during the fall or spring semester, 3 during the summer internship and 1 during the winter internships.

P  F  3. Lateness of more than 2 incidents in one semester.

P  F  4. Provides notification for absences or tardiness in accordance with established Program guidelines and practices with no more than 2 variances per semester or internship, as noted by the clinical faculty and/or Program Director.

P  F  5. Requests time off in accordance with established procedures with no more than 2 variances in a semester or internship, as noted by the Clinical Coordinator and/or Program Director.
Appendix H

CTO FORM

NUCLEAR MEDICINE TECHNOLOGY PROGRAM

Request for CTO Hours

Today’s Date: ____________________________

Student’s Name: ________________________________

Clinical Affiliate: ________________________________

Time off Date: ________________________________

*Four (4) or Eight (8) Hours: ________________________________
*CTO may only be scheduled in four (4) or eight (8) hour segments.

Requested within 48 hours: ________________________________

Approved: ________________________________

____________________________________
Clinical Coordinator

Form must be filled out and handed in at least 2 days prior to request date unless otherwise specified. Scheduled time is verified with the Clinical Coordinator prior to the time off. The student must notify the Clinical Coordinator and the Affiliate Educational Supervisor (AES) of all CTO time.
### Appendix I

**END OF ROTATION EVALUATION FORM**

<table>
<thead>
<tr>
<th>Task Description</th>
<th>N</th>
<th>U</th>
<th>Y</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contacts appropriate personnel as needed.</td>
<td></td>
<td></td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Dismisses patients properly with escorting &amp; calling transport.</td>
<td>N</td>
<td>U</td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Examines and questions patients in order to remove attenuating objects, and completes pertinent patient history.</td>
<td></td>
<td></td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Explains procedures appropriately to patients.</td>
<td>N</td>
<td>U</td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Identifies patient correctly &amp; reviews requisition for pertinent information.</td>
<td></td>
<td></td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Maintains patient confidentiality and complies with HIPAA regulations.</td>
<td>N</td>
<td>U</td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Maintains patient dignity and comfort.</td>
<td></td>
<td></td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Maintains patient safety at all times.</td>
<td>N</td>
<td>U</td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Prepares patients and room for next exam according to protocol.</td>
<td></td>
<td></td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Responds to patients questions &amp; needs appropriately.</td>
<td>N</td>
<td>U</td>
<td>Y</td>
<td>N/A</td>
</tr>
</tbody>
</table>

#### Equipment and Procedure Protocol

<table>
<thead>
<tr>
<th>Task Description</th>
<th>N</th>
<th>U</th>
<th>Y</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answers telephone, responds to inquiries, and greets visitors in department.</td>
<td>N</td>
<td>U</td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Can perform multiple task as necessary. (Summer Freshmen)</td>
<td></td>
<td></td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Completes all assigned work.</td>
<td>N</td>
<td>U</td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Completes all the necessary paperwork, &amp; properly presents cases to physician.</td>
<td>N</td>
<td>U</td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Performs appropriate view for procedure and can change existing protocols as needed. (Summer Freshmen)</td>
<td>N</td>
<td>U</td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Task</td>
<td>N</td>
<td>U</td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>-----</td>
</tr>
<tr>
<td>Performs computer analysis accurately. (Summer Freshmen)</td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Performs the study in a timely manner, keeping the room on schedule. (Summer Freshmen)</td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Places camera as close as possible and can perform extra views.</td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Positions patients and camera correctly.</td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Prepares camera/probe set-up for acquisitions, &amp; performs computer set-up for acquisitions.</td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Prepsares, assays, &amp; administers dose safely and correctly. (Summer Freshmen)</td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Responds effectively to interruptions &amp; prioritizes schedule. (Summer Freshmen)</td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Radiation Safety**

<table>
<thead>
<tr>
<th>Task</th>
<th>N</th>
<th>U</th>
<th>Y</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disposes of radioactive materials properly.</td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Follows ALARA guidelines.</td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Handles radioactivity safely.</td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Wears and removes gloves appropriately.</td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Wears lab coat and uniform per program guidelines.</td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Wears whole body and ring badges properly.</td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Safety**

<table>
<thead>
<tr>
<th>Task</th>
<th>N</th>
<th>U</th>
<th>Y</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handles and disposables of needles properly.</td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Maintains a clean and orderly work area.</td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Operates the camera &amp; all equipment in a safe manner.</td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
</tbody>
</table>
## Student Professionalism

<table>
<thead>
<tr>
<th>Practice</th>
<th>N</th>
<th>U</th>
<th>Y</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practices an acceptable level of personal hygiene.</td>
<td></td>
<td></td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Practices standard precautions.</td>
<td></td>
<td></td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Uses proper body mechanics.</td>
<td></td>
<td></td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Accepts responsibility for his/her actions and admits errors.</td>
<td></td>
<td></td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Conducts all work activities with respect for rights and wishes of others.</td>
<td></td>
<td></td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Demonstrates good listening skills.</td>
<td></td>
<td></td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Follows guidelines set in the GCC NMT Student Guide without deviation.</td>
<td></td>
<td></td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Fosters mature, professional relationships with technologists, &amp; remains calm during stressful situations including controlling emotions.</td>
<td></td>
<td></td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Is dressed in accordance with GCC NMT Student Guide without deviation.</td>
<td></td>
<td></td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Is reliable, arrives on time &amp; notifies technologist when leaving clinical site.</td>
<td></td>
<td></td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Refrains from personal or negative conversations that exclude the patient, or include unprofessional subject matter.</td>
<td></td>
<td></td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Takes notes &amp; uses them appropriately.</td>
<td></td>
<td></td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Volunteers to assist others in the department &amp; makes constructive use of downtime. (e.g. stocks rooms, cleans or organizes).</td>
<td></td>
<td></td>
<td>Y</td>
<td>N/A</td>
</tr>
</tbody>
</table>

## Pharmacy Assessment

<table>
<thead>
<tr>
<th>Practice</th>
<th>N</th>
<th>U</th>
<th>Y</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accurately operates and utilizes the radio-pharmacy computer system and completes all documentation.</td>
<td></td>
<td>Y</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Accurately performs Q.C. and usage of the GM counter and dose calibrator.</td>
<td></td>
<td></td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Calculates dose/volumes to be administered correctly.</td>
<td></td>
<td></td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Checks expiration dates on radiopharmaceutical doses and kits.</td>
<td>N</td>
<td>U</td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Complies with DOT requirements (e.g. receives packages, defacing, transportation index, etc.).</td>
<td>N</td>
<td>U</td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>The student understands the purpose for quality control and can accurately perform as necessary.</td>
<td>N</td>
<td>U</td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Demonstrates compliance with package insert and department guidelines.</td>
<td>N</td>
<td>U</td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Demonstrates proper record keeping.</td>
<td>N</td>
<td>U</td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Demonstrates proper technique when preparing radiopharmaceuticals and drawing up doses.</td>
<td>N</td>
<td>U</td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Handles and disposes all radioactive materials properly and safely.</td>
<td>N</td>
<td>U</td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Follows ALARA guidelines (e.g. wearing radiation monitors, exposures limits, appropriately wearing &amp; disposing of gloves, etc.)</td>
<td>N</td>
<td>U</td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Labels vials and syringes correctly.</td>
<td>N</td>
<td>U</td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>States NRC limits for 99Mo breakthrough in the eluate &amp; performs assay correctly.</td>
<td>N</td>
<td>U</td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>States patient dose ranges for each scan.</td>
<td>N</td>
<td>U</td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Stays on schedule.</td>
<td>N</td>
<td>U</td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Uses aseptic technique.</td>
<td>N</td>
<td>U</td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Wears lab coat and uniform per program guidelines.</td>
<td>N</td>
<td>U</td>
<td>Y</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Fusion Imaging PET/CT, SPECT/CT, Assessment

<p>| Performs glucose testing accurately and understands glucose limits. | N | U | Y | N/A |
| Demonstrates and understands the use of contrast media. | N | U | Y | N/A |
| Follows department protocol for PET/CT imaging. | N | U | Y | N/A |</p>
<table>
<thead>
<tr>
<th>Follows department protocol for SPECT/CT imaging.</th>
<th>N</th>
<th>U</th>
<th>Y</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrates a knowledge of PET Radiopharmaceuticals.</td>
<td>N</td>
<td>U</td>
<td>Y</td>
<td>N/A</td>
</tr>
</tbody>
</table>

[Approved] [Not Approved]
Appendix J

CLINICAL EDUCATION PLAN

ALLIED HEALTH & NURSING DIVISION

CLINICAL EDUCATION PLAN

Student's Name ____________________
Program Nuclear Medicine Technology
Date ____________

PROBLEMS IDENTIFIED

CONCLUSION

RECOMMENDATION/ACTION PLAN

Follow-up Date:

Student ________________________________ Date ____________

Program Director __________________________ Date ____________

Clinical Coordinator __________________________ Date ____________
## Appendix K

### NMT PROGRAM PROCEDURE CHECKLIST
(Revised: June 2017, ARRT Implementation Date: January 2017)

<table>
<thead>
<tr>
<th>No.</th>
<th>Category (mandatory #)</th>
<th>Procedure</th>
<th>Required</th>
<th>Date Completed</th>
<th>Semester</th>
<th>Must have 1 on log sheet at this level to complete a competency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Abscess or Infection (0)</td>
<td>Gallium-Abscess/Infection</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>WBC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Skeletal (2)</td>
<td>Bone-Spot Imaging</td>
<td></td>
<td></td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Three-Phase-mot until 8/1</td>
<td>*</td>
<td></td>
<td></td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Whole Body</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Cardiovascular (2)</td>
<td>Gated Blood Pool Study-mot until 8/1</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Myocardial Perfusion STRESS (specify)</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Myocardial Perfusion REST (specify)</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>9</td>
<td>PET/CT-Cardiac</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Endocrine/Exocrine (2)</td>
<td>Thyroid Uptake</td>
<td></td>
<td></td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Thyroid Scan</td>
<td></td>
<td></td>
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<td>5</td>
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<tr>
<td>12</td>
<td>Thyroid Metastatic Survey</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
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<tr>
<td>13</td>
<td>Parathyroid</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Gastrointestinal (3)</td>
<td>Hepatobiliary</td>
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<tr>
<td>15</td>
<td>Gastroesophageal Reflux</td>
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<tr>
<td>16</td>
<td>Gastric Emptying</td>
<td></td>
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<tr>
<td>17</td>
<td>Meckel’s Diverticulum</td>
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<td>GI Bleeding</td>
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<tr>
<td>19</td>
<td>Liver/Spleen</td>
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<tr>
<td>20</td>
<td>Damaged RBC Spleen</td>
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<tr>
<td>21</td>
<td>Hemangioma</td>
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<tr>
<td>22</td>
<td>Genitourinary (1)</td>
<td>Renal Function</td>
<td></td>
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<tr>
<td>23</td>
<td>Renal-Cortical Imaging/DMISA</td>
<td></td>
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<td>24</td>
<td>Radionuclide Cystogram</td>
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</tr>
<tr>
<td>25</td>
<td>Respiratory (2)</td>
<td>Lung Perfusion-mot until 8/1</td>
<td>*</td>
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<td>5</td>
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<tr>
<td>26</td>
<td>Lung Ventilation-Gas (or)</td>
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<tr>
<td>27</td>
<td>Lung Ventilation-Aerosol</td>
<td>*</td>
<td></td>
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<td>5</td>
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<tr>
<td>28</td>
<td>Quantitative Lung</td>
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<td>Tumor (2)</td>
<td>Gallium-Tumor Localization</td>
<td></td>
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<tr>
<td>30</td>
<td>Tumor-other (e.g. neuroendocrine, adrenal)</td>
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<td>31</td>
<td>Lymphoscintigraphy</td>
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<tr>
<td>32</td>
<td>PET/CT-Tumor</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Category (mandatory #)</td>
<td>Procedure</td>
<td>Required</td>
<td>Date Completed</td>
<td>Semester</td>
<td></td>
</tr>
<tr>
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<td>-----------------------</td>
<td>-----------</td>
<td>----------</td>
<td>----------------</td>
<td>----------</td>
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</tr>
<tr>
<td>33</td>
<td>SPECT (2)</td>
<td>SPECT-Bone</td>
<td></td>
<td></td>
<td>5</td>
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<tr>
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<td>SPECT-Brain</td>
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<td>SPECT-Liver</td>
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<td></td>
<td>SPECT-Tumor (not Hemangioma)</td>
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<tr>
<td>37</td>
<td></td>
<td>SPECT-Renal</td>
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</tr>
<tr>
<td>38</td>
<td></td>
<td>SPECT- Cardiac-other (TI-201 MPI, TI-201 Viability, MPI W/AC, MPI Dual Isotope, Pharmacologic)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>39</td>
<td>Therapeutic Proc (1)</td>
<td>Therapy-Thyroid Ablation (may be simulated)</td>
<td></td>
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<td>40</td>
<td></td>
<td>Therapy-Hypertthyroid (may be simulated)</td>
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</tr>
<tr>
<td>41</td>
<td></td>
<td>Therapy-Palliative Bone (may be simulated)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td>Therapy-Non Hodgkins Lymphoma (may be simulated)</td>
<td></td>
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</tr>
<tr>
<td>43</td>
<td>CNS (0)</td>
<td>Brain Planar</td>
<td></td>
<td></td>
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<tr>
<td>44</td>
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<td>Brain Dynamic</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>45</td>
<td></td>
<td>Brain PET or PET/CT</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>46</td>
<td></td>
<td>Cistemogram-Routine</td>
<td></td>
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</tr>
<tr>
<td>47</td>
<td></td>
<td>Cistemogram-CSF Leak</td>
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<td>48</td>
<td></td>
<td>Shunt Patency</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>49</td>
<td>Exit (1)</td>
<td>Competency</td>
<td>*</td>
<td></td>
<td>Senior/Spring</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>General Patient Care</td>
<td>CPR</td>
<td>***</td>
<td>Freshman Orient.</td>
<td>Summer before Freshman/Fall</td>
<td></td>
</tr>
<tr>
<td>51</td>
<td></td>
<td>Vital Signs (BP, pulse, temp, respir.)</td>
<td>***</td>
<td>Freshman Orient.</td>
<td>Summer before Freshman/Fall</td>
<td></td>
</tr>
<tr>
<td>52</td>
<td></td>
<td>Venipuncture</td>
<td>***</td>
<td>Clinical Practicum II</td>
<td>Freshman/Fall</td>
<td></td>
</tr>
<tr>
<td>53</td>
<td></td>
<td>EKG Placement and Monitoring</td>
<td>***</td>
<td>NM Procedures II/ Clin. Pract. Checklist</td>
<td>Freshman/Fall</td>
<td></td>
</tr>
<tr>
<td>54</td>
<td>Quality Control Procedures</td>
<td>Radiopharmaceutical QC</td>
<td>***</td>
<td>Clin. Pract. Checklist</td>
<td>Summer before Senior/Fall</td>
<td></td>
</tr>
<tr>
<td>55</td>
<td></td>
<td>SPECT Gamma Camera (uniformity resolution, center of rotation)</td>
<td>***</td>
<td>Clin. Pract. Checklist</td>
<td>Senior</td>
<td></td>
</tr>
<tr>
<td>56</td>
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<td>Dose Calibrator (Constancy, Linearity)</td>
<td>***</td>
<td>Clin. Pract. Checklist</td>
<td>Senior</td>
<td></td>
</tr>
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<td>57</td>
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<td>Well Counter/Uptake Probe (energy calibration)</td>
<td>***</td>
<td>Clin. Pract. Checklist</td>
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<tr>
<td>58</td>
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<td>Survey Meter (battery check and constancy)</td>
<td>***</td>
<td>Clin. Pract. Checklist</td>
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<td>59</td>
<td></td>
<td>PET/CT QC (reference or blank scan)</td>
<td>***</td>
<td>Clin. Pract. Checklist</td>
<td>Summer before Senior/Fall</td>
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</tbody>
</table>

*Required Competencies begin August of Clinical Internship II (Freshmen Summer)
*Required Competencies begin June of Clinical Internship II (Freshmen Summer)
*** Per Clinical Syllabi

**These do not count towards the required number of competencies per semester.

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17 Mandatory+8 Elective+1 Exit Comp

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Appendix L

GENERAL COMPETENCY EVALUATION FORM

Gateway Community College- Nuclear Medicine Technology
General Competency Evaluation Form- Trajecsys

See Trajecsys on line clinical documentation system for specific competency requirements:

<table>
<thead>
<tr>
<th>Score</th>
<th>Exam Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pass/Fail</td>
<td>The purpose of a competency is to ensure that the student has mastered his/her skills. The technologist is responsible for ensuring that the student has competently and without error accomplished the procedure. If the skills are performed accurately the student passes the competency, if any skill is performed weakly or incorrectly on the first attempt the student fails the competency.</td>
</tr>
<tr>
<td>Pass/Fail</td>
<td>The student performs all patient and room preparation tasks to the technologist's satisfaction. The student is able to perform any calculations needed for procedure.</td>
</tr>
<tr>
<td>Pass/Fail</td>
<td>The student keeps the patient as the first priority, including but not limited to patient instructions, patient dignity and safety.</td>
</tr>
<tr>
<td>Pass/Fail</td>
<td>The student prepares the camera and computer acquisition protocols without assistance prior to the study.</td>
</tr>
<tr>
<td>Pass/Fail</td>
<td>The student is able to keep the room on schedule.</td>
</tr>
<tr>
<td>Pass/Fail</td>
<td>Retrieves and identifies the correct patient, and asks the patient only appropriate and pertinent questions regarding the procedure.</td>
</tr>
<tr>
<td>Pass/Fail</td>
<td>Remains calm and keeps the technologist(s) informed.</td>
</tr>
<tr>
<td>Pass/Fail</td>
<td>Properly handles needles and waste safely at all times.</td>
</tr>
<tr>
<td>Pass/Fail</td>
<td>Student positions accurately without assistance and labels images correctly.</td>
</tr>
<tr>
<td>Pass/Fail</td>
<td>Demonstrates ALARA and standard precautions at all times.</td>
</tr>
<tr>
<td>Pass/Fail</td>
<td>The student demonstrates and scans according to department protocol correctly for the procedure unassisted.</td>
</tr>
<tr>
<td>Pass/Fail</td>
<td>Checks all views or images for quality.</td>
</tr>
<tr>
<td>Pass/Fail</td>
<td>The student dismisses the patient and completes all necessary information for the radiologist including presenting scan.</td>
</tr>
<tr>
<td>Pass/Fail</td>
<td>Accurately calculates and dispenses the dose for the patient unassisted. Completes all necessary information needed to retrieve the dose for the patient from the radiopharmacy.</td>
</tr>
<tr>
<td>Pass/Fail</td>
<td>Performs extra views when necessary unassisted.</td>
</tr>
<tr>
<td>Pass/Fail</td>
<td>Completes processing needed for the study to be interpreted unassisted.</td>
</tr>
<tr>
<td>Pass/Fail</td>
<td>Performs safe administration of the radiopharmaceutical. <strong>Please comment on method of administration: Direct venipuncture, Existing IV line, New IV line, Inhalation, Oral</strong></td>
</tr>
<tr>
<td>Pass/Fail</td>
<td>The technologist is encouraged to question the student on; department protocol, radiopharmaceutical(s), and detailed pertinent information regarding the study before signing off on the competency. If the student cannot respond correctly, it must be documented and the student is not able to complete the competency at this time (a fail is given). The technologist should insert comments that will aid as an educational tool for the student to assist in the successful completion of future competencies.</td>
</tr>
</tbody>
</table>

Total
Appendix M

DAILY SKILL SUMMARY FORM

Gateway Community College
Nuclear Medicine Technology Program

DAILY SKILL SUMMARY FORM (PATIENT LOG SHEETS)

<table>
<thead>
<tr>
<th>DATE</th>
<th>STUDY</th>
<th>PARTICIPATION</th>
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<tr>
<td>EXAMPLE:</td>
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<tr>
<td>5/2/2015</td>
<td>Whole Body Bone Scan</td>
<td>3</td>
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</table>

Participation levels: 1=observed; 2=partially assisted technologist; 3=assisted technologist; 4=performed with minimal assistance; 5=performed with indirect supervision
## Appendix N

### EXIT COMPETENCY

**Clinical Instructor Exit Competency**

The purpose of a competency is to ensure that the student has mastered all their skills for graduation. The clinical instructor is responsible for ensuring that the student has competently and without error accomplished the above procedure. If the skills are performed accurately the student passes the competency, if any skill is performed weakly or incorrectly on the first attempt the student fails the competency.

<table>
<thead>
<tr>
<th>Task</th>
<th>Fail</th>
<th>Pass</th>
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</thead>
<tbody>
<tr>
<td>The student performs all patient and room preparation tasks to the Clinical Instructor/Evaluator's satisfaction. The student is able to perform any calculations needed for procedure.</td>
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<td></td>
</tr>
<tr>
<td>The student keeps the patient as the first priority, including but not limited to patient instructions, patient dignity and safety.</td>
<td></td>
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</tr>
<tr>
<td>The student identifies correct patient and verifies the procedure requisition.</td>
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</tr>
<tr>
<td>The student prepares the camera and computer acquisition protocols without assistance prior to the study.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The student is able to keep the room on schedule.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The student asks the patient only appropriate and pertinent questions regarding the procedure.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remains calm and keeps the Clinical Instructor/Evaluator informed.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Properly handles needles and waste safely at all times.

Student positions accurately without assistance and labels images correctly.

Demonstrates ALARA and standard precautions at all times.

The student performs scan according to department protocol correctly for the procedure unassisted.

Checks all views or images for quality.

The student dismisses the patient and completes all necessary information for the radiologist including presenting scan.

Accurately calculates and dispenses the dose for the patient unassisted. Completes all necessary information needed to retrieve the dose for the patient from the radiopharmacy.

Performs safe administration* of the radiopharmaceutical; a. direct venipuncture; b. injected through existing IV line; c. established a new IV line; d. inhalation; e. oral.

Performs extra views when necessary unassisted.
<table>
<thead>
<tr>
<th>For Faculty Use Only</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>For Faculty Completion</strong></td>
</tr>
<tr>
<td>Combined score for diagnostic nuclear medicine examinations, radiopharmacy, non-imaging procedures, radiation safety and protection, support functions, customer service, safety, attendance and punctuality (three or more items marked “Fail” will result in a failed competency).</td>
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</table>

<table>
<thead>
<tr>
<th>Diagnostic Nuclear Medicine Procedures</th>
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<tr>
<td>Performs a variety of diagnostic imaging procedures in accordance with departmental protocols to produce information of high diagnostic quality.</td>
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</table>

<table>
<thead>
<tr>
<th>Radiopharmacy Procedures</th>
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</thead>
<tbody>
<tr>
<td>Performs a variety of diagnostic imaging procedures in accordance with departmental protocols to produce information of high diagnostic quality.</td>
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</table>

<table>
<thead>
<tr>
<th>Non-imaging procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performs a variety of diagnostic imaging procedures in accordance with departmental protocols to produce information of high diagnostic quality.</td>
</tr>
</tbody>
</table>
Quality Control Procedures

Performs daily, weekly, monthly quality control on all instrumentation and other indicated quality control tests according to departmental procedure to ensure all equipment is in proper working order.

Radiation Safety and Procedures

Follows ALARA guidelines for radiation exposure as evidenced by monthly film badge reports.

Support Functions

Follows patient scheduling and tracks patient’s completion status using hospital information systems.

Customer Service

Interacts with patients, visitors and personnel in a considerate, helpful, and courteous manner.

Safety

Operates assigned equipment safely and performs duties in an appropriate manner by following all procedures as instructed during training and/or orientation.

Attendance and Punctuality
Meets program attendance and punctuality requirements to insure proper clinical training and consideration to patients and clinical staff.
Appendix O

AGREEMENT TO ABIDE BY INTERNET USE PROCEDURES AT CLINICAL AFFILIATES

NUCLEAR MEDICINE TECHNOLOGY PROGRAM
Agreement to Abide by Internet Use Procedures at Clinical Affiliates

I have read the Procedures Governing the Use of the Online Clinical Documentation System in the Gateway Community College Nuclear Medicine Technology Student Handbook.

I agree to only access the online clinical documentation system (www.trajecsys.com) to enter my entry and exit times at the clinical affiliates that allow students to use the Internet for this purpose.

I will not use the Internet for any other purpose at any clinical affiliate.

I will enter my entry and exit times from another computer on a daily basis if I am assigned to a clinical affiliate that does not allow students to access the Internet at their institution.

I acknowledge that I may be subject to disciplinary sanctions if I deviate from this procedure.

Print Name: ________________________________________________

Signature: _________________________________________________

Date: __________________________
Appendix P

TRAVEL TIMES FOR NMT PROGRAM STUDENTS

The following table includes the travel time that is allowed when NMT Program Students need to travel to and from clinical affiliates or GCC's New Haven Campus. These times were calculated using Yahoo Maps, and an additional 15 minutes was added for parking. Students may be penalized if they leave their clinical area earlier than the times found below.

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<th>To</th>
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<th>From</th>
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Page 102
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Appendix Q

DIRECTIONS TO CLINICAL AFFILIATES

Directions to Yale-New Haven Hospital
20 York Street (main entrance)

I-95 traveling north or south

Exit 47 to Route 34 west to Exit 2 or 3. Follow signs. Covered entrance at 20 York Street. Visitor parking available in Air Rights Garage. Enter from North or South Frontage Roads, or York Street.

I-91 traveling south

Exit 1 to Route 34 west to Exit 2 or 3. Follow signs. Covered entrance at 20 York Street. Visitor parking available in Air Rights Garage. Enter from North or South Frontage Roads, or York Street.

Wilbur Cross Parkway (Rte. 15) traveling south

Exit 59 immediately after tunnel. Right at end of ramp. Merge left onto Whalley Avenue at light. Stay on Whalley until you see signs for Yale-New Haven at Park Street. Follow signs. Covered entrance at 20 York Street. Visitor parking available in Air Rights Garage. Enter from North or South Frontage Roads, or York Street.

Merritt Parkway (Rte. 15) traveling north

Exit 57 to Route 34 east into New Haven. Right onto Ella T. Grasso Boulevard (Rte. 10) and left onto South Frontage Road (Legion Ave.). Follow hospital and Rte. 34 signs. Covered entrance at 20 York Street. Visitor parking available in Air Rights Garage. Enter from North or South Frontage Roads, or York Street.

Route 1 (Boston Post Road) traveling east

After crossing Ella T. Grasso Boulevard (Rte. 10), turn left onto Davenport Avenue. When Davenport crosses Howard Avenue, it becomes York Street. Hospital's main entrance is on the left. Parking is straight ahead in Air Rights Garage spanning York Street.

Bus Stops/Routes:
Call or E-mail CT Transit Telephone Information Center for times: (203) 624-0151
Route B: West Haven to Yale-New Haven Hospital
Route O: Sylvan Ave./Route 1, Milford to Yale-New Haven Hospital
Downtown Commuter Connection/Shore Line East (shuttle from Union Station to York & Cedar)

Directions to the YNHH- Saint Raphael Campus

![Medical Center Walking Map]
From I-91 South
Leave I-91 south at Exit 1 (Downtown New Haven). Continue straight on the exit expressway, where it merges with Frontage Road. Continue through four lights and then turn right at the fifth light, onto Orchard Street. After the first light you will see a Saint Raphael's garage to your left and another to your right.

From I-95 South
Leave I-95 South at Exit 47 (Downtown New Haven). Continue straight on the exit expressway, where it merges with Frontage Road. Continue through four lights and then turn right at the fifth light, onto Orchard Street. After the first light you will see a Saint Raphael's garage to your left and another to your right.

From Route 8 South
Take Route 8 south to Route 34 east to Ella Grasso Boulevard. Continue straight ahead to Derby Avenue. Derby Avenue changes to George Street. Once past Sherman Avenue, a hospital garage is on the left.

From Bridgeport and New York City areas (south)
Take I-84 east to Route 8 south in Waterbury. Follow Route 8 South to Route 34 east to Ella Grasso Boulevard. Continue straight ahead to Derby Avenue. Derby Avenue changes to George Street. Once past Sherman Avenue, a hospital garage is on the left.

Or, leave the Wilbur Cross Parkway at Exit 57 (Route 34 east). Continue on Route 34 until you cross Ella Grasso Boulevard. Continue straight ahead on to Derby Avenue. Derby Avenue changes into George Street. Once past Sherman Avenue, a garage is on your left. Additional parking is available if you take the next left on to Orchard Street; the garage will be on your right.

Or, leave I-95 north at Exit 47 (downtown New Haven). Continue straight on the exit expressway, where it merges with Frontage Road. Continue through four lights and then turn right at the fifth light, onto Orchard Street. After the first light you will see a Saint Raphael's garage to your left and another to your right.

Parking
There are two parking garages on the Hospital campus. Visitor parking is available in the 850-car garage on Hospital grounds at the corner of Orchard and George streets. A sheltered access from the George Street Garage to the Hospital is available by using the elevators at the rear of the garage to the first level, and following the signs. There is also a 500-space parking facility on Orchard Street, which has service parking for oversized vehicles. The garage office is in the cashier's booth area in the George Street Garage. Both garages are owned by Seton Real Estate.
Directions to the VA Connecticut Healthcare System, West Haven Campus

From I-91 Southbound:

Take I-91 South to New Haven, where it ends and interchanges with I-95 South to Exit 43, “First Avenue.” At the end of the exit ramp, turn right onto First Avenue. Proceed one block to the next stop light and turn left. Again, proceed one block to the next stoplight, and turn right onto Campbell Avenue. At the next light, turn left into the large driveway, proceed up the hill, and follow the signs to the visitors’ parking areas.

From I-95 Northbound:

Take I-95 North to Exit 43, “Downtown West Haven.” At the end of the exit ramp, turn left onto Campbell Avenue. Proceed through two stop lights to the VA Medical Center on your left. Turn left into the large driveway, proceed up the hill, and follow the signs to the visitors’ parking areas.

From Route 34:

Follow Route 34 into West Haven, and turn right onto Route 122, Forest Road (the large intersection with a car dealership on the right corner). Proceed on Forest Road for about 2 miles until you come to a large, multiple branching intersection with a Merit gas station across the street. From the right lane, proceed straight through the intersection, then bear left at the fork onto Campbell Avenue. Proceed on Campbell Avenue for about 1 mile, through 2 stop lights, and past the University of New Haven on your right. Turn right into the VA Medical Center driveway, proceed up the hill, and follow the signs to the visitors’ parking areas.

Directions to Griffin Hospital

Route 34 from New Haven:
Follow signs to Route 8 North, take Exit 17 to stop sign, turn left onto Seymour Avenue for 1/4 mile. Griffin Hospital is on right.

Route 8 North and South:
Take Exit 17, turn left at stop sign onto Seymour Avenue, follow road ½ mile. Griffin Hospital is on right.

Merrit Parkway (Route 15) North and South:
Take Exit 52 (Route 8 North/Waterbury). Take Exit 17 off Route 8, turn left at stop sign onto Seymour Avenue, follow Road ½ mile. Griffin Hospital is on the right.
Directions to Middlesex Hospital, Middletown

From Middlesex Hospital Outpatient Center
Exiting the Outpatient Center turn right onto Saybrook Road. Follow approximately 1.5 miles. After two traffic lights, Saybrook Road turns into Main Street Extension. At the third light, take a left onto Crescent Street. The Hospital is on Crescent Street.

From North (Hartford)
Take I-91 South to Exit 22S, Route 9 South. Follow Route 9 through Middletown. Take Exit 13, Route 17. Bear right and take Main Street Extension exit. At the bottom of the exit, take a right at the stop sign. Follow Main Street Extension until the first light. Take left onto Crescent Street. The Hospital is on Crescent Street.

From South (Meriden)
Take I-91 or Wilbur Cross Parkway to Route 691 East. Follow Route 691 (becomes Route 66) to Main Street, Middletown. Turn right onto Main Street. Continue down Main Street, turn right onto Crescent Street into Hospital Campus.

From West
Take I-84 to Route 691 East. Follow Route 691 (becomes Route 66) to Main Street, Middletown. Turn right onto Main Street. Continue down Main Street, turn right onto Crescent Street into Hospital Campus.

from New York/New Haven
Take I-95 North to Exit 69, Route 9 North at Old Saybrook. Stay on Route 9 to Exit 12. At end of exit, turn left. At next stop sign, turn left. At next stop sign, turn right onto Saybrook Road. Continue for a half mile. Turn left onto Crescent Street into Hospital campus.

(alternate route)
Take I-95 to I-91 North. Change to Route 9 South toward Cromwell/Middletown. In Middletown, take Exit 13 and bear right onto Main Street Extension. At the third light, turn left onto Crescent Street. The Hospital is on Crescent Street.

Middlesex Hospital Student Parking: park at Elks lot.

Directions to Middlesex Hospital, Outpatient Center

534 Saybrook Road, Middletown

From Hartford
Take I-91 South to Exit 22S, Route 9 (left exit). Follow Route 9 to Exit 11. Turn right off of Exit 11. Turn left onto Coe Road. At stop sign, take left onto Saybrook Road. The Outpatient Center is 0.2 miles ahead on the right.

From the Shoreline
Route 9 to Exit 11, Randolph Road. Go straight through stop light to stop sign. Turn left onto Saybrook Road. Follow for .2 miles. The Outpatient Center is on the right.

**From Middletown Center**
Follow Main Street through the center of town, past Crescent Street and Middlesex Hospital. Approximately 1.5 miles past the Hospital, Outpatient Center is on the left.

**Parking:** students to park in in the back of the lot.

**Cardinal Health Nuclear Pharmacy Services**

31 Hartland Street, East Hartford, CT 06108 (860) 291-9027

From GCC, New Haven Campus:

Get on 91 North.

Take exit #29 onto US-5 North for East Hartford/Boston.

Merge onto CT-2 via exit #90 toward East River Drive.

Take exit #3- Pitkin Street.

Turn left onto Pitkin Street.

Turn left on Meadow Street.

Turn left on Hartland Street.

**Directions to Milford Hospital**

300 Seaside Avenue, Milford, CT 06460 (203) 876-4000

**From Hartford Region and Points North:**
Take I-91 South to I-95 South to Exit 36 (Plains Road). At the end of the ramp turn left and follow blue Hospital signs.

**From Fairfield County and Points South:**
Take I-95 North to Exit 36 (Plains Road). At the end of the ramp, turn right and follow blue Hospital signs.
From Merritt/Wilbur Cross Parkways and Points North:
Take Exit 54 to I-95 South. Take I-95 South to Exit 36 (Plains Road). At the end of the ramp turn left and follow blue Hospital signs.

From Merritt/Wilbur Cross Parkways and Points South:
Take Exit 54 to I-95 South. Take I-95 South to Exit 36 (Plains Road). At the end of the ramp turn left and follow blue Hospital signs.

Directions to Waterbury Hospital

64 Robbins Street, Waterbury, CT 06721 (203) 573-6000

Route 84 - Eastbound from New York or Danbury area
Exit 18(Chase Parkway). Turn Right, go to first light. Then turn Right and go to next light. Turn right (this is West Main Street). At fork in road, bear left on Robbins Street for 1/2 mile. Hospital is on left.

Route 84 - Southwest from Boston Westbound from Hartford area
Exit 18 (Highland Avenue/West Main Street). Take fork to West Main Street. Turn right (this is West Main Street). At fork in road, bear left on Robbins Street for 1/2 mile. Hospital is on the left.

Route 8 - Northbound from Naugatuck, Bridgeport area
Exit 32 (Downtown Waterbury). Turn left at second light, through underpass and uphill (West Main). Take first right (Colley Street). Hospital is straight ahead on Robbins Street.

Route 8 - Southbound from Watertown, Thomaston, Torrington
Route 8 southbound to exit 34 (West Main Street/Downtown Waterbury exit). Take a right at the end of the exit onto West Main Street. Take the first right onto Colley Street (this is a one-way street). At the end of this street, you will be across the street from the entrance to Waterbury Hospital.
Directions to MidState Medical Center

435 Lewis Avenue, Meriden, CT 06451 (203) 694-8200

From downtown Meriden: Take Main Street to Lewis Avenue north (toward Westfield Shoppingtown Meriden). The entrance to MidState is less than one mile, on right (opposite Westfield Shoppingtown Meriden entrance). From I-91 or Route 15: Take I-91 or Route 15 to I-691 west. Take exit 6, to traffic light on Lewis Avenue. The entrance to MidState Medical Center is straight across Lewis Avenue.

From Cheshire and Southington: Take I-691 east to exit 5, Chamberlain Highway. Turn left off exit ramp and turn right at third traffic light. At first traffic light, turn right onto Lewis Avenue. The entrance to MidState is on left (opposite Westfield Shoppingtown Meriden entrance).

From Wallingford: From I-91 or Route 15: Take I-91 or Route 15 to I-691 west. Take exit 6, to traffic light on Lewis Avenue. The entrance to MidState Medical Center is straight across Lewis Avenue.

MidState Medical Center's East Campus, 883 Paddock Avenue, Meriden, CT 06450

From Route 91 (North of Meriden): Proceed south to East Main Street (exit 17). While on exit ramp, bear right onto exit 67 for East Main Street. At end of ramp, turn right and go 1/4 mile to traffic light at Paddock Avenue. Turn left and go 1 1/4 miles. The medical center is on right.

From Route 91 (South of Meriden): Proceed north toward Meriden. Take the Durham/Yalesville exit (exit 15). Turn left at end of ramp, onto Route 68. Continue 1/2 mile to North Farms Road and turn right. Continue one mile as road becomes Paddock Avenue. The medical center is on left.

From Route 15 (North of Meriden): Proceed south to East Main Street (exit 67W). Bear right onto East Main Street for 1/4 mile to traffic light at Paddock Avenue. Turn left and go 1 1/4 miles. The medical center is on right.

From Route 15 (South of Meriden): Proceed north toward Meriden. After exit for Route 5 (exit 66), continue one mile to D.O.T. exit ramp. At end of ramp (Miller Avenue), turn right onto Miller Avenue. Then turn right onto Paddock Avenue. The medical center is 1/4 mile ahead on right.

To UConn Health Center

263 Farmington Avenue, Farmington, Connecticut 06030 (860) 679-2000

From Bradley International Airport: follow Route 20 to I-91 South to I-84 West in Hartford. Follow I-84 West about 7 miles to Exit 39 which is after 39A. Turn right at first traffic light onto Route 4 East (Farmington Avenue). At third traffic light, turn right to enter the Health Center campus.
From I-84: take Exit 39 (if coming from I-84 West, Exit 39 is after 39A). Turn right at first traffic light onto Route 4 East (Farmington Avenue). At third traffic light, turn right to enter the Health Center campus.

From Northbound Route 9: take Exit 32 (left exit) onto I-84 West and stay in the right lane. Take Exit 39 (first exit). Turn right at first traffic light onto Route 4 East (Farmington Avenue). At third traffic light, turn right to enter the Health Center campus.

To Return to Route 9: exit the Health Center campus via Munson Road. At the end of Munson Road, turn left onto South Road. At next stop sign, turn right and follow signs to I-84 East, staying in the right lane to exit onto Route 9 South.

Bus Routes: the UConn Health Center is on CT Transit bus routes E, E1, E6 and E7. For current weekday and weekend schedules, call CT Transit at 860-525-9181 or visit their website.

Lawrence Memorial Hospital

365 Montauk Avenue, New London, CT 06320 (860) 442-0711

From Hartford: Take Route 2 east to Route 11, follow to the end. At the end of the exit ramp turn left on to Route 82. At the light (Salem Four Corners) turn right onto Route 85. Continue south for approximately 12 miles into New London. Turn right at traffic light onto Colman Street (Route 213). At the end of Colman, turn right onto Bank Street, then an immediate left onto Lee Avenue. At the end of Lee, turn right onto Ocean Avenue. Go through one stop light, then turn left at the fourth street onto Faire Harbour Place (for Same-Day Surgery, Emergency Room, Community Cancer Center and Physicians Office Suites, patient drop-off area will be on the right). At stop sign turn right on Montauk Avenue. The Ambulatory Care Center and Main Hospital Entrances are on the right.

From Worcester or Norwich: Take I-395 south to exit 78 to Route 32. Follow Route 32 into downtown New London where it becomes Eugene O’Neill Drive and then Green Street. Turn left at the end onto Tilley Street and a right onto Bank Street at the fire station. Follow Bank Street to the fourth stop light and turn left at Shalett’s Cleaners onto Montauk Avenue. The Ambulatory Care Center and Main Hospital Entrances will be on the right, approx. one mile.

From New York and New Haven: Take I-95 north to exit 82A, Frontage Road. Keep right and follow to Colman Street exit (Route 1 south). Turn left onto Colman Street and follow second paragraph of the directions from Hartford.

Directions to The William W. Backus Hospital 326 Washington Street, Norwich, CT 06360 (860) 889-8331

FROM THE NEW HAVEN AREA AND SOUTHWESTERN CONNECTICUT: Take I-95 North to Exit 76 for I-395North. Follow 395 to Exit 81 -East for the Routes 2 and 32 connector in Norwich. Follow the connector until you exit to your right onto Washington Street. The Hospital entrance is on the right.
FROM THE HARTFORD AREA: Take Route 2 East to Norwich. Exit right onto Washington Street. The Hospital entrance is on the right.

FROM BRADLEY INTERNATIONAL AIRPORT WINDSOR LOCKS, CT: Follow airport signs for I-91 South. Follow I-91 South to Hartford; watch carefully for SHARP left exit to Route 2 East. Take Route 2 East to Norwich. Exit right onto Washington Street. The Hospital entrance is on the right.

FROM THE GROTON AREA: Take I-95 South and go over the Gold Star Memorial Bridge. On the New London side of the bridge, take Exit 84 for Route 32 North. Follow Route 32 to I-395 North. Follow I-395 to Exit 81-East for the Routes 2 and 32 connector in Norwich. Follow the connector until you exit to your right onto Washington Street. The Hospital entrance is on the right.

FROM THE NEW LONDON AREA: Take Route 32 north to I-395 North. Follow I-395 to Exit 81 East for the Routes 2 and 32 connector in Norwich. Follow the connector until you exit to your right onto Washington Street. The Hospital entrance is on the right.

FROM NORTHEASTERN CONNECTICUT: Follow I-395 South to Exit 81 -East for the Routes 2 & 32 connector in Norwich. Follow the connector until you exit to your right onto Washington Street. The Hospital entrance is on the right.

Saint Francis Hospital and Medical Center

114 Woodland Street, Hartford, CT 06105 (860) 714-4000

From Interstate 91 Northbound And Southbound: Take Exit 32A to Interstate 84 Westbound. From Interstate 84 Westbound, take Exit 48, Asylum Street. From exit ramp, take right onto Garden Street. At second traffic light, take left onto Collins Street for six blocks. At light, take left onto Woodland Street to hospital entrance on left.

From Interstate 84 Westbound: Take Exit 48, Asylum Street. From exit ramp, take right onto Garden Street. At second traffic light, take left onto Collins Street for six blocks. At light, take left onto Woodland Street to hospital entrance on left.

From Interstate 84 Eastbound: Take Exit 46, Sisson Avenue (a left exit). From exit ramp, take right onto Sisson Avenue for four blocks. Take right onto Farmington Avenue for four blocks. Take left onto Woodland Street for three blocks to hospital entrance on right.

Please tell the students that come for their first day to not park in the garage. They should use the lot @ 61 Woodland St

To emphasize the importance of students parking in the assigned lot, please remind students:
1. Incoming students park at 61 Woodland Street Lot when coming in for Human Resources ID badge, department orientation, etc. DO NOT PARK IN THE COLLINS GARAGE. Tickets will not be validated, but more importantly, patients will not have space to park.

2. Promptly submit parking verification forms, obtain a parking assignment, mirror tag. Instructions are on the bottom of the form - available in the Infonet.

3. Students parking in the Collins Garage will lose parking privileges at St. Francis; vehicles are subject to towing, including towing costs.

4. Shuttle service starts at 4pm, every twenty minutes from PCT front entrance, for escort to your vehicle.
Appendix R

REQUEST FOR REFERENCE

Any student who wishes to request that the Nuclear Medicine Director or Clinical Coordinator from Gateway Community College render a verbal or written reference must fill this form out and have it signed.

The student noted below hereby authorizes Gateway Community College and the Program Director and Clinical Coordinator to release any and all documents, records, reports and information, including the academic records, personal information and otherwise privileged or confidential information to the person/institution listed below regarding the academic record, character, ethics, behavior, and such other information bearing on student’s qualifications, including any information which the student have provided. The student noted below releases Gateway Community College and the Program Director and Clinical Coordinator from any and all liability in connection with disclosure of this information covered by this authorization.

Request for Reference

Date: __________________________________________

Student Name: __________________________________________

Name of person the reference is requested from:

________________________________________________________________________

Institution that the request is for:

________________________________________________________________________

Student Signature: __________________________________________

Request granted by: __________________________________________

This form will be kept in the student’s file for one (1) year. After one (1) year no reference be given, unless this written consent is renewed by the student.
Appendix S

ACADEMIC EXIT FORM

Gateway Community College
Allied Health & Nursing Division

Academic Exit Form

Student Name: __________________________

Reason for Student Exit: (Check one of the following)

______ Academic Withdrawal (passing grade at time of exit)
______ Academic Withdrawal (failing grade at time of exit)
______ Academic Failure - Allied Health or Nursing Course (at end semester)
______ Academic Failure - Corequisite Course (at end semester)
______ Personal Reasons ______________________________

Summary of Student Exit:

Plan for Success: The student needs to do the following to assist with success in the future and consideration for readmission.

Student Signature: __________________________ Date: _______

Program Coordinator Signature: ______________________ Date: _______

Division Director Signature: ______________________ Date: _______
Appendix T

GCC EMERGENCY PROCEDURES

EVACUATION PLAN:

1. **Everyone** in the building must evacuate when an alarm sounds and/or upon verbal notification by authorized personnel.
   - All persons in classrooms should be directed to move in an orderly manner to the designated exits posted on the Emergency Action Plan chart located on the wall of the room’s egress.
   - If time and safety permits, close all doors.
   - If your assigned exit is blocked, keep calm and seek nearest exit.
   - When outside of building proceed away from the building and stay out of roadways and areas utilized by emergency personnel.
   - Remain outside of the building until the security staff authorizes re-entry.

2. The Early Learning Center evacuated to the Temple Street Garage.

3. Gateway Garage evacuated to the Crown Street sidewalk.

4. Persons with a physical/mobility disability, who cannot exit, should be accompanied to the rescue area and where they shall wait for the emergency personnel to arrive and evacuate them. The rescue areas are as follows:
   - Second Floor Bridge-stairwell/escalator
   - Third Floor Bridge-stairwell
   - Fourth Floor Bridge-stairwell

EMERGENCY LOCK DOWN PROCEDURES

1. If a lockdown occurs, proceed to nearest office or classroom. If already in office or classroom, stay there.

2. If time and safety permits, close and lock all doors.

3. Shut off lights and stay out of sight.

4. Dial 911 (9-911 from college phone) or call GCC Security 203-285-2246/203-285-2611(X2246/X2611)

5. Do not leave your location until you are given an “all clear” sign by an authorize person – Police, Fire or Security Staff.

6. **STAY:**
   - **CALM**
   - **QUIET**
   - **WAIT**
Appendix U

ARRT ELIGIBILITY FOR CERTIFICATION

All ARRT certification categories have three basic requirements:
1. Ethical Behavior 2. Educational Preparation 3. Examination

Ethics
The ethical behavior eligibility requirement is the same for both ARRT certification categories: primary (radiography, nuclear medicine technology, radiation therapy) and post-primary (advanced-level and added qualifications).

The requirements specify that every application for certification and every registrant must “be a person of good moral character and must not have engaged in conduct that is inconsistent with the ARRT Rules of Ethics,” and they must “agree to comply with the ARRT Rules and Regulations and the ARRT Standards of Ethics.”

One issue addressed by the Rules of Ethics is the conviction of a crime, including a felony, a gross misdemeanor or a misdemeanor, with the sole exception of speeding and parking violations. All alcohol and/or drug related violations must be reported. Conviction as used in this provision includes a criminal proceeding where a finding or verdict of guilt is made or returned but the adjudication of guilt is either withheld or not entered, or a criminal proceeding where the individual enters a plea of guilty or nolo contendre. All potential violations must be investigated by the ARRT in order to determine eligibility. Further information may be found on the web site in the handbooks for each certification category.

Education
Eligibility for certification also specifies the satisfaction of educational preparation requirements.

For the primary categories of radiography, nuclear medicine technology, and radiation therapy, eligibility requires the successful completion of a formal educational program in the respective discipline that is accredited by a mechanism acceptable to ARRT. Beginning January 1, 2015 candidates must also earn an associate degree and demonstrate competency in didactic coursework and an ARRT-specified list of clinical procedures. Further details may be found here and in the handbook for primary certification categories.

For post-primary categories (i.e., mammography, CT, MR, quality management, sonography, bone densitometry and vascular sonography, cardiovascular interventional technology), satisfaction of the preparation requirements involves documentation of ARRT-specified clinical experience. Further details may be found in the handbooks available for each of the post-primary certification categories.

Examination
Finally, eligibility requires that applicants for certification, after having met all other qualifications for certification, must pass an examination developed and administered by the ARRT. The exams assess the knowledge and cognitive skills underlying the intelligent performance of the tasks typically required of staff technologists practicing within the respective disciplines. The handbooks available for each of the disciplines provide
specifications listing the content covered by the examination. Visit www.arrt.org for detailed information.

Appendix V

NMTCB ELIGIBILITY FOR CERTIFICATION

A. General Qualifications

Candidates must comply with the Society of Nuclear Medicine Technologist Section’s Code of Ethics (adopted by the NMTCB, April 2004). A Disciplinary Policy took effect on January 1, 2005. The details regarding this policy and the effects it will have on candidate eligibility are available on the NMTCB web site (www.nmtcb.org).

B. Educational Requirements

Graduates of approved nuclear medicine technology programs are eligible to take the NMTCB Certification Examination. Approved programs include JRCNMT (Joint Review Committee on Educational Programs in Nuclear Medicine Technology) approved programs and programs from a regionally accredited academic institution which grants a certificate, associate degree, or baccalaureate degree in nuclear medicine technology. This includes schools, colleges, or universities accredited by one of the six regional accrediting bodies: Middle States Association of Colleges and Schools, North Central Association of Colleges and Schools, New England Association of Schools and Colleges, Northwest Association of Schools and Colleges, Southern Association of Colleges and Schools, Western Association of Schools and Colleges. A candidate for examination must show documented evidence of one of the following:

I. Completion of a NMTCB recognized nuclear medicine technology program.

II. Completion of a certificate, associate degree or baccalaureate degree in nuclear medicine technology program from a regionally accredited academic institution. * Regionally accredited college and university Programs must have structured clinical training sufficient to provide clinical competency in radiation safety, instrumentation, clinical procedures, and radiopharmacy. This should require approximately 1000 hours of clinical training supervised by program faculty.

Once the NMTCB has received a complete application, it is processed. Verification of graduation status of NMT program applicants is determined by a letter sent to their Program director. All verifications must be returned by the Program director. You MUST have fulfilled all graduation requirements to sit for the certification examination and the NMTCB will NOT mail your authorization letter until the verification has been received.

Go to www.nmtcb.org for detailed information.
Accreditation Standards for Nuclear Medicine Technologist Education
(Effective July 1, 2018)

10/06/17 Glossary explanation of ‘physics’ was broadened
06/29/18 Editorial changes made for clarity and consistency of terminology

Joint Review Committee on Educational Programs in Nuclear Medicine Technology
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Additional requirements for entry-level programs conferring a master’s degree are in shaded text
**Introduction**

The Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT) is recognized by the Council for Higher Education Accreditation (CHEA) to accredit postsecondary nuclear medicine technology programs offering certificate, associate and baccalaureate degrees. Programs must be located in the territorial United States, its protectorates and possessions and may be offered in a traditional or distance education format.


- American College of Radiology
- American Society of Radiologic Technologists
- Society of Nuclear Medicine and Molecular Imaging
- Society of Nuclear Medicine and Molecular Imaging Technologist Section

These *Standards* should be used for the development and self-evaluation of programs. They constitute the minimum requirements to which an accredited program is held responsible and they are the criteria which the JRCNMT utilizes to award or deny program accreditation. Program accreditation is recognized as providing a basic assurance of the scope and quality of professional education.

**Terms in bold within the Standards are defined in the glossary at the end of this document.**

**Nuclear Medicine Technology**

Nuclear medicine is the medical specialty that utilizes the nuclear properties of radioactive and stable nuclides for the diagnostic evaluation of the physiologic and/or anatomic conditions of the body and to provide therapy with radioactive sources. The nuclear medicine technologist is an allied health professional who, under the direction of an authorized user, is committed to applying the art and skill of diagnostic evaluation and therapeutics through the safe and effective use of radiopharmaceuticals and pharmaceuticals. The nuclear medicine technologist exhibits professionalism in the performance of duties, demonstrates an empathetic and instructional approach to patient care and maintains confidentiality of information as required. Responsibilities include, but are not limited to: preparation, quality control testing and administration of radioactive and non-radioactive compounds; execution of patient imaging procedures including computer processing and image enhancement; laboratory testing; patient interviews; instruction and preparation for administration of prescribed radioactive compounds for therapy; quality control; and radiation safety. The nuclear medicine technologist applies knowledge of radiation physics and safety regulations to limit radiation exposure of the general public, patients, fellow workers, and self to as low as reasonably achievable (ALARA). Professional growth and development is achieved through appropriate utilization of new technologies, participation in continuing education and involvement in research to enhance the quality of patient care.

**Program Accreditation**

Accreditation of nuclear medicine technology programs is a voluntary process that includes an in-depth analysis of the program relative to the *Standards*. Published institutional and program mission statements are considered by the JRCNMT in its application and enforcement of the *Standards*. Accreditation decisions are based on JRCNMT Board review of information provided in the accreditation application and self-study report, the letter of site visit findings and any additional information requested from the program in writing or at the time of the site visit. New information submitted after the site visit will not be accepted or considered by the JRCNMT Board of Directors.
A1 Sponsorship

A1.1 The institution sponsoring a nuclear medicine technology program must be one of the following:

a. A post-secondary academic institution accredited by a regional or national accrediting agency recognized by the U.S. Department of Education (USDE) or the Council for Higher Education Accreditation (CHEA), and authorized under applicable state law or other acceptable authority to provide a post-secondary educational program that awards a minimum of a certificate upon completion of the program.

b. A hospital or medical center that is accredited by a health care accrediting agency or equivalent recognized by the U.S. Department of Health and Human Services, and authorized under applicable state law or other acceptable authority to provide healthcare, that awards a minimum of a certificate upon completion of the program.

c. A branch of the United States Armed Forces that awards a minimum of a certificate upon completion of the program.

A1.2 When multiple institutions collaboratively sponsor a program it shall be called a consortium. All institutions in the consortium must meet one of the criteria in Standard A1.1. The responsibilities of each member institution must be clearly documented in a formal contract or memorandum of understanding that delineates responsibility for all aspects of the program including instruction, student services, resources, reporting, governance and lines of authority.

A1.3 Entry-level programs culminating in a master’s degree must be sponsored by the educational institution that awards the graduate degree.

A2 Sponsor Responsibilities

A2.1 The sponsor must be capable of providing required prerequisite and co-requisite courses or have a process for evaluating and accepting transfer credit for these courses from other regionally or nationally accredited educational institutions.

A2.2 The sponsor must be capable of providing the professional didactic and laboratory instruction and is responsible for:

a. hiring faculty and staff;

b. supporting the program faculty in curriculum planning, selection of course content, and program assessment;

c. supporting the program in maintaining compliance with JRCNMT Standards and policies;

d. receiving and processing applications for admission;

e. conferring the academic degree or credential which documents satisfactory completion of the educational program;

f. ensuring that all faculty and student policies are consistent with federal and state statutes, rules and regulations; and

g. creating and following a teach out plan for currently matriculated students in accordance with the institution’s regional or national accreditor and federal law, in the event of program closure and/or loss of accreditation.

A2.3 The sponsor must provide the opportunity and financial support for ongoing professional development of the primary faculty of the program to ensure they are able to fulfill their instructional and administrative obligations.
A3 Program Responsibilities

A3.1 The program must have a mission and student learning outcomes that are commensurate with the degree level offered and used to guide the development of the curriculum.

A3.2 The program shall be responsible for:
   a. Maintaining and documenting effective supervision, coordination, and continuing communication with all clinical affiliates to ensure students receive equivalent and adequate clinical experiences to meet competencies defined by the program.
   b. Maintaining and documenting effective coordination and continuing communication with academic affiliates to ensure students receive accurate and timely advisement
      • prior to entering the nuclear medicine technology program, and/or
      • upon transfer of professional coursework from the program to the academic affiliate for degree completion.

A3.3 The program must ensure there is a current, duly executed affiliation agreement between the sponsor and each clinical affiliate. An agreement must identify the roles and responsibilities of all parties; specifically address student supervision and student liability; and provide adequate notice of termination of the agreement to minimize the impact on the clinical education of enrolled and matriculated students.

A3.4 The program must ensure there is a current, duly executed affiliation agreement between the sponsor and each academic affiliate. The agreement must identify the roles and responsibilities of all parties. It must delineate the credits the academic affiliate will award for completion of the nuclear medicine technology program, the degree to be awarded, and the process whereby the transfer of credits is accomplished.

A3.5 When a clinical affiliate is utilized by more than one nuclear medicine technology program, each program and the clinical site must negotiate and sign an affiliate sharing agreement then adhere to the terms of the agreement to ensure the maximum student capacity at the affiliate is not exceeded.

Standard B: Resources

Sponsor Resources
B1 The sponsor must provide sufficient resources to ensure achievement of the program’s mission and student learning outcomes. Resources must include, but are not limited to:
   a. faculty;
   b. clerical and support staff;
   c. finances;
   d. offices, classroom and laboratory facilities;
   e. library, technology and educational resources;
   f. clinical affiliates

Program Personnel
B2.1 Program Director
   a. Duties
The Program Director (PD) must hold a full-time appointment at the sponsoring institution and demonstrate effectiveness in program administration and assessment, curriculum design, instruction, student evaluation, and academic advisement. The PD must also demonstrate
effectiveness in the supervision and coordination of the clinical coordinator(s) and other faculty teaching in the program. There must be evidence that sufficient time is devoted to the program by the PD to demonstrate that all educational and administrative responsibilities are met.

b. Qualifications
The PD must be a nuclear medicine technologist knowledgeable of current nuclear medicine technology and educational methodology. The PD must:

- hold a master’s degree from a regionally or nationally accredited academic institution,
- hold certification and registration in nuclear medicine technology from a national certification board,
- have a minimum of four years post-certification nuclear medicine technology experience, and
- have at least one year experience teaching in the didactic and/or clinical setting for a nuclear medicine technology program.

B2.2 Clinical Coordinator
a. Duties
The Clinical Coordinator (CC) must be responsible for all aspects of the clinical education portion of the program, including organization, ongoing review and revision, planning for and development of clinical affiliates, and the general effectiveness of the clinical education experience. The PD may assume the responsibilities of the CC. There must be evidence that sufficient time is devoted to the program by the CC so that his or her educational and administrative responsibilities are met and students are supervised throughout the program’s clinical education experiences.

b. Qualifications
The CC must be a nuclear medicine technologist knowledgeable of current nuclear medicine technology. The CC must:

- hold a bachelor’s degree from a regionally or nationally accredited academic institution,
- hold certification and registration in nuclear medicine technology from a national certification board, and
- have a minimum of two years post-certification nuclear medicine technology experience.

B2.3 Instructional Faculty
a. Duties
Instructional faculty must demonstrate effectiveness in teaching courses, supervising laboratory experiences, evaluating student achievement, and developing curriculum. Faculty must also participate in program policy and procedure formulation and the assessment of program effectiveness.

b. Qualifications
Instructional faculty must be qualified by education, certification and/or experience to teach assigned courses at a level appropriate for nuclear medicine technology students.

c. Programs at the master’s degree level must ensure that faculty teaching in graduate-level courses or mentoring graduate projects meet institutional graduate faculty
B2.4 Administrative Support Staff
There must be sufficient administrative and clerical support staff to enable the program to meet its published mission.

Clinical Affiliate Personnel
B3 Affiliate Education Supervisor
a. Duties
Each *Affiliate Education Supervisor (AES)* must demonstrate effectiveness in the supervision, clinical education and evaluation of students assigned to his or her facility.

b. Qualifications
An AES must hold certification and registration in nuclear medicine technology from a national certification board or possess *suitable equivalent qualifications* relevant to the particular clinical area, and must have at least two years of post-certification clinical experience. The AES in a radiopharmacy must possess a current pharmacy license from the state in which (s)he practices and have two years of radiopharmacy experience. If the radiopharmacy is located within a clinical nuclear medicine department, the AES may be a certified, registered nuclear medicine technologist.

Clinical Affiliate Resources
B4.1 The clinical component of the program shall provide an environment for supervised, *competency-based* clinical education and offer a sufficient and well-balanced variety of nuclear medicine procedures. Nuclear medicine equipment that is accurately calibrated, in working order, and meeting applicable national and state standards must be available.

In the event that a single clinical affiliate is unable to provide all clinical education competencies, rotations through additional recognized clinical affiliates is required.

B4.2 Student capacity of a program is based on the ability of clinical affiliate resources to provide experiences that develop the clinical competence of all students.

a. Facilities providing narrowly-focused competencies, such as radiopharmacy and PET/CT, will be assigned an *arranged capacity*, which does not contribute to the program’s total student capacity. The capacity will be based upon staffing and the volume of procedures performed. A 1:1 student to staff ratio must be maintained.

b. Capacity at imaging affiliates providing a broad variety of competencies is determined based on staffing, number of imaging instruments, and the volume and variety of procedures performed. The lowest number computed for each of the criterion below determines an affiliate’s capacity.

- 1 full-time student per full-time, certified nuclear medicine technologist
- 1 student per imaging instrument
- 1 student per 1300 procedures performed annually

B5 Clinical education may only occur at facilities recognized by the JRCNMT through the affiliate application process initiated by the program.
Standard C: Curriculum

C1 The program must create and follow a master educational plan for program delivery. The plan should contain sufficient detail to support program continuity when there are changes in faculty. The plan should include the following:

a. mission and student learning outcomes of the program and a description of how they integrate with the mission and goals of the institution
b. curriculum sequence with rationale for course organization
c. course syllabi that include, at a minimum:
   - course title and number
   - course description
   - credit hours (or clock hours if program does not utilize credit hours)
   - instructor(s)
   - texts and other reading assignments
   - outline/agenda of topics
   - learning and/or performance objectives
   - methods of student assessment and their weighting in course grade computation
   - grading scale
d. clinical education schedule template and guidelines for making clinical assignments, which demonstrate that all students will have the opportunity to meet required competencies
e. explanation of how the didactic curriculum correlates with the clinical curriculum
f. tools used to assess student attainment of clinical competencies

C2 The program must provide a student handbook, clinical course syllabi, and student assessment documents to each AES. Orientation to the documents and expectations of clinical affiliates should be provided by the program.

C3 General education and basic science coursework must be of adequate depth and scope, and appropriately sequenced, to provide a foundation for the student learning outcomes of the professional program. Credit-bearing, college-level courses are required in:

a. chemistry with laboratory
b. human anatomy and physiology (two courses, each with a laboratory)
c. mathematics
d. physics
e. written communication

Programs at the master’s degree level must require sufficient coursework to support the professional curriculum. A baccalaureate degree must be conferred during the program if it is not a requirement for admission.
The professional nuclear medicine technology curriculum shall include as a minimum the following didactic content areas:

- a. patient care
- b. cross-sectional anatomy
- c. nuclear medicine statistics
- d. nuclear medicine and radiation physics
- e. radiation biology
- f. radiation safety and protection
- g. nuclear medicine instrumentation
- h. quality control and quality assurance
- i. medical vocabulary
- j. diagnostic nuclear medicine procedures
- k. therapeutic nuclear medicine procedures
- l. positron emission tomography (PET)
- m. computed tomography (CT)
- n. hybrid imaging
- o. radiopharmacy and pharmacology
- p. medical ethics and law
- q. healthcare administration
- r. health sciences research methods
- s. medical informatics
- t. oral communication

Programs offering a master’s degree must provide additional professional content in topics such as leadership, management, education, research and/or expanded clinical skills.

The program shall include opportunities for students to develop personal and professional attributes and values relevant to clinical practice. These attributes include:

- a. problem-solving, critical-thinking and decision-making skills;
- b. participating as an effective member of an interprofessional healthcare team;
- c. showing respect for diversity; and
- d. demonstrating responsibility and ethical principles

Programs offering a master’s degree must identify and provide mechanisms for students to develop additional personal and professional attributes beyond those listed above.

Supervised, competency-based clinical education shall include the following:

- a. patient care and patient recordkeeping in accordance with the Health Insurance Portability and Accountability Act (HIPAA);
- b. radiation safety techniques that minimize radiation exposure;
- c. participation in a quality control program;
- d. preparation, calculation, identification, administration (where permitted), and disposal of radiopharmaceuticals and the performance of radionuclide quality control procedures;
- e. preparation, calculation, identification, administration (where permitted), and disposal of adjunctive medications necessary to performance of the nuclear medicine procedure;
- f. performance of an appropriate number and variety of diagnostic nuclear medicine procedures, including general imaging, nuclear cardiology and PET/CT, to achieve desired clinical competencies;
- g. observation and assistance with an appropriate number and variety of therapeutic nuclear medicine procedures to achieve desired clinical competencies; and
- h. interaction with interpreting physicians to develop an understanding of the clinical correlation of nuclear medicine procedures with other diagnostic procedures.

Programs offering a master’s degree with expanded clinical experiences must identify competencies unique to these experiences and provide supervised activities in which students may obtain the competencies.

An accredited nuclear medicine technology program includes didactic, laboratory, and clinical education experiences that develop student competence in the items included on the Competency List in the appendix. The program must confirm student competence on each item prior to graduation.
Standard D: Assessment

D1 Measurement of a program’s effectiveness is based on the extent to which it achieves its mission and student learning outcomes. The program must demonstrate a systematic and sustained assessment process that is used to enhance student learning outcomes and program effectiveness.

Assessment of Student Learning Outcomes

D2.1 A program must identify student learning outcomes that clearly state the knowledge, skills and/or attitudes students are expected to obtain at the course and program level. Assessment measures must be established by the program for each learning outcome.

Programs offering a master’s degree must identify additional learning outcomes and associated assessment measures that address the additional curriculum associated with the

D2.2 Clinical and didactic evaluation of students shall be based on the learning outcomes and competencies identified in course syllabi.

D2.3 Programs must implement a student assessment process in didactic and clinical courses that utilizes formative and summative assessment techniques to provide students and program officials with timely indication of student progress and academic standing while remediation is still possible. In addition to measuring student progress, the assessment system also serves as a reliable indicator of the effectiveness of course design and instruction.

Assessment of Program Effectiveness

D3.1 Assessment of program effectiveness must, at a minimum, document the regular collection and analysis of the following quantitative and qualitative data. Justifiable benchmarks for each quantitative assessment parameter should be established by the program, with the exception of the national certification exam benchmark, which is identified by the JRCNMT in Standard D3.2.

- graduation rate
- graduate performance on the national certification examinations
- job placement of graduates
- faculty retention
- student assessments of individual didactic courses, clinical experiences, and faculty
- AES assessment of student performance
- graduate assessment of program effectiveness
- employer assessment of graduate preparedness to enter the workforce
- Advisory Committee feedback (refer to D3.3)
- affiliate visit notes from the PD and/or CC; a minimum of two visits per year to each clinical affiliate in use is expected.

D3.2 Programs will maintain at least an 80% average pass rate over consecutive five year periods for first-time examinees on the national certification examination(s).

D3.3 Programs must have an Advisory Committee that includes each AES, along with any other members the program chooses to appoint. On an annual basis, the program shall hold a meeting to apprise the Committee of program issues and ask for feedback to improve the program’s policies, procedures and curriculum. Meetings must be live (in-person, conference call, webinar and/or other real-time, interactive medium) and minutes must be prepared.

Programs offering a master’s degree must appoint additional members to the Advisory Committee to represent the expanded professional curriculum.
D3.4 The results of ongoing assessment must be appropriately reflected in the curriculum and other dimensions of the program. In particular, the program must systematically document the application of assessment results in the process of program improvement.

**Standard E: Operational Policies**

**Fair Practices**

**E1.1** Published information, including academic catalogs, web pages, brochures and advertising must accurately reflect the program offered.

**E1.2** The program must create and adhere to personnel and student policies that are congruent with institutional policies and consistent with federal and state statutes, rules, and regulations.

**E1.3** The admission process, including advanced placement, must be conducted in accordance with clearly defined and published practices of the sponsoring institution and program.

**E1.4** The following must be accurately stated, published, and available to students:

   a. policies on transfer of credit and credit for professional certification and prior work experience  
   b. institutional academic calendar  
   c. estimates of tuition, fees, and other costs related to the program  
   d. policies and procedures for refund of tuition and fees  
   e. required academic and technical performance standards for admission  
   f. all graduation requirements, including academic credits necessary for program completion  
   g. policies and procedures for student withdrawal, leave of absence, probation, suspension, and dismissal  
   h. student appeal and grievance procedures to permit neutral evaluation and ensure due process

**E1.5** Faculty grievances must be handled in accordance with clearly defined and published practices of the sponsor that are readily available to faculty.

**E1.6** Clinical assignments outside the normally scheduled clinical experience (e.g., evenings, weekends, and holidays) shall be justified by documenting their purpose. The document must be signed by the student, the AES and a representative of the program. Specific learning outcomes and assessments must be developed to address the uniqueness of these clinical experiences.

**E1.7** Policies and processes by which students may work in the nuclear medicine department while enrolled in the program must be published and made known to all concerned. Students may not assume the responsibility or take the place of qualified staff. Class credit cannot be awarded for clinical hours in which the student is an employee of the facility.

**E1.8** Programs offering courses by distance education must have processes through which they can establish that a student who registers in such a course is the same student who participates in, completes and receives academic credit for the course. Student identity may be verified by methods including, but not limited to, secure login methodologies or proctored examinations. These processes must protect student identity and students must be informed of associated costs.
E1.9 The program is responsible for accurately stating and annually publishing data reflecting student achievement and program performance for public review. At a minimum this includes providing a link on the program’s main web page to the Graduate Achievement Report posted on the JRCNMT website.

**Record-Keeping**

E2.1 Individual grades and credits for courses shall be recorded on a transcript and permanently maintained by the sponsoring institution.

E2.2 Student records shall be maintained for admission, assessment, counseling/ advisement, and disciplinary actions. Records should be maintained in compliance with federal, state and institutional regulations and should remain on file for a minimum of seven years (one accreditation cycle). Programs must determine if the sponsoring institution or its accreditor have policies requiring maintenance for more than seven years.

**Health and Radiation Safety**

E3.1 All students shall be informed of and have access to the student health care services provided by the sponsoring institution.

E3.2 The health and safety of patients, students, and faculty must be adequately safeguarded.

E3.3 The program must maintain compliance with federal and state radiation protection regulations. Radiation exposure records shall be reviewed with each student at regular intervals (not less than quarterly). Documentation of these reviews, including a dated acknowledgement by the student, must be maintained.

E3.4 The program must ensure that all students, regardless of location, have equitable and timely access to faculty and student support services for assistance with academic matters and personal issues.
## Appendix 1: Glossary

Terms throughout the Standards that are in **bold italics** are defined below. Where terms are not defined, their definitions are at the discretion of the JRCNMT.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Academic Affiliate</strong></td>
<td>A regionally-accredited, post-secondary educational institution recognized by the JRCNMT to provide, through a contractual agreement with the program sponsor, academic credits for nuclear medicine coursework that will lead to a degree.</td>
</tr>
<tr>
<td><strong>Affiliation Agreement</strong></td>
<td>A formal written document between a program sponsor and another institution that agrees to provide educational experiences or academic credits to students.</td>
</tr>
<tr>
<td><strong>Affiliate Education Supervisor (AES)</strong></td>
<td>The person recognized at each clinical affiliate to oversee and participate in the education occurring there. This person is also named to the program’s Advisory Committee.</td>
</tr>
<tr>
<td><strong>Affiliate Sharing Agreement</strong></td>
<td>A formal document, signed by the program directors and AES, describing how the approved student capacity at the affiliate will be distributed amongst the programs sharing the facility for clinical education.</td>
</tr>
<tr>
<td>** Appropriately Sequenced**</td>
<td>General education and basic science courses must occur prior to related professional courses in the curriculum. Examples include chemistry prior to radiopharmacy, physics prior to nuclear/radiation physics, anatomy and physiology prior to procedures courses.</td>
</tr>
<tr>
<td><strong>Arranged Capacity</strong></td>
<td>Student capacity at a clinical affiliate that does not contribute to the program’s total clinical capacity due to the limited nature of education provided by the affiliate. Examples include, but are not limited to, radiopharmacies and affiliates that only offer PET/CT.</td>
</tr>
<tr>
<td><strong>Assessment</strong></td>
<td>The systematic collection, review and application of information to improve student learning, educational quality and program effectiveness.</td>
</tr>
<tr>
<td><strong>Competencies</strong></td>
<td>The measurable set of knowledge; clinical and interpersonal skills; professionalism; and critical thinking skills expected of program graduates.</td>
</tr>
<tr>
<td><strong>Competency-Based</strong></td>
<td>Learner-centered education in which the focus is on the development and demonstration of proficiency in performing specific tasks.</td>
</tr>
<tr>
<td><strong>Consortium</strong></td>
<td>A legally binding, contractual partnership between two or more institutions, for the purpose of offering a nuclear medicine technology educational program.</td>
</tr>
<tr>
<td><strong>Credential</strong></td>
<td>Confirmation of program completion using a certificate or diploma, rather than an academic degree.</td>
</tr>
<tr>
<td><strong>Effectiveness</strong></td>
<td>Meeting expectations or producing the identified outcomes.</td>
</tr>
<tr>
<td><strong>Formative Assessment</strong></td>
<td>Monitoring learning and skill development during a clinical rotation or course so adjustments can be made to lessons and/or instructional techniques to improve learning outcomes by the end of the rotation or course.</td>
</tr>
<tr>
<td><strong>Full-Time</strong></td>
<td>The JRCNMT will defer to the published definition of ‘full-time’ utilized by the Program Director’s employer.</td>
</tr>
<tr>
<td><strong>Medical Informatics</strong></td>
<td>Structure, function and implementation of PACS, teleradiology, electronic medical records, and other digital systems used in the healthcare setting to manage, store and transmit information.</td>
</tr>
<tr>
<td><strong>Physics</strong></td>
<td>A college-level course in physics or graduation from an accredited radiography program.</td>
</tr>
<tr>
<td><strong>Post-secondary Education</strong></td>
<td>Education offered by institutions after the completion of high school.</td>
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<tr>
<td><strong>Primary Faculty</strong></td>
<td>Employees of the program sponsor filling the positions of Program Director and Clinical Coordinator.</td>
</tr>
<tr>
<td><strong>Quality Assurance</strong></td>
<td>A structured program designed to maintain and improve all aspects of clinical practice. A quality control program is part of the broader quality assurance program.</td>
</tr>
<tr>
<td><strong>Quality Control</strong></td>
<td>A program of technical procedures routinely performed to ensure that equipment meets established performance standards and radiopharmaceuticals demonstrate accepted properties.</td>
</tr>
<tr>
<td><strong>Suitable Equivalent Qualifications</strong></td>
<td>Current registration, certification or state license related to the area of practice, such as computed tomography, nursing, or radiation physicist.</td>
</tr>
<tr>
<td><strong>Summative Assessment</strong></td>
<td>Measuring the knowledge and proficiency obtained by a student at the end of a clinical rotation or course.</td>
</tr>
<tr>
<td><strong>Supervised</strong></td>
<td>Direct supervision of students is required at clinical affiliates until competence is demonstrated, after which time supervision may be indirect. Direct supervision requires the clinical instructor to be physically present with the student. Indirect supervision requires the clinical instructor to be within the facility and immediately available to provide direct supervision.</td>
</tr>
<tr>
<td><strong>Teach Out Plan</strong></td>
<td>A plan created by the sponsoring institution and program describing how current students in the program will complete their education or be assisted in transferring to another accredited program. The plan is developed when closure or loss of accreditation is forthcoming for the institution or program.</td>
</tr>
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</table>
Appendix 2: Competency List for Nuclear Medicine Technology Graduates

A. Professionalism
A nuclear medicine technology graduate must:
1. Practice in accordance with ethical standards, legal statutes and published standards of practice.
2. Demonstrate professionalism befitting a health care provider.
3. Collaborate as a member of an interprofessional team.
4. Display respect for diversity.
5. Apply problem-solving, critical-thinking and decision-making strategies.
6. Evaluate published research studies and apply appropriate principles to improve evidence-based practice.

B. Patient Care
A nuclear medicine technology graduate must:
1. Practice universal precautions.
2. Practice aseptic technique.
3. Assess patient status and vital signs.
4. Establish, verify and maintain vascular access.
5. Provide appropriate patient comfort, monitoring, and care before, during and after procedures.
6. Recognize and respond appropriately to unexpected and emergency situations.

C. Radiation Safety
A nuclear medicine technology graduate must:
1. Maintain compliance with institutional radioactive materials license under supervision of an authorized user or radiation safety officer.
2. Maintain compliance with local, state and federal radiation safety regulations.
3. Practice ALARA principles thereby limiting the radiation exposure of the patient, public, fellow workers, and self.
4. Perform and document radiation surveys and when necessary, take appropriate action.
5. Respond appropriately to a radioactive spill.
6. Perform decontamination procedures in accordance with the radiation safety program.
7. Participate in appropriate in-service programs to educate other personnel regarding radiation and principles of radiation protection.
8. Prepare to participate in the management of radiation disasters.

D. Instrumentation and Quality Control
A nuclear medicine technology graduate must:
1. Identify the function and application of the following instruments:
   a) Dose calibrators
   b) GM survey meters
   c) NaI(Tl) counting and/or uptake systems
   d) Imaging systems including:
      i. Planar
      ii. SPECT
      iii. PET
      iv. CT component of hybrid imaging
      v. Fusion or hybrid imaging system
2. Perform the appropriate quality control for the instruments listed in D1.
3. Document performance and results of all quality control testing according to quality control program procedures.
4. Analyze QC results and take appropriate corrective action(s) when necessary.
5. View, process and archive acquired data on picture archival communicating systems (PACS).
6. Utilize radiology and hospital information systems, managing patient information in these systems according to facility policies, state and federal statues and accreditation standards.

**E. Radiopharmaceuticals and Pharmaceuticals**

A nuclear medicine technology graduate must:

1. Procure appropriate radiopharmaceuticals for the day’s schedule in accordance with license possession limits.
2. Store radiopharmaceuticals consistent with established safeguards and institutional radiation safety guidelines.
3. Follow Department of Transportation (DOT) and institutional radiation safety guidelines in the transport, receipt and shipment of radioactive materials.
4. Prepare and label applicable radiopharmaceuticals in accordance with institutional protocols.
5. Apply radioactive decay calculations as appropriate to determine required volume and activity.
6. Verify physician order, procedure, time, patient, radiopharmaceutical or adjunctive pharmaceutical, dosage, and route for administration.
7. Apply weight and age-based calculations as appropriate to verify the prescribed dosage of radiopharmaceuticals or pharmaceuticals.
8. Dispense and administer radiopharmaceuticals and/or adjunctive pharmaceuticals under the direction of an authorized user.
9. Document radiopharmaceutical and/or adjunctive pharmaceutical administration in accordance with institutional policies.
10. Follow institutional protocols for blood withdrawal and radioactive labeling.
11. Evaluate patients for contraindications, precautions, physiological response and side effects of radiopharmaceuticals and adjunctive pharmaceuticals.
12. Manage the disposal of radioactive materials.

**F. Diagnostic Procedures**

A nuclear medicine technology graduate must:

1. Identify indications for performing imaging and physiologic quantitation.
2. Identify the chemical and brand names of the radiopharmaceutical(s) for a specific procedure.
3. Identify the acceptable dose ranges for the radiopharmaceutical(s).
4. Identify the route of administration for the radiopharmaceutical(s).
5. Explain the appropriate methods to administer the radiopharmaceutical(s).
6. Describe the normal bio-distribution of the radiopharmaceutical including route of excretion and organ receiving highest radioactive dose.
7. Schedule a procedure, keeping in mind appropriate sequence when multiple procedures have been ordered.
9. Verify the written order for the procedure and evaluate procedure appropriateness.
10. Verify the patient’s identity prior to radiopharmaceutical or adjunctive pharmaceutical administration.
11. Identify any contraindications including pregnancy and/or lactation status, prior to the procedure.
12. Verify patient’s physiological preparation (e.g. NPO status).
13. Explain the impact of patient preparation on the procedure, imaging and quantitative data.
14. Explain the procedure, patient involvement, length of study and radiation safety to the patient and family.
15. Verify informed consent, if appropriate.
16. Select and organize the supplies necessary to perform the procedure.
17. Select appropriate instrument and parameters for the procedure.
18. Administer the radiopharmaceutical and/or adjunctive pharmaceutical in accordance with institutional guidelines.
19. Document the radiopharmaceutical and/or adjunctive pharmaceutical in accordance with institutional guidelines.
20. Position the patient appropriately for the procedure.
21. Assist the healthcare provider in nuclear cardiac stress testing performed in conjunction with nuclear medicine procedures.
22. Acquire appropriate imaging view(s) and/or non imaging data for complete procedure.
23. Annotate and/or process imaging or non imaging data for physician interpretation.
24. Review acquired images and processed data critically in order to assure diagnostic quality.
25. Analyze normal and abnormal bio-distribution of the radiopharmaceutical in nuclear medicine images and correlate with physiology and/or pathology.
26. Recognize image or patient artifacts and take appropriate action.

G. Radionuclide Therapy
A nuclear medicine technology graduate must:
1. Assist an authorized user with the therapy procedure including preparation, documentation, patient care and radiation safety.
2. Identify any contraindications to the therapy including pregnancy and/or lactation status, prior to the procedure.
4. Verify completion of informed consent, written directive, radiation safety instructions, and patient and family education.
5. Verify and document patient identity, radiopharmaceutical, route of administration and dosage for the therapy.
6. Assist the authorized user in room preparation, instructing hospital staff, patient and/or caregivers in appropriate patient care and radiation safety precautions.
7. Practice prescribed radiation safety procedures during the preparation and the administration of therapy.
8. Conduct and document radiation surveys of designated patient areas and/or the patient, when indicated.
9. Assure appropriate post therapy monitoring, documentation and follow up is performed.