Nuclear Medicine Technology Program
2015-2017

STUDENT HANDBOOK
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INTRODUCTION

DEAN’S WELCOME MESSAGE

Welcome to the University of Alabama at Birmingham School of Health Professions (SHP), one of the nation’s leaders in the health care industry.

We are home to one of the largest health professions schools in the nation with more than 20 programs at the baccalaureate, master’s, and doctoral levels with nearly 2,000 undergraduate and graduate students enrolled. The School of Health Professions is part of UAB’s thriving academic health center. As one of our students, you will have the opportunity to work side-by-side with world-renowned researchers and faculty, utilize advanced technologies and experience cutting-edge approaches to clinical treatment.

We understand that health care needs are constantly changing. That is why we continue to add innovative programs such as Biotechnology, Genetic Counseling, our one-of-a-kind Low Vision Therapy graduate certificate, Healthcare Quality and Safety, a Ph.D. in Rehabilitation Science, and our newest program, a Master’s in Biomedical and Health Sciences which can be completed within eleven months. We offer all of these in addition to our many other well-established programs.

Our degrees and programs are fully accredited by their respective professional organizations. This means you will be eligible for licensure, national certification or registration, and enjoy being in high demand within the job market. Our first-time student exam pass rate on credentialing exams is an astounding 98 percent.

Several of our programs preside among the nation’s top 30 of the U.S. News and World Report including our bachelor’s degree in Health Care Management- ranked at number two, our master’s in Health Administration- ranked at number two, entry level Physical Therapy- ranked at number 19, Physician Assistant program- ranked at number 16 and Occupational Therapy- ranked at number 28. We continue to be rated at the top of the list in research funding from the National Institutes of Health, and SHP is the only school in the country to house both an NIH-funded Nutrition and Obesity Research Center and an NIH Diabetes Research and Training Center.

Graduating from SHP means you will have acquired an esteemed degree, enjoy choosing among a host of job options in health care, an industry that continues to grow rapidly, and be well-prepared to make a difference in your field.

Our alumni give advice to current students that is worth repeating: be a sponge, learn your craft, be a better professional for your patients, be open minded to future possibilities, and remember to have a healthy work/life balance. I look forward to seeing you grow in your respective field and watch as you become the professional we know you can be.

Harold P. Jones, PhD
Dean
UAB School of Health Professions
OVERVIEW OF THE SCHOOL OF HEALTH PROFESSIONS

A leader in federally funded research, the UAB School of Health Professions (SHP), is the largest academic institution of its type in the United States and currently boasts several nationally ranked programs. What began in the 1950s as a collection of courses in various para-professional disciplines has grown into an internationally recognized center of academic excellence.

The SHP initially took shape in 1969 as UAB gained autonomy within the University of Alabama System. Originally christened the School of Community and Allied Health Resources (SCAHR), the school incorporated the School of Health Services Administration and the Division of Allied Health Sciences from the College of General Studies with parts of the Department of Public Health and Epidemiology from the medical school. An innovative facility designed to meet the growing needs of the health care industry, the SCAHR was divided into four academic divisions that functioned like regular academic departments: Health Services Administration, Public Health and Environment, Allied Health Sciences, and the Regional Technical Institute for Health Occupations.

Throughout the 1970s and 80s the school’s offerings were amended to reflect the changing health care industry. As a result of those changes, SCAHR became SPAH (the School of Public and Allied Health), before becoming SCAH (the School of Community and Allied Health), and then SHRP (the School of Health Related Professions). During that time, the school added several new areas of study including the consistently nationally ranked Nutrition Sciences program.

In 2001, Dr. Harold Jones was recruited to become the school’s dean. Through his visionary leadership and guidance the school has experienced a period of unparalleled success beginning with the SHRP’s reorganization and relocation. Up that point in time, the SHRP’s programs had been housed in various locations throughout the UAB campus but during the spring of 2002, many of the classrooms, laboratories and faculty offices moved into the newly completed School of Health Professions Building (SHPB), the first such building dedicated to housing those programs since their original grouping more than 30 years before.

Today the school is known as the School of Health Professions, and is comprised of more than 20 programs – at the baccalaureate, master’s and doctoral levels – across five academic departments: Clinical and Diagnostic Sciences, Health Services Administration, Nutrition Sciences, Occupational Therapy, and Physical Therapy. The school is housed in three buildings, the Susan Mott Webb Nutrition Sciences Building, the Learning Resource Center Building, and the SHPB.

With more than 2,100 faculty, staff and students, the SHP is one of the six schools comprising the world-renowned UAB Academic Health Center. Students are exposed to vast resources, state-of-the-art facilities, and progressive research during their academic and clinical education at UAB.

SHP is proud of many accomplishments including:

- U.S. News & World Report ranks several SHP programs in the nation’s top 25
- Research funding is rapidly approaching the $12 million level
- The school is at the top of the list in research funding from the National Institutes of Health for schools of its type and has been either first or second in funding received since 1969
- All of the school’s programs with professional accrediting agencies are fully accredited by those associations
The SHP Office of Student Recruitment, Engagement and Success (OSS) supports UAB’s mission and values with a focus on achievement, collaboration and diversity. Guided by our commitment to student achievement and dedication to excellence, the OSS provides academic counseling and advising support to all students through a number of programs including:

- Academic advising and counseling
- Peer tutoring services
- ADA accommodations
- Campus resource referral

At the OSS, we understand that undergraduate and graduate studies can be challenging and we provide students with a network of services specifically designed to address those challenges and explore the many opportunities of attending an internationally renowned research university. We have created a series of seminars, available in person and on-line to assist students with:

- Test taking strategies
- Time management
- Resume preparation
- Interview skills and techniques
- Professionalism in health care

Additionally, the OSS team recognizes that with classes and labs, internships, and studying, students in the health professions can have particularly demanding schedules. In response, we have created a number of programs specifically to address our students’ limited availability:

- The OSS Coffee House
- OSS Brown Bag Lunch Seminars
- OSS Virtual Seminars
- Mock Interview and Interview Stream
- The OSS Snack Break

The advising and professional team at the OSS is here to support individual students and student groups, contributing to the University’s strong sense of community. We have an open-door policy and encourage students to connect on a personal basis with advisors and mentors. To that end, students should feel free to drop-by, no appointment needed – but if they prefer, they can call, email or arrange a meeting with one of our advisors through the OSS website. We are here to help students make the most of their UAB experience and will assist in any way we can.

Our Goal is Student Success!

Check us out!

www.uab.edu/shp/home/about-shp/student-services
Welcome

The Department of Clinical and Diagnostic Sciences is comprised of academic programs essential to today's healthcare system. Our programs provide education for future health care professionals in a variety of disciplines ranging from the diagnosis of illness and disease, the administration of advanced treatment therapies, and the performance of vital roles in surgical suites and in outpatient and inpatient healthcare settings. Graduates of our programs are well poised for a wide variety of job opportunities due to the outstanding education received at UAB. Comprised of multiple academic programs, the Department of Clinical & Diagnostic Sciences provides training for tomorrow's health care professionals from physician assistants and genetic counselors to nuclear medicine technologists. Students receive hands-on training from renowned faculty while using the tools to prepare them for a career in health care.

Professional Development: Our Quality Enhancement Program

Teamwork: Learning in a Team Environment

In accordance with requirements of the university’s accrediting body, Southern Association of Colleges and Schools Commission on Colleges (SACSCOC), the university is required to create a Quality Enhancement Plan (QEP). The goal of the QEP is to improve the quality of education at UAB by improving an aspect of student learning.

The topic selected for the new QEP is Teamwork: Learning is a Team Environment. The two specific areas of the QEP are:

- Teach students to succeed in all roles of a team
- Use these skills to improve student learning

Each undergraduate, graduate and professional program at UAB is required to develop a plan to implement the QEP in order to enhance the education of all students on campus. The Department of Clinical and Diagnostic Sciences has developed a unique series of courses to enable our students to develop interprofessional teaming skills that will translate beyond the classroom and into the workplace. These courses are integrated into each of our graduate professional programs. The CDS QEP courses are:

- CDS 501 Professional Skills I
- CDS 502 Professional Skills II
- CDS 503 Professional Skills III
- CDS 504 Professional Skills IV

For more information about the UAB QEP please visit: http://www.uab.edu/accreditation/qep
## Accreditation Information

The accrediting agencies for programs offered by the Department include:

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<tr>
<td>Nuclear Medicine Technology</td>
<td>Joint Review Committee for Nuclear Medicine Technology (JRCNMT)</td>
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SECTION 1 – SCHOOL AND UNIVERSITY INFORMATION

ACADEMIC CALENDAR
All dates related to registration, payments of tuition and fees, drop/add dates, other administrative requirements, and official school holidays are recorded on the UAB Academic Calendar available at www.uab.edu/academiccalendar.

ACADEMIC HONOR CODE (UAB)
The University expects the highest ethical and professional behaviors from the academic community. The code, including penalties for violations, is published on the UAB website at http://www.uab.edu/graduate/area-3/online-orientation/227-the-uab-academic-honor-code.

The UAB Academic Honor Code
The University of Alabama at Birmingham expects all members of its academic community to function according to the highest ethical and professional standards. Students, faculty, and the administration of the institution must be involved to ensure this quality of academic conduct. Academic misconduct undermines the purpose of education. Such behavior is a serious violation of the trust that must exist among faculty and students for a university to nurture intellectual growth and development. Academic misconduct can generally be defined as all acts of dishonesty in an academic or related matter. Academic dishonesty includes, but is not limited to, the following categories of behavior:

ABETTING is helping another student commit an act of academic dishonesty. Allowing someone to copy your quiz answers or use your work as their own are examples of abetting.

CHEATING is the unauthorized use or attempted use of unauthorized materials, information, study aids, the work of others, or computer-related information.

PLAGIARISM means claiming as your own the ideas, words, data, computer programs, creative compositions, artwork, etc., done by someone else. Examples include improper citation of referenced works, the use of commercially available scholarly papers, failure to cite sources, or copying another person’s ideas.

FABRICATION means presenting falsified data, citations, or quotations as genuine.

MISREPRESENTATION is falsification, alteration, or the misstatement of the contents of documents, academic work, or other materials related to academic matters, including work substantially done for one class as work done for another without receiving prior approval from the instructor.

Violations of the UAB Academic Honor Code are punishable by a range of penalties, from receiving a failing grade on an assignment, to an F in the course, to dismissal. Any course grade of F for academic misconduct supersedes any other grade or notation for that class. Withdrawal from a course while a possible violation of the Academic Honor Code is under review will not preclude the assignment of a course grade that appropriately reflects the student’s performance prior to withdrawal if the violation is substantiated.

AskIT
AskIT is the technology help desk for faculty, staff, and students. AskIT staff provides free support via telephone, email, or in-person. AskIT is physically located in the Center for Teaching and Learning in the Education Building, room 238. You can make contact through the website at https://ask.it.uab.edu/ or
by telephone at 205-996-5555. Questions or problems can also be submitted by email to ASKIT@uab.edu. You will be asked to supply your BlazerID when you request assistance.

**Attendance**

Class attendance is expected in all SHP programs. Specific program requirements for class, laboratory, and clinical site attendance may be more stringent than those established by the University. Please refer to the program requirements elsewhere in this handbook and in individual course syllabi for program attendance policies. The UAB policy for undergraduates follows. Please note the categories of excused absences; they typically apply to both undergraduates and graduates.

### UAB Attendance and Excused Absence Policy

The University of Alabama at Birmingham recognizes that the academic success of individual students is related to their class attendance and participation. Each course instructor is responsible for establishing policies concerning class attendance and make-up opportunities. Any such policies, including points for attendance and/or participation, penalties for absences, limits on excused absences, total allowable absences, etc., must be specified in the course syllabus provided to students at the beginning of the course term. Such policies are subject to departmental oversight and may not, by their specific prescriptions, negate or circumvent the accommodations provided below for excused absences.

The University regards certain absences as excused and in those instances requires that instructors provide an accommodation for the student who misses assignments, presentations, examinations, or other academic work of a substantive nature by virtue of these excused absences. Examples include the following:

- Absences due to jury or military duty provided that official documentation has been provided to the instructor in a timely manner in advance.
- Absences of students registered with Disabilities Services for disabilities eligible for "a reasonable number of disability-related absences" provided students give their instructors notice of a disability-related absence in advance or as soon as possible.
- Absences due to participation in university-sponsored activities when the student is representing the university in an official capacity and as a critical participant, provided that the procedures below have been followed:
  - Before the end of the add/drop period, students must provide their instructor a schedule of anticipated excused absences in or with a letter explaining the nature of the expected absences from the director of the unit or department sponsoring the activity.
  - If a change in the schedule occurs, students are responsible for providing their instructors with advance written notification from the sponsoring unit or department.
  - Absences due to other extenuating circumstances that instructors deem excused. Such classification is at the discretion of the instructor and is predicated upon consistent treatment of all students. In these instances, instructors must devise a system for reasonable accommodation including, for example, policies allowing for dropped exams/quizzes, make-up exams, rescheduling of student classroom presentations or early or later submission of written assignments.

### AWARDS AND HONOR SOCIETIES

All students in the School are eligible for consideration for following awards or society memberships.

**Alfred W. Sangster Award for Outstanding International Student** – This award is presented annually to an international student in recognition of his or her academic and non-academic achievements.

**Alpha Eta Society** – The UAB Chapter of this Society recognizes students registered in the final term of a baccalaureate or graduate health professions program. Inductees must have a
cumulative grade point average of 3.0 (4.0 = A), and be in the upper 10% of their program. Nominations are made by program directors in spring and summer terms.

*Cecil Clardy Satterfield Award for Humanism in Health Care* – This award is made annually to recognize one outstanding student for humanitarianism, professionalism, and commitment to health care. Nominations are coordinated by program directors, but may also be made by faculty, students, patients, or preceptors.

*Charles Brooks Award for Creativity* – This award is made annually in recognition of creative accomplishments such as written publications or artistic contributions which complemented the student’s academic activities. Nominations are made by program directors.

*Dean’s Leadership and Service Award* – Presented to a maximum of three outstanding SHP students annually, this award recognizes leadership to the School, UAB, and the community. Nominations are made by program directors or faculty.

*Phi Kappa Phi* – This is the oldest, and most selective, all-discipline honor society in the nation. Membership is by invitation to the top 7.5% of junior students and the top 10% of seniors and graduate students. Nominations are made by program directors.

*Who’s Who Among Students in American Colleges and Universities* – Membership in this national organization is open to outstanding college juniors, seniors, and graduate students. Criteria include scholarship, leadership, and service to the School and community. Applications should be submitted in spring term to the Office of Student Recruitment, Engagement and Success.

Please refer to the program section of this handbook for awards and honors available to students in individual programs.

**BACKGROUND CHECK**

By policy, SHP students are required to undergo a background check using the school’s approved vendor, Certified Background, at the time of program admission, and again prior to placement in a clinical rotation. Instructions for requesting the background check and appropriate consent forms will be provided to students by their programs. Please refer to the policy section of this handbook for the policy statement.

**BlazerID / BlazerNET / Email**

All students are assigned a unique identification, their BlazerID, which is established by the student at [www.uab.edu/blazerid](http://www.uab.edu/blazerid). BlazerNET is the official portal to the UAB information networks. The portal can be accessed from any Internet-accessible computer, on- or off-campus at [https://blazernet.uab.edu/cp/home/displaylogin](https://blazernet.uab.edu/cp/home/displaylogin). Your BlazerID is required to access BlazerNET and other campus information resources, such as your UAB email account. Your UAB email is the official communication medium and should be monitored routinely. UAB student email is provided through Microsoft Office 356, a cloud based email and file storage system. Students have 50 GB of email space and 25 GB of free file storage.
**Blazer Express**
The UAB Blazer Express Transit System is a bus service operating under the Business & Auxiliary Services Department. The service provides transportation throughout the University campus. With a valid UAB ID badge, students, employees, and authorized visitors can enjoy fare-free bus transportation along 6 designated routes. All buses are ADA-accessible and can seat approximately 35 riders. For an updated schedule, route maps, and hours of operation please go to [http://www.uab.edu/blazerexpress/](http://www.uab.edu/blazerexpress/).

**Bookstores**
Two bookstores are located on the UAB campus, both offering a wide variety of products and services to students, including online purchasing and shipping. Both bookstores stock UAB memorabilia and college wear in addition to all required textbooks and course material.

*UAB Barnes and Noble Bookstore*
- Location: 1218 6th Avenue South
- Hours: M – Th 7:30 a.m. – 6:00 p.m.; Fri 7:30 a.m. – 5:00 p.m.; Sat 10:00 a.m. – 2:00 p.m.; Sun - Closed
- Telephone: (205) 996-2665
- Email: Through website contact page. Website: [http://uab.bncollege.com](http://uab.bncollege.com)

*Snoozy’s Bookstore*
- Location: 1321 10th Avenue South
- Hours: M – F 7:45 a.m. – 6:00 p.m.; Sat 10:00 a.m. – 2:00 p.m.; Sun - Closed
- Telephone: (205) 328-2665 Fax: (205) 933-2229
- Email: [info@snoozysbookstore.com](mailto:info@snoozysbookstore.com) Website: [www.snoozysbookstore.com](http://www.snoozysbookstore.com)

**Campus OneCard**
The UAB OneCard is the official university identification card. It is used for personal identification, for entry to campus events and the recreation center, for library check-out, and other UAB services. It also serves as a declining balance card for the UAB meal plans and for Blazer Bucks accounts. Additional information is available at [www.uab.edu/onecard](http://www.uab.edu/onecard).

**Campus Map**

**Canvas Learning Management System**
The Canvas Learning Management System is the platform used for managing instructional materials online. Canvas course sites can be accessed through BlazerNET or at [http://www.uab.edu/online/canvas](http://www.uab.edu/online/canvas). Students should monitor their course sites routinely for communications from faculty and to manage course assignments.

**Counseling Services**
The Counseling and Wellness Center offers no cost, confidential counseling for UAB students related to physical, emotional, social, intellectual, or spiritual concerns. The Center is located in the Holley-Mears
Building, 924 19th Street South. For more information, call 205-934-5816 or visit: http://www.uab.edu/handbook/student-services/c-counseling.

DIRECTIONS STUDENT HANDBOOK
The UAB student handbook, Directions, may be accessed online at http://www.uab.edu/handbook/.

DISABILITY SUPPORT SERVICES
Offices for UAB's Disability Support Services (DSS) are located at 516 Hill University Center. The purpose of these services is to make UAB's programs and services accessible to students with disabilities. Students must be registered with DSS and be assessed for type of disability and need for accommodations. It’s best to register with DSS upon application to UAB. A request for assessment and accommodations can be made at any time, but accommodations are not granted retroactively. For more information about DSS, contact the office directly or visit their website.

Disability Support Services
Location: 9th Ave. Office Building, 1701 9th Ave. South/Birmingham, AL 35294-1150
(205) 934-4205 (Voice) (205) 934-4248 (TDD)
Fax: (205) 934-8170 Email: dss@uab.edu
Website: http://www.uab.edu/handbook/student-services/c-disability

DRUG SCREENING
By policy, SHP students are required to undergo a routine drug screen using the school’s approved vendor, CertifiedBackground, at the time of program admission and again prior to placement in a clinical rotation. Instructions for requesting the drug screen and appropriate consent forms will be provided to students by their programs. Please refer to the policy section of this handbook for the school and university policy statements related to drug use and substance abuse.

EMERGENCIES
Any suspicious or threatening activity should be reported to the UAB Police Department immediately. In addition to calling via a regular telephone, more than 300 emergency blue light telephones connected directly to the police dispatcher are located throughout the campus. Police are staffed 24 hours, seven days a week.

UAB Police Numbers: 911 from a campus phone; 934-3535; 934-HELP (4357); 934-4434.

Emergency situations affecting the campus are communicated to students in several ways:
- Webpage: www.uab.edu/emergency
- University home web page: www.uab.edu
- Cell phone messages and SMS text – register to receive these notices with the UAB Emergency Notification System (B-ALERT) via www.uab.edu/balert; text short code will be 23177 or 63079; cell phone calls will come from (205) 975-8000. Store these numbers and codes in your cell as B-ALERT.
Mass emails – uses the official xxx@uab.edu email system
Announcements on the BlazerNET portal
Facebook and Twitter – B-Alert integrates with these media at www.facebook.com/UABALERT and @UABALERT: www.twitter.com/uabalert
Weather and Emergency Hotline: (205) 934-2165

EQUITY AND DIVERSITY OFFICE
The mission of the UAB Office of Equity and Diversity is to “increase, retain and enhance faculty, student, and staff diversity at all levels of the University and to ensure equity.” UAB defines diversity as “the full range of human difference and potential...”. This administrative office supports faculty recruitment, provides scholarships for graduate and undergraduate students, and promotes programs to enhance the campus diversity experience. The office provides a diversity awareness training program for employees. A key component of this Office is the Commission on the Status of Women, which is charged with assuring the best possible conditions for women who work and study at UAB. Additional information is available at http://www.uab.edu/equitydiversity/. Dr. Louis Dale is the Vice President responsible for the activities of this Office.

FERPA
The Family Educational Rights and Privacy Act of 1974 provides protection for all educational records related to students enrolled in an educational program. Information about your rights and protection of your records is available at the following sites: https://sa.uab.edu/enrollmentservices/ferpa/; https://sa.uab.edu/enrollmentservices/ferpa/FERPA_students.asp. If you have questions or concerns about FERPA issues, you may email FERPA@uab.edu, or contact the SHP Office of Student Recruitment, Enrollment and Success.

FINANCIAL AID
Located at 1700 University Blvd., Lister Hill Library, Room G40. Hours of Operation are from 8:00 am to 5:00 pm Monday thru Friday. Phone: (205) 934-8223; Fax: (205) 975-6168. Additional information can be located on the website http://www.uab.edu/students/paying-for-UAB.

FOOD SERVICES
UAB offers seven meal plans for students that are billed to the student’s account. All students, even commuters, are required to purchase a meal plan. Up to 25% of dining fees not used by the end of the school year are converted to Blazer Bucks, which can be used to shop at campus bookstores, local restaurants, and the campus CVS. Several dining facilities that accept the meal plans are available on campus. Those closest to the SHP buildings include:

- Commons on the Green – located on the Campus Green, just south of 9th Avenue and the Campus Recreation Center.
- Einstein’s Bagels – located at the plaza entrance to the Learning Resource Center. Open Monday – Thursday, 8:00 a.m. – 5:00 p.m., and Friday 8:00 a.m. – 3:00 p.m.

There are soda and snack vending machines available in the basement of the Learning Resource Center and on the 6th floor of the Webb Building. Additional information about meal plans and campus dining facilities is available at www.uab.edu/dining.
**GRADUATE SCHOOL**

The UAB Graduate School offers doctoral programs in 37 areas, eight post-master's specialist programs, and master's level programs in 45 areas. Most graduate programs in SHP are coordinated through the Graduate School and students must adhere to the Graduate School policies and procedures. Graduate School information for current students is available at [http://www.uab.edu/graduate/](http://www.uab.edu/graduate/).

**GRADUATION**

UAB offers two commencement ceremonies, one in the fall and one in the spring. All students must complete an application for degree six months prior to graduating. For more information and important deadlines please go to [http://www.uab.edu/commencement/degree-applications](http://www.uab.edu/commencement/degree-applications).

**HEALTH SERVICES AND MEDICAL CLEARANCE**

The University provides prevention, counseling, and treatment services to students through the UAB Student Health Services (SHS) clinic located at 1714 9th Avenue South. The clinic is open from 8:00 a.m. – 5:00 p.m. Monday – Friday, but is closed between noon and 1:00 p.m. daily. Detailed information about services and operating practices is located on the SHS website at [www.uab.edu/studenthealth](http://www.uab.edu/studenthealth). Appointments may be scheduled by calling 205-934-3581.

SHP students are required to receive medical clearance at the time of program admission. A secure web-based process using CertifiedBackground, an external vendor, is used to document medical information and immunization records. Each student will have a personal account with CertifiedBackground for storage of required documents. More information is available under the Medical Clearance Sections of the SHS website. An instruction sheet and access code are provided to students by programs or the Office of Student Success.

**HIPAA TRAINING**

The Health Insurance Portability and Accountability Act includes significant requirements for protecting individual privacy of health information. All students in the School of Health Professions must complete an online tutorial and be tested on HIPAA regulations at the time of program admission. A BlazerID is required to access the training site, located at [www.uab.edu/learningsystem](http://www.uab.edu/learningsystem). Compliance with the training requirement is monitored monthly. Students who have not completed the training are reported by name to the Office of Student Success for follow-up with the appropriate program director.

**INSTITUTIONAL REVIEW BOARD FOR HUMAN USE (IRB)**

Student researchers must comply with all requirements for protection of human subjects. Detailed information is available on the IRB website [www.uab.edu/irb](http://www.uab.edu/irb), including resources and services specifically for students. The brochure “IRB Guidance for Student Research and Class Projects” may be downloaded from this site as a PDF document.

**INTELLECTUAL PROPERTY**

Intellectual property refers to an asset that originated conceptually, such as literary and artistic works, inventions, or other creative works. These assets should be protected and used only as the creator intends. A training module defining inventor status, patent criteria, and other intellectual property issues is available at [http://www.uab.edu/ethicscenter/educational-materials/rcr-materials/intellectual-property](http://www.uab.edu/ethicscenter/educational-materials/rcr-materials/intellectual-property).
**Lactation Centers**

Through the work of the UAB Commission on the Status of Women, the University has provided several lactation centers for students, faculty, and staff across the campus. Locations of the centers are available at [http://www.uab.edu/women/lactationcenters](http://www.uab.edu/women/lactationcenters).

**Libraries and Learning Resource Center**

UAB’s libraries house excellent collections of books, periodicals, microforms, and other media. The libraries have online remote access to catalogs and online collections. Customer services are extensive. All facilities have computers available for student use during regular hours of operation.

*Birmingham Public Library*

In addition to the main library facility, there are 17 branch libraries. The library holdings include print and digital media. Library services are described on the website.

- Location: 2100 Park Place
- Hours: M – Tu 9:00 a.m. – 8:00 p.m.; W – Sat 9:00 a.m. – 6:00 p.m.; Sun 2:00 p.m. – 6:00 p.m.
- Telephone: (205) 226-3600
- Website: [http://www.bham.lib.al.us/](http://www.bham.lib.al.us/)

*Lister Hill Library of the Health Sciences*

This is the largest biomedical library in Alabama, and one of the largest in the south. Located across the crosswalk from the School, the LHL has extension libraries in University Hospital and The Kirklin Clinic. Dedicated librarians hold “office hours” in the Learning Resource Center weekly.

- Location: 1700 University Boulevard
- Hours: M – Th 7:00 a.m. – 9:00 p.m.; Fri 7:00 a.m. – 5:00 p.m.; Sat 9:00 a.m. – 4:00 p.m.; Sun 12:00 p.m. – 8:00 p.m.
- Telephone: (205) 934-2230
- Website: [www.uab.edu/lister/](http://www.uab.edu/lister/)

The SHP library liaisons are:

- Lee Vucovich, email: lvucovi@uab.edu, phone: (205) 934-2231
- Pat Higginbottom, email: phiggin@uab.edu, phone: (205) 934-5432
- Imelda Vetter, email: ivetter@uab.edu, phone: (205) 934-2231

*Mervyn H. Sterne Library*

A collection of more than one million items supporting teaching and research in the arts and humanities, business, education, engineering, natural sciences and mathematics, and social and behavioral sciences.

- Location: 913 13<sup>th</sup> Street South
- Hours: M – Th 7:30 a.m. – 2:00 a.m.; Fri 7:30 a.m. – 7:00 p.m. Sat 9:00 a.m. – 5:00 p.m.; Sun 1:00 p.m. – 2:00 a.m.
- Telephone: (205) 934-6364 (Reference) (205) 934-4338 (User Services)
- Website: [www.mhsl.uab.edu](http://www.mhsl.uab.edu)

*Reynolds Historical Library*

A collection of rare and important books, manuscripts and artifacts in the medical sciences. The Reynolds historical collection is located on the top floor of the Lister Hill Library.

**OneStop Student Services**

If you have questions or need assistance with an academic or administrative process, the UAB OneStop is where to go! Advisers will help you solve your problem or do the legwork for you if another UAB resource is needed. OneStop is located in the Residence Life Center of Blazer Hall, 920 16<sup>th</sup> Street South.
You may contact the OneStop office by phone or email at (205) 934-4300; 855-UAB-1STP (toll-free); onestop@uab.edu. Additional information is available at www.uab.edu/onestop.

**PARKING**

Student vehicles must be registered with UAB Parking and Transportation Services, located at 608 8th Street South. The office is open Monday – Friday from 7:30 a.m. – 4:30 p.m. Parking is allocated on a first-come, first-served basis. Commuter student lots are designated as Lot 15, Deck 12, and Deck 16. Parking fees are established by location, payable by semester or year, and are billed to the student’s account. Additional information is available at http://www.uab.edu/parking/.

**PATIENT CARE PARTNERSHIP**

Students in health professions programs learn general information about the health care industry as well as knowledge and skills specific to their chosen profession. The American Hospital Association (AHA) (www.aha.org) is an excellent resource for industry information. One role fulfilled by the AHA is that of patient advocate. The Patient Care Partnership brochure (link below) outlines rights and responsibilities of patients during hospital stays.


**PLAGIARISM AND TURN-IT-IN**

Plagiarism is academic misconduct that will result in a grade of zero on the plagiarized assignment and may result in dismissal from the School of Health Professions and the University (see DIRECTION Student Handbook or SHP Grievance Procedures for Violations of Academic Standards). All papers submitted for grading in any SHP program may be reviewed using the online plagiarism monitoring software, Turnitin.com. Please note that all documents submitted to Turnitin.com are added to their database of papers that is used to screen future assignments for plagiarism.

**RECREATION CENTER**

The campus Recreation Center, located on University Boulevard at 15th Street, is open to faculty, staff, students, and their families. A valid student identification card or membership card is required for access. Facilities include basketball courts, racquetball courts, weight rooms, swimming pools, exercise rooms, and indoor track. Check the website at for information about hours and services http://www.uab.edu/campusrecreation.

**SCHOLARSHIPS**

Many programs in the School have scholarships available to currently enrolled students. Please see the program section of this handbook for that information. The following scholarships are available to students enrolled in any program in the School.

*Dean’s National Alumni Society Scholarship* – Funding from the UAB National Alumni Society for two scholarships per year, one to a graduate student and one to an undergraduate student. One student per program is nominated by the program director for consideration by the School’s Scholarship Committee.

*Ethel M. and Jessie D. Smith Endowed Nursing and Allied Health Scholarship* – Funding for baccalaureate students with GPA 3.0 or above and unmet financial need. Students apply to the UAB Office of Student Recruitment, Engagement and Success, SHPB 230.
**Lettie Pate Whitehead Foundation Scholarship** – Funding for Christian women students from selected states (AL, FL, GA, LA, MS, NC, SC, TN) enrolled in SHP programs. Award amounts are variable and are based on unmet financial need. Students apply in the SHP Office of Student Recruitment, Engagement and Success, SHPB 230.

**Matthew F. McNulty Jr. Health Services Emergency Loan** – Students enrolled in any SHP program may apply for this low interest loan to address emergencies. Loan amounts are variable based on need. Students apply in the Office of Student Success, SHPB 230.

**SHP General Scholarship** – Funding to recruit or retain outstanding students. Awards are based on academic achievement, and unmet financial need. Program directors apply for funding on behalf of qualified students. Awards up to $4500 over the length of the student’s duration in the program are made by the School’s Scholarship Committee.

**SOCIAL MEDIA**

Social media such as Facebook and Twitter are useful communication tools, but health professions students should use these forums judiciously. In addition to the School’s official sites listed below, individual programs and student organizations may have networking sites.

- Website: [http://www.uab.edu/shp/](http://www.uab.edu/shp/)
- Twitter: [http://twitter.com/#!/UAB_SHP](http://twitter.com/#!/UAB_SHP)
- Facebook: [http://www.facebook.com/UABSHP](http://www.facebook.com/UABSHP)
- LinkedIn: [http://www.linkedin.com/groups?gid=3596638](http://www.linkedin.com/groups?gid=3596638)
- Vimeo: [http://vimeo.com/uabshp](http://vimeo.com/uabshp)
- YouTube: [http://www.youtube.com/uabshp](http://www.youtube.com/uabshp)

The School’s Academic Affairs Committee published the following guidelines related to use of social media.

<table>
<thead>
<tr>
<th>UAB School of Health Professions Guidelines for Social Networking</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Academic Affairs Committee proposes the following for social networking vehicles. Online communities like Facebook, MySpace, Flickr and Twitter provide opportunities for faculty, staff, and students to share and explore interests that enrich the higher education learning experience. However, using these mediums with discretion is advised. UAB online community members are expected to act with honesty, integrity, and respect for the rights, privileges, privacy, sensibilities, and property of others.</td>
</tr>
<tr>
<td><strong>Professional Use</strong></td>
</tr>
<tr>
<td>Only UAB employees authorized by their departments may use social networking Web sites to conduct University business. The authorized employee/position will serve as the point of contact for the web site. In keeping with University policy⁠, the authorized employee may post on a social network profile: the University’s name, school, department, and/or unit information, a University email address or University telephone number for contact purposes, or post official department information, resources, calendars, and events. The employee should use care that any personal opinions or opposition to the University either by direct statement or perception not be published.</td>
</tr>
<tr>
<td><strong>General Use</strong></td>
</tr>
<tr>
<td>The following guidelines are strongly suggested:</td>
</tr>
<tr>
<td>1. Use networking sites legally and appropriately. Consider your personal obligation as a citizen of the university. Use proper conduct in your posts regarding the university and your colleagues/fellow students.</td>
</tr>
</tbody>
</table>
2. Consider the use of a student, staff or faculty member to monitor any departmental social pages. All parties need to understand the guidelines presented.

3. Remember, you cannot ensure who does and does not have access to your information. Any text or photo placed online is available to anyone in the world – even if you limit access to your site.

4. Information that you post online may continue to stay on the World Wide Web even after you erase or delete that information from your profiles or blog. Do not post anything that could reflect negatively on you, your family, your friends, and the university.

5. Do not post any confidential or sensitive information online.

6. By agreeing to the terms of use, online communities have your permission to republish your content worldwide and share information with advertisers, third parties, law enforcement, and others.

7. You are legally responsible for your posts on the social networking sites. Be discreet, respectful, and as accurate/factual as you can be in any comments or content you posted online.

8. Potential employers, admissions officers, and scholarship committees often search social networking sites to screen candidates. Your profile will be a part of how others know you.

1 The Official UAB Web Policy >> http://www.uab.edu/brand/web/planning/policies-and-standards

Tuition and Fees

Tuition and fees for the University are published annually under the “Current Students” tab of the UAB website. There are two tuition rates: Alabama resident (in-state) and Non-resident (out-of-state). Currently, non-resident students who register for online course sections pay resident tuition for all lecture-based courses. Non-resident tuition is charged for clinical practicums, independent study courses, and project courses.

SHP programs may have specific fees attached to courses or laboratories. These fees will be addressed in the program section of this handbook. Questions about program-specific fees should be addressed with your program director. Current standard tuition and fees for the School, and links to program cost estimations, are posted at http://www.uab.edu/shp/home/admissions-tuition/tuition.

Payment deadlines for each semester are published on the official academic calendar and on the UAB website at http://www.uab.edu/whentopay/. Please note that failure to meet payment deadlines can result in administrative withdrawal from courses.

Tuition and fees may be paid through BlazerNET.

Weather

Severe weather situations that may affect the safety of students, faculty, and staff are communicated through the same channels as other emergencies. Severe weather precautions are published at http://www.uab.edu/emergency/preparedness. Other information sources include:

- Webpage: www.uab.edu/emergency
- B-ALERT system: Register to email, cell phone, and text notices with the UAB Emergency Notification System via; www.uab.edu/balert
- Hotline: (205)- 934-2165
- WBHM Radio (90.3 FM): Announcements about University closings or delayed openings are made on the UAB radio station.
Withdrawal from Course / Program
Withdrawal from a course or from your program is an official process and should be discussed with your academic advisor and / or program director. Most programs in the School are full-time and the curriculums are specifically sequenced. Withdrawal from a course may put you at risk for being required to wait for a full year before resuming courses in the program. Course withdrawals are made through the UAB registration system via the Student Resources tab in BlazerNET. Program withdrawal should be made in writing to the program director. Please refer to the program section of this handbook for additional information.
**SECTION 2 – SHP AND UAB POLICIES**

**SCHOOL OF HEALTH PROFESSIONS POLICIES**

**BACKGROUND CHECK AND DRUG SCREEN**

**GRIEVANCE PROCEDURES FOR VIOLATIONS OF ACADEMIC STANDARDS**
http://www.uab.edu/shp/home/images/PDF/grievance_procedures.pdf

**IMPAIRMENT AND SUBSTANCE ABUSE**

**PLAGIARISM**
http://www.uab.edu/shp/home/images/PDF/Plagiarism_Policy.pdf
Please note that all papers submitted for grading in any SHP program may be reviewed using the online plagiarism monitoring software, Turnitin.com. All documents submitted to Turnitin.com are added to their database of papers used to screen future assignments for plagiarism.

**UAB POLICIES**

**AIDS AND HIV INFECTION**
http://sppublic.ad.uab.edu/policies/Pages/LibraryDetail.aspx?pID=252

**ALCOHOLIC BEVERAGES, USE AND CONSUMPTION**
http://sppublic.ad.uab.edu/policies/Pages/LibraryDetail.aspx?pID=71

**ATTENDANCE / ABSENCE (UNDERGRADUATE)**
http://catalog.uab.edu/undergraduate/academicstudentresources/progresstowardadegree/#enrollmenttext

**BODY FLUID EXPOSURE**
http://www.uab.edu/studenthealth/emergencies/blood-a-body-fluid-exposure

**COMPUTER AND NETWORK RESOURCES (ACCEPTABLE USE)**
http://sppublic.ad.uab.edu/policies/Pages/LibraryDetail.aspx?pID=4

**COMPUTER SOFTWARE COPYING AND USE**

**DRUG FREE CAMPUS (GENERAL POLICY)**
http://sppublic.ad.uab.edu/policies/content/Pages/UAB--POL-0000046.aspx

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STUDENT HANDBOOK 2015
**Drug-Free Campus Policy for Students - Attachment A**
http://sppublic.ad.uab.edu/policies/Pages/LibraryDetail.aspx?pID=632

**Drug-Free Campus Policy for Students - Attachment B**
http://sppublic.ad.uab.edu/policies/Pages/LibraryDetail.aspx?pID=626

**Drug-Free Campus/Workplace Policy - Attachment B.1**
http://sppublic.ad.uab.edu/policies/Pages/LibraryDetail.aspx?pID=627

**Drug-Free Campus Policy for Students - Attachment C**
http://sppublic.ad.uab.edu/policies/Pages/LibraryDetail.aspx?pID=628

**Equal Opportunity and Discriminatory Harassment**
http://sppublic.ad.uab.edu/policies/Pages/LibraryDetail.aspx?pID=52

**Ethical Standards in Research and Other Scholarly Activities**
http://sppublic.ad.uab.edu/policies/Pages/LibraryDetail.aspx?pID=263

**Firearms, Ammunition, and Other Dangerous Weapons**
http://sppublic.ad.uab.edu/policies/Pages/LibraryDetail.aspx?pID=257

**Immunization**
http://sppublic.ad.uab.edu/policies/Pages/LibraryDetail.aspx?pID=86

**Non-Smoking**
http://sppublic.ad.uab.edu/policies/Pages/LibraryDetail.aspx?pID=110

**Patent (Intellectual Property)**
http://sppublic.ad.uab.edu/policies/Pages/LibraryDetail.aspx?pID=115

*Note: Additional university policies may be located by searching the UAB Policies and Procedures Library available online at http://sppublic.ad.uab.edu/policies/Pages/default.aspx.*
CDS POLICIES

ACADEMIC PROGRESS

Academic Progress Review is implemented to promote, assist, and maintain student performance. The main purpose is to provide feedback to students regarding their performance and to identify areas of strength and/or weakness in performance or behavior.

Generally speaking, program faculty and/or the program director may academically counsel students on a semester-by-semester basis to assess progress in the curriculum and to provide students counseling regarding deficiencies as needed. These meetings may be documented and the student may be required to sign the documentation of the academic progress sessions with associated notes placed in the students file.

In cases regarding deficiencies, suggestions and/or action plans may be developed in conjunction with the student so as to provide a plan for reversing the deficiencies by a specified timeframe. Such suggestions and/or action plans will be documented and signed (by both faculty and the student) and will be placed in the students file. If a student does not comply with the suggestions and/or action plan and/or does not meet the deadlines as specified, the student may be dismissed from the program.

ATTENDANCE AND EXCUSED ABSENCES

CDS Attendance Policy

Attendance is mandatory for all classes, lectures, labs, program-related seminars, clinical practice, internships, etc.

Absences are either excused or unexcused and both require timely notification to the course instructor. Students who are absent during clinical practice or an internship must notify both the program clinical practice coordinator/internship coordinator and the clinical practice instructor/clinical internship instructor as soon as possible. Time missed during clinical practice or the internship must be made up and this may result in a delay in graduation.

Below is a list of excused absences recognized by the Department of Clinical and Diagnostic Sciences and UAB:

- Absences due to jury or military duty, provided that official documentation has been provided to the instructor in a timely manner in advance.
- Absences of students registered with Disabilities Services for disabilities eligible for “a reasonable number of disability-related absences” provided students give their instructors notice of a disability related absence in advance or as soon as possible.
- Absences due to participation in university-sponsored activities when the student is representing the university in an official capacity and as a critical participant, provided that the procedures below have been followed:
Before the end of the add/drop period, students must provide their instructor a schedule of anticipated excused absences in or with a letter explaining the nature of the expected absences from the director of the unit or department sponsoring the activity.

If a change in the absence schedule occurs, students are responsible for providing their instructors with advance notification from the sponsoring unit or department.

- Absences due to other extenuating circumstances that instructors deem excused. Such classification is at the discretion of the instructor and is predicated upon consistent treatment of all students.
- Absences due to religious observations provided that students give faculty written notice prior to the drop/add deadline of the term.

In instances resulting in unavoidable absence(s), a student is expected to inform the program office and the associated course instructor in advance of the planned absence. For unforeseen events (car accident or breakdown, injury), the student is expected to notify the program and course instructor at the earliest possible time.

Make-up of missed class information or assignments is the student’s responsibility. Make-up of class activities and projects is at the discretion of the course faculty – refer to individual course syllabi for more detailed attendance policies pertaining to the course.

*NOTE: The program cannot guarantee that all work missed for an excused absence can be made up. Some activities (including laboratories) due to their complex, time intensive, and/or cost intensive nature will not be able to be made up. Similarly, when students arrive to laboratories late they risk missing important information/directions that may adversely affect their grade. Instructors are not obligated to repeat directions for students when they are tardy.

**ATTENDANCE INFRACTIONS**

For each unexcused absence, there will be a 1% overall grade reduction for that course or lab per absence. Two tardies will equal one unexcused absence. A tardy is considered being more than 10 minutes late to class. Faculty may choose to include attendance and timeliness in grading criteria and may implement a more restrictive attendance policy. The attendance policy for each course will be described in all course syllabi. The Department of Clinical and Diagnostic Sciences also reserves the right to institute an attendance policy for official program/department activities.

**CONSENSUAL ROMANTIC RELATIONSHIPS**


**DATA PROTECTION AND SECURITY**

**Dress Code**

Guidelines for professional attire require consideration for patients, visitors, and coworkers, as well as personal safety. Therefore, CDS students are expected to promote a professional image by following these guidelines.

**Clothing:**
- Clothing should be clean, neat, in good repair, and appropriate for the profession.
- Casual or athletic wear such as sweat suits or warm-up pants are not acceptable.
- Shorts are not acceptable.
- Skirt length shall be no shorter than two inches above the top of the knee and may not be tight fitting.
- Undergarments shall be worn and shall not be visible, even when in stretching or bending positions.
- Shoes shall be appropriate for the work environment and compliant with professional attire. Flip flops are not appropriate.
- Caps or head coverings are not acceptable unless they are for religious purposes or are part of a uniform.
- Sunshades (or hand-tinted, non-prescription glasses) shall not be worn unless they are required for medical purposes.
- Identification badges shall be worn at all times.

**Grooming:**

**Piercings**
- Facial and/or body adornments are not permitted other than in the ear lobe.
- No more than two pairs of earrings may be worn. Earrings will be no longer than one inch in diameter or length.

**Hair**
- Hair should be clean and neat.
- Hair may not be dyed unnatural colors and/or have patterns.
- Hair ornaments should be moderate and in good taste.
- Hair should be well-groomed, closely trimmed beards, sideburns, and mustaches are allowed.

**Daily Hygiene**
- Daily hygiene must include clean teeth, hair, clothes, and body, including use of deodorant.

*In addition to these basic guidelines, students are expected to follow any additional provisions of a facilities dress code while in clinical practice.*

**Dress Code Infractions:**
Failure to comply with the above dress code requirements will result in removal from program activities until requirements are met. Students will be counted as absent (unexcused) and will receive a grade of zero for any missed work during that time with no opportunity to make-up the missed work.
*Note- The above Dress Code is a minimum standard set forth by the Department of Clinical and Diagnostic Sciences. Each program and/or course within CDS has the liberty to set forth and enforce a stricter dress code. Similarly, clinics also have their own dress codes that must be followed precisely.

**FOOD AND DRINK IN THE CLASSROOM**
Food or drinks in laboratories is prohibited. Food and drink in classrooms is allowed at the discretion of faculty.

**GRADING POLICY**
In each CDS course, the instructor will announce the grading criteria and publish it in the course syllabus. The following policy relating to the I (incomplete) grade or deferred credit supplements the School of Health Professions’ policy.

**INCOMPLETE & DEFERRED CREDIT POLICY**
The awarding of an “I” (incomplete) grade is not done lightly. An “I” will be given only when an emergency or unexpected event prohibits the student from meeting course objectives in a timely manner. A student receiving a grade of “I” (incomplete) must arrange with the instructor to complete the course requirements as soon as possible, and in order to progress within the program the student must arrange to complete the requirements prior to the final day of registration for the next term. A grade of “I” not changed by the instructor by the beginning of the next regular term will automatically convert to an “F.”

**INFECTION CONTROL**
Because students are working with patients having low immunities, the clinical supervisor reserves the right to send any student to UAB Student Health Services if the need arises. The clinical supervisor will call UAB Student Health Services and request that the student be sent off duty if he/she has an infection of any kind. The student must then acquire a doctor’s written permission to return to clinical education. Students are required to adhere to the policy of the clinical affiliate for working with patients with local infections or infectious diseases. Students are required to inquire about this policy at the beginning of rotation through a clinical affiliate.

**LIABILITY INSURANCE**
Liability insurance is provided by the University for all students registered for clinical education courses. The coverage protects students in any assigned clinical site to which they are assigned as a student.

**NON-ACADEMIC STUDENT CONDUCT**
http://www.uab.edu/students/services/student-engagement/student-conduct
**Non-Resident Tuition Policy**


**Pregnancy Policy**

All students are encouraged to inform the program director immediately in writing once pregnancy has been confirmed. If students choose not to inform the program of their pregnancy, the program will not consider them pregnant and cannot exercise options that could protect the fetus.

For students who voluntarily disclose pregnancy the program director will discuss factors to be considered in cases of pregnancy with the student based on acceptable professional guidelines.

A student is offered three alternatives after the consultation with the program director. These are:

1. Immediate withdrawal in good standing from the program. Readmission to the program after the pregnancy will be in accordance with the Readmit Policy.
2. Continuation in the program after being given specific instruction regarding safety practices, safety monitoring, and specific clinical and laboratory assignments.
3. Continuation in the program with additional safety monitoring but without modification of assignments.

The student must be able to progress in her educational experiences, both clinical and academic. If the student cannot, she will be strongly advised to withdraw as in alternative number one. If there are any questions regarding any aspect of the above statements, please call the Program Director.
SECTION 3 – PROGRAM INFORMATION

MISSION

The UAB Nuclear Medicine Technology Program is dedicated to providing a quality master’s level program by offering didactic and clinical coursework in a curriculum that is designed to prepare students to become competent and productive technologists. The program also serves the profession through its offering of continuing education activities and educational products.

GOALS

1. Provide students with the knowledge and skills necessary to secure employment as an entry-level nuclear medicine technologist.
2. Provide students with the knowledge necessary to pass national certification.
3. Provide health care employers with competent graduates.
4. Offer educational activities and materials to the health care community.
5. Provide help for students with future graduate school request.
FACULTY

Norman E. Bolus, MSPH, MPH, CNMT, FSNNMI –TS
Program Director and Assistant Professor

Department of Clinical & Diagnostic Sciences
1705 University Boulevard, SHPB 446
Birmingham, AL 35294
(205) 934-3427
bolusn@uab.edu

Norman Bolus is the Program Director and an Assistant Professor for the UAB Nuclear Medicine Technology Program. He was in clinical practice for 3 years prior to joining the School of Health Professions. He has served in many capacities for the program as lab instructor, teacher, assistant professor and clinical coordinator before assuming the role of program director in 2007. Mr. Bolus received his undergraduate Bachelor of Science degree in Biology/Chemistry in 1988 and a degree in Nuclear Medicine Technology in 1989 from UAB. He also obtained a Master in Public Health in Occupational Health and Safety from UAB in 1998 and has an additional Master of Science degree from the UAB School of Public Health in Environmental Toxicology. He is an active member of the Society of Nuclear Medicine and Molecular Imaging (SNMMI) and is the Editor-in-Chief of the Journal of Nuclear Medicine Technology through 2016.

Courses Taught: Introduction to Clinical Nuclear Medicine, Patient Care, Instrumentation, Radiation Biology, Radiopharmacy, Seminar courses and Correlative Imaging along with assisting in NMT labs

Elizabeth Cloyd, BS, R.T.(R)(CT)(MR)
Instructor

Department of Clinical and Diagnostic Sciences
1705 University Boulevard Blvd, SHPB 433
Birmingham, AL 35294
205-975-8835
epcloyd@uab.edu

B.S. (Radiologic Technology) Bluefield State College. CT/MRI Manager for Brookwood Medical Center. Adjunct Instructor for the UAB Nuclear Medicine Technology Program. Areas of instruction include Computed Tomography Procedures, Magnetic Resonance Imaging, and Cross-sectional Anatomy.
Remo George, PhD, CNMT
Assistant Professor

Department of Clinical and Diagnostic Sciences
1705 University Boulevard Blvd, SHPB 452
Birmingham, AL 35294
205-934-7378
remo@uab.edu

Remo George is an Assistant Professor in the UAB Nuclear Medicine Technology Program. He was in clinical practice for over 10 years in Indiana, Michigan & India prior to joining the school of health professions as a faculty member. He has extensive experience in nuclear medicine procedures, radiopharmaceuticals, instrumentation, and PET applications. He is also a U.S. Nuclear Regulatory Commission approved Medical Radiation Safety Officer.

Mr. George received his undergraduate Bachelor of Science degree in Biological sciences (Zoology, Botany & Biochemistry) (1994) and his Master of Science degree in Biophysics (1996), both from Mahatma Gandhi University, India. Thereafter, he went on to obtain his post baccalaureate diploma in Nuclear Medicine Technology from the Radiation Medicine Center at the Bhabha Atomic Research Center, University of Mumbai, India (1998). He is also concurrently working towards a PhD in Biochemistry & Molecular Genetics at the University of Alabama at Birmingham. His research interest is in the use of antisense molecular beacons for the detection and attenuation of latent mycobacteria.

Courses taught: Nuclear Medicine Instrumentation I, Nuclear Medicine Instrumentation II, Nuclear Medicine Procedures I, Nuclear Medicine Procedures II, Radiation Protection & Biology, Regulatory Issues

Krystle W. Glasgow, MIS, CNMT, NMAA
Instructor, Clinical Coordinator

Department of Clinical and Diagnostic Sciences
1705 University Boulevard, SHPB 462
Birmingham, AL 35294
205-996-6597
krystlew@uab.edu

Krystle Glasgow is the clinical coordinator for the UAB Nuclear Medicine Technology Program. She was in clinical practice for 5 years prior to joining the School of Health Professions. Mrs. Glasgow received her undergraduate Bachelor of Science degree in Nuclear Medicine Technology with a concentration in Computed Tomography in 2010 from UAB. She obtained a Master of Imaging Science at The University of Arkansas for Medical Science in Little Rock Arkansas. She is a certified Nuclear Medicine Technologist and also a Certified Nuclear Medicine Advanced Associate (NMAA). She is an active and contributing member of the Alabama Society of Nuclear Medicine and the Society of Nuclear Medicine and Molecular Imaging.
Liliana Navarrete, MS  
Assistant Professor  
Department of Clinical and Diagnostic Sciences  
1705 University Boulevard, SHPB 450  
Birmingham, AL 35294  
205-934-4168  
lilinav@uab.edu

Liliana Navarrete is an assistant professor for the UAB Nuclear Medicine Technology program. She held various teaching and research positions in the higher education sector for over 10 years prior to joining the UAB faculty in 2008. Ms. Navarrete received her B.S. degree in physics from National University of Colombia, Bogota Colombia in 1994. She received M.S. degrees in physics from Kyushu University, Fukuoka Japan in 1998, and from the University of Alabama, Tuscaloosa, Alabama in 2006. She is a member of the American Physics Society and the Health Physics Society.

Courses taught: Physics for Technologist, Medical Radiation Physics, Instrumentation, Physics and Instruments of Nuclear Magnetic Resonance, Survival Spanish for Health Professions, and assists with Instrumentation Lab, Applications of Radiation Protection and Biology, and a Physics Review module for the UAB Nurse Anesthesia program.

Administrative Staff
The Department of Clinical & Diagnostic Sciences has a centralized staff team that supports all CDS programs. For student questions, please contact the CDS Receptionist:
(205) 975-4CDS (4237)  
ASKCDS@uab.edu
ADVISORY BOARD

Baptist Medical Center-Princeton
James Nance, CNMT
701 Princeton Avenue SW, Birmingham, AL 35211

Birmingham VA Medical Center
Denois Lockett, RT(N)
700 19th Street South, Birmingham, AL 35233

Brookwood Diagnostic Cardiology Center
Cassandra Fuqua
3980 Colonnade Parkway, Birmingham, AL 35243

Brookwood Medical Center
Jennifer Potts, CNMY, BS
2010 Brookwood Medical Center Drive, Birmingham, AL 35209

Cardinal Health
James E. Underwood, BS, RPh
1218 3rd Avenue South, Birmingham, AL 35233

Children’s Hospital of Alabama
Sharon Jordan, CNMT
1600 7th Avenue South, Birmingham, AL 35233

Citizens Baptist Medical Center
Linda Hutchinson, RT, CNMT
604 Stone Street, Talladega, AL 35160

Cullman Regional Medical Center
Carmen Brown, RT(R), CNMT
PO Box 1108, 1912 AL HWY 157, Cullman, AL 35055

Decatur Morgan HH Hospital
Melissa Shryock, CNMT
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Heart South Cardiovascular Group, PC
Loukisha Collins, CNMT, NCT
1022 First Street North, Ste. 500, Alabaster, AL 35007
**ImageSouth PET Center**
Brittney Gray, CNMT
924 Montclair Road, Ste. 108, Birmingham, AL 35213

**Medical West**
Tiffany Jennings, CNMT
US Highway 11 South, Bessemer, AL 35020

**Nusonics, Inc.**
Susan Hunt, CNMT
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**Shelby Baptist Medical Center**
Lisa Moody, RT(R), CNMT
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**St. Vincent's East**
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50 Medical Park Drive East, Birmingham, AL 35235

**The Kirklin Clinic Cardiology Center**
Ashley Russell, CNMT
2006 6th Avenue South, Birmingham, AL 35233

**The Kirklin Clinic PET Center**
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2000 6th Avenue South, Birmingham, AL 35233

**Trinity Medical Center**
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**UAB Highlands Medical Center**
Shawn Roberts, CNMT
120 11th Avenue South, Birmingham, AL 35205

**University of Alabama Hospital**
David Kynard, CNMT
619 20th Street South, Birmingham, AL 35233
Walker Baptist Medical Center
Brett Black, CNMT
US Highway 78, PO Box 3547, Jasper, AL 35502

Walker Medical Diagnostics, LLC
Jackie Lee, RT, CNMT
1450 Jones Dairy Road, Jasper, AL 35501

NMT CLINICAL SITES
Clinical education is a major component of the nuclear medicine technology professional phase program. This allows the student to get first hand and hands on experience in the clinical setting which allows the students to get real world practical experience as part of their overall education. This enables the student to become an entry level technologist by the time of graduation through completing documented clinical competencies and experiences.

The following Alabama facilities serve as clinical practice sites:
- Baptist Medical Center Princeton, Birmingham
- Brookwood Diagnostic Cardiology Center, Birmingham
- Brookwood Medical Center, Homewood
- Cardinal Health Nuclear Pharmacy, Birmingham
- Children’s Hospital, Birmingham
- Citizens Baptist Medical Center, Talladega
- Cullman Medical Center, Cullman
- Decatur Morgan HH Hospital, Decatur
- Dept. of Veterans Affairs Medical Center, Birmingham
- Heart South Cardiovascular, PC, Alabaster
- Image South PET Center, Birmingham
- Shelby Baptist Medical Center, Alabaster
- St. Vincent’s East, Birmingham
- The Kirklin Clinic – PET, Birmingham
- The Kirklin Clinic – Cardiology, Birmingham
- Trinity Medical Center, Birmingham
- UAB Highlands Hospital, Birmingham
- UAB Hospital, Birmingham
- UAB Medical West, Bessemer
- Walker Baptist Medical Center, Jasper
- Walker Medical Diagnostics, LLC, Jasper
## Professional Phase Curriculum

### Prerequisite Courses (40 hours)

- Pre-calculus Trigonometry
- Introductory Chemistry I & II
- Pathophysiology
- Human Anatomy and Physiology
- First Aid and BLS CPR
- Statistics
- College Physics I & II
- Medical Terminology
- Medical Terminology
- Health Care Systems

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<tr>
<td>NMT 602 Intro to Clinical Nuclear Medicine, Patient Care &amp; Communication Skills</td>
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<td>NMT 610 Medical Radiation Physics &amp; Lab</td>
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<td>NMT 621 Nuclear Medicine Instrumentation I &amp; Lab</td>
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<tr>
<td>NMT 631 Nuclear Medicine Anatomy and Physiology – Procedures I</td>
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<td>CDS 501 Professional Skills I</td>
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<td>CDS 610 Research Design &amp; Stats</td>
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<td>NMT 461 Regulations, Radiation Protection/Biology &amp; Lab</td>
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<td>NMT 691 Clinical Practice I</td>
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<td>CDS 502 Professional Skills II</td>
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<td>CDS 625 Analysis of Scientific Publication</td>
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<td>NMT 602 Cross-Sectional Anatomy</td>
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<td>NMT 622 Nuclear medicine Instrumentation II</td>
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<td>NMT 623 Computed Tomography</td>
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<td>NMT 692 Clinical Practice II</td>
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<td>HCM 590 Management Class</td>
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<td>CDS 503 Professional Skills III</td>
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<td>NMT 660 Radiopharmacy, Pharmacology &amp; Lab</td>
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<tr>
<td>NMT 693 Clinical Practice III</td>
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<tr>
<td>NMT 698 Non-Thesis Research</td>
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<td>CDS 504 Professional Skills IV</td>
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**Total Hours for Professional Phase Program**: 64
Students may choose from two concentrations: Computed Tomography (CT) or Magnetic Resonance Imaging (MRI). Courses for each concentration will begin in the summer term of the first year of the professional phase of the NMT curriculum.

**CT Concentration Courses**

**SECOND YEAR**

**Summer**
NMT 605 Cross-sectional Anatomy (3) – Program Course
NMT 623 Computed Tomography (3) – Program Course

**Fall**
NMT 633 Computed Tomography Procedures (3) – Elective

**Spring**
NMT 694 Computed Tomography Clinical Practice (10) – Elective

**MRI Concentration Courses**

**FIRST YEAR**

**Spring**
NMT 624 MRI Physics and Instrumentation (3) – Elective

**Summer**
NMT 601 Introduction to MRI Clinic (2) – Elective
NMT 605 Cross-sectional Anatomy (3) – Program Course

**SECOND YEAR**

**Fall**
NMT 634 MRI Scanning & Sequence Optimization (3) – Elective

**Spring**
NMT 695 MRI Clinical Practice (12) – Elective
STUDENT RESPONSIBILITIES

- Maintain academic integrity by refraining from cheating. Incidents of cheating among others should be reported if and when it is witnessed.
- Check email on a daily basis.
- Turn off all cell phones and/or beepers prior to beginning class.
- Report to all class meetings on time.
- Bring all course materials to class.
- Assist in maintaining a constructive classroom environment by refraining from inappropriate disruptions or outbursts. Respectful behavior toward instructors, classmates, and guests is expected.
- It is recommended that you join the Society of Nuclear Medicine & Molecular Imaging as a student member.
- It is recommended that you join the Alabama Nuclear Medicine Society as a student member.
- Have access to a computer with MS Office software for participation in on-line work (software available at UAB bookstore at reduced cost to students.)
- Refer to the Student Policies and Procedures Handbook when in need of program and or didactic policy information. Refer to the clinical handbook when in need of information pertaining to clinical education. Failure to meet student responsibilities may lead to counseling, reprimand and/or probation.

Due to the fact that graphing calculators are not allowed to be used on the Nuclear Medicine Technology Certification Board exam, they are not allowed for use in classes within the NMT program. A non-graphing scientific calculator can be used.

PROGRAM GRADING POLICIES

1. The following grading scale is utilized in all nuclear medicine technology courses with the prefix NMT. It is to be pointed out that this is based on an 8 point scale rather than a 10 point scale.

   \[ A = 92 \rightarrow 100, \ B = 84 \rightarrow 91, \ C = 75 \rightarrow 83, \ F = < 67 \]

2. A current student who receives an “F” in any required course while admitted to the nuclear medicine technology program will be dismissed from the program unless there are mediating circumstances. These circumstances must be extreme in order to be considered.

   In the case of extreme circumstances, the student will be suspended from the program rather than expelled, and must wait until the next time the course in which the failing grade was made is offered again. The student will then be allowed to take the course again. Under the recommendation of the program director, the student may be required to take remedial courses prior to repeating a nuclear medicine technology course. If the student passes the course, then the student may petition the program director for re-entry into the program. If the class size warrants, the student MAY be allowed to re-enter the program at the discretion of the program
director. Re-entry into the nuclear medicine technology program is NOT guaranteed. If the student takes the course again and still fails to make a 75 or greater, the student will be expelled from the program. The student may reapply to the program, and must complete the full application process again and enter the program as a new student. Entry into the program is still not guaranteed, but will be on a competitive basis with the other applicants.

3. Cheating: If a student is caught and proven to be cheating, the student is in violation of the UAB Honor Code (found on the Home Page under Course Information) and will be subject to the UAB policies on Academic Misconduct. At the least, the student will receive a zero for the exam or assigned work and will be put on Academic Probation (see Program Policies and Procedures on Academic Misconduct/Probation). If placed on Academic Probation, a second infraction OF ANY KIND will result in dismissal from the program.

4. Plagiarism: All papers and assignments must be the original work of that student, or have the work of another in quotation marks with proper reference notations immediately following the direct quote. If a student is proven to have plagiarized another individual’s work, claiming that work as his or her own, the student is in violation of the UAB Honor Code (found on the Home Page under Course Information) and will be subject to the UAB policies on Academic Misconduct.
TEXTBOOK LIST

2015-2016

The following books must be purchased for use during participation in the program. This list is subject to change. Students are required to use the i>clicker software for all of the following courses.

FALL

NMT 602
Intro to Radiography & Patient Care, 6th Edition
Adler & Carlton
Saunders
978-1437716467

NMT 610
Medical Imaging Physics
Hendee and Ritenour
9780471382263

NMT 621
Physics in Nuclear Medicine, 3rd Edition
Sorenson, Phelps, and Cherry
9780721683416

NMT 621
Nuclear Medicine and PET/CT Technology and Techniques, 7th Edition
9780323071925

NMT 621/NMT 622
Nuclear Medicine Instrumentation, 2nd Edition
Prekeges, Jennifer
9780763766382 (Provided by program- on loan)

NMT 621/622 & NMT 631/632
Nuclear Medicine and PET/CT Technology and Techniques, 7th Edition
Christian & Waterstaram-Rich
Mosby-Elsevier
9780323071925

NMT 631 & NMT 632
Nuclear Medicine Technology Procedures and Quick Reference
Pete Shackett
Lippincott, Williams & Wilkins
9780781774505

SPRING

NMT 622/NMT 632
Nuclear Cardiac Imaging: Terminology & Technical Aspects, 2nd Edition
Crawford and Husain
Society of Nuclear Medicine
978932004857

NMT 632
Quick and Accurate 12-lead ECG Interpretation, 4th Edition, Dale Davis
Lippincott Williams & Wilkins
9781582553795

NMT 641
Essentials of Radiation Biology and Protection, 2nd Edition
Forshier, S., Delmar
Thompson Learning, 2002
978142812173

NMT 641
Radiation Protection in the Health Sciences (with problem solutions manual), 2nd Edition
Noz and Maguire
World Scientific
9789812705976
NMT 641
*Guide for Diagnostic Nuclear Medicine and Radiopharmaceutical Therapy*
Jeffery A. Siegel
Society of Nuclear Medicine
9780972647823

**SUMMER**
NMT 605
*Sectional Anatomy for Imaging Professionals,*
2nd Edition (or newest edition)
Lorrie L. Kelly and Connie M. Petersen
Mosby
0323020038

NMT 605 (Recommended)
*Workbook of Sectional Anatomy for Imaging Professionals,* 2nd Edition (or newest edition)
Lorrie L. Kelly and Connie M. Petersen
Mosby
0323020046

NMT 622 (See NMT 621)
*Nuclear Medicine and PET/CT Technology and Techniques,* 7th Edition
9780323071925

NMT 623
*Computed Tomography: Physical Principles, Clinical Applications and Quality Control,*
3rd Edition
Euclid Seeram, W. B. Saunders
9781416028956

**SECOND YEAR FALL**
NMT 660
*Fundamentals of Nuclear Pharmacy,* 6th Edition
Gopal B. Saha
Springer-Verlag New York, Inc.
9781441958594

NMT 698
*Steves Review of Nuclear Medicine Technology,*
4th Edition
0932004873 (Provided by program - on loan)
UAB AND PROGRAM ASSESSMENTS AND EVALUATIONS

The student is requested to do several types of assessments throughout their participation within the program. A list of those assessments and a brief explanation are below.

By completing the evaluations of the program, the program can identify areas in need of improvement or enhancement in order to better meet the educational needs of the student.

1. Course / Instructor Evaluation
   - This is done by the student electronically at the completion of each course at the end of each semester.
   - While the student is not required to do the evaluation, the information is vital for the instructor to use to improve the course.
   - The evaluations are anonymous.

2. Student End-of-Term Evaluation
   - This is done at the end of each semester the student is enrolled in the clinic.
   - The student is requested to submit a self-assessment of how they perceived their performance was in clinic for that semester.
   - If necessary, a meeting with the student and the program director will be arranged to work out any identified problem areas.

3. Exit Interview
   - This is done at the end of the last semester of the program.
   - The student is requested to do an evaluation of the program’s strengths and weaknesses as perceived by the student.
   - The evaluation is anonymous.

Nuclear Medicine Technology Certification Board – UAB NMT Program Results

First Time Taking the Exam Upon Completion of UAB NMT Program Results:

<table>
<thead>
<tr>
<th>Year</th>
<th>UAB NMT Program</th>
<th>National Average for Equivalent Program Graduates</th>
<th>Overall National Average for All Examinees</th>
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<td>2013</td>
<td>100%</td>
<td>90.78%</td>
<td>89.90%</td>
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<td>2012</td>
<td>92.80%</td>
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<td>2011</td>
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<td>92.5%</td>
<td>91.4%</td>
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<td>2010</td>
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<td>2009</td>
<td>100%</td>
<td>94.3%</td>
<td>89.9%</td>
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</tbody>
</table>
ACCREDITATION

Accreditation: The NMT program is accredited by:
The Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT).

JRCNMT
2000 W. Danforth Road
Suite 130, #203
Edmond, OK 73003
Phone: 405.285.0546
Fax: 405.285.0579
jrcnmt@coxinet.net
www.jrcnmt.org

Credentials Conferred: Post Baccalaureate degree and a certificate of completion are awarded by the University of Alabama at Birmingham

Board Certification: Graduates of the program are eligible to apply for the certification examination offered by both the Nuclear Medicine Technology Certification Board (NMTCB) or the American Registry of Radiological Technologists (ARRT)

Nuclear Medicine Technology Certification Board
3558 Habersham at Northlake
Building I
Tucker, GA 30084
http://www.nmtcb.org/root/default.php

ARRT
1255 Northland Drive
St. Paul, MN 55120
https://www.arrt.org/

Phone: (651) 687-0048
Fax: (651) 681-3299

Phone: (404) 315-1739
Toll Free: (800) 659-3953
Fax: (404) 315-6502
E-mail: board@nmtcb.org
STUDENT SEIZURE PROTOCOL

1. If a student has a seizure and comes out of the seizure physically unharmed and appears to be fine after the event:
   - Do not call 911.
   - Do not write up an incident report.
   - Make sure the student is ok.

2. If a student has a seizure and is physically harmed but seems fine otherwise (i.e. a fall occurs, the student bumps their head etc.):
   - Write up the incident as a “not a medical emergency” incident (see item 5 on the attached incident reporting policy).
   - Notify the program director immediately: (205) 934-3427 or (205) 975-4237
   - Transport the student to student health (1714 Ninth Avenue South) with a medical authorization form. This may be done by faculty or staff.

3. If the student has a seizure and is unresponsive or alert but not coherent:
   - Call 911.
   - Write up the incident as a “major medical injury” (See item one on the attached incident reporting policy).
   - Accompany the student to the ER to present the completed medical authorization form. This may be done by faculty or staff.
   - Notify the program director immediately.

If this were to occur a medical authorization form and incident report form would need to be completed.

CLOSING NOTIFICATIONS

Your safety should always take precedence to official closings. To find out if class cancellation occurs due to bad weather (snow and ice) on an assigned class day use the following official sources:

UAB radio station WBHM 90.3

The UAB Web site at www.uab.edu

BlazerNet at www.uab.edu/blazernet

The UAB inclement Weather Hotline at (205) 934-2165
**NMT Code of Ethics**

Nuclear Medicine Technologists must strive as individuals and as a group to maintain the highest of ethical standards.

The Principles (SNMMI-TS Code of Ethics) listed below are not laws, but standards of conduct to be used as ethical guidelines by nuclear medical technologists. These Principles were adopted by the Technologist Section and the Society of Nuclear Medicine and Molecular Imaging at the 2004 Annual Meeting. They are standards of conduct to be used as a quick guide 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 their 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 their profession.

**NMT Drug Testing Policy**

In addition to the SHP Drug Testing Policy, the NMT program reserves the right to test any NMT student, with cause, at any time while they are enrolled in the program under the direction of either the Program Director or Clinical Coordinator.
**Essential Requirements**

The following skills are needed by applicants to the Nuclear Medicine Technology Program. Applicants and students should possess these abilities, or with the help of compensatory techniques and/or assistive devices, be able to demonstrate the ability to become proficient.

Manual dexterity: Use of extremities for patient care purposes
- wrists (both) grasping pulling twisting
- hands (both) fingering holding (rotation)
- arms (both) pushing extending cutting

Sensation: palpation auscultation percussion capable of hearing voices of normal range in the presence of background noise

Visual Perception: depth acuity (corrected to 20/40) ability to distinguish shades of gray/color

Physical strength: to support another person to position another person to transfer/ambulate with walker, cane, crutches, bed, wheelchair to stand for long periods of time to perform CPR; resuscitation to walk at a rapid pace for eight hours to lift 10-15 pounds

Ability to operate and maintain equipment (e.g., nuclear medicine instrumentation, ventilator, electronic monitor, etc.)

Interpersonal skills: able to function (consult, negotiate, share) as part of a team able to use oral communication skills able to respond to others’ requests willing to accept direction and supervision

Perform duties while under stress.
**STUDENT AWARDS & SCHOLARSHIPS**

**Scholarships**

Once the student is admitted to the Nuclear Medicine Technology Program, the student becomes eligible to apply for specific scholarships offered by the School of Health Professions as well as scholarships offered through the Society of Nuclear Medicine & Molecular Imaging (SNMMI), and the Alabama Society of Nuclear Medicine (ASNM).

**Society of Nuclear Medicine & Molecular Imaging (SNMMI)**

The Society of Nuclear has various student and professional scholarships available. Applications can be found on the SNM website: [http://www.snmmi.org/](http://www.snmmi.org/). To apply the student must be a member of the SNM. There are student memberships available.

**Alabama Society of Nuclear Medicine (ASNM)**

The Alabama Society of Nuclear Medicine also has various student and professional scholarships available. Applications can be found on the ASNM website: [www.alabamanucmed.org](http://www.alabamanucmed.org). To apply the student must be a member of the ASNM.

**Michael Thompson Scholarship Fund**

Professor Emeritus Michael Alford Thompson, Professor of Medical Physics for 27 years at the University of Alabama at Birmingham (UAB) School of Health Professions, suddenly and unexpectedly passed away on January 2, 2009 at the age of 59. He retired in 2007 from the faculty of the UAB Nuclear Medicine Technology Program after suffering with Parkinson’s disease for 7 years. His 30 year career at UAB began in 1977 as a Radiation Safety Monitor in the Occupational Health Safety Office. He transferred to the School of Health Professions in April of 1980 and began utilizing teaching experience he obtained at Francis Marion College in Florence, South Carolina, where he taught Physics and Mathematics from 1974-1977. In May 1986, just six short years after joining the faculty, he was honored with the School of Health Professions highest faculty award, the Joseph F. Volker Outstanding Faculty Award. He received the President’s Excellence in Teaching Award in May of 1993 and twice (1995 and 1997) was a finalist for the highest faculty award given by UAB, The Ellen Gregg Ingalls / UAB National Alumni Award. These faculty awards are a testament to Michael Thompson’s reputation as an outstanding educator. Numerous former students were led to the field of Health Physics through Professor Thompson’s efforts. He continuously promoted the field and would personally hand out application forms to students he thought had any interest in health physics. As a long-time member he would sign off on the applications and personally mail them into the society. Many former students went on from the UAB NMT Program to pursue a Health Physics degree at Georgia Tech with recommendations provided by Professor Thompson.

In addition to being an outstanding educator for the School of Health Professions and promoter of the field of health physics, Professor Thompson created and marketed many educational...
materials through the years. His Principles of Radiation Protection Video Series has been sold internationally. His most recent undertaking has been educational PowerPoint CD packages which have included topics on nuclear instrumentation, radiologic physics, radioactive decay processes, and radiation protection. In 1994, he led the effort for publication of a text book for radiography entitled “Principles of Imaging Science and Protection” from the W.B. Saunders Company.

Professor Emeritus Michael Thompson was beloved by the many students he taught over his 30 year career and will be remembered for being a kind, gentle, and generous person who gave all he could to his students to help them in the learning process. Being a talented educator and a dedicated professor devoted to life-long learning, he will be greatly missed by all who were fortunate enough to be his students.

In an effort to honor the contributions Professor Thompson made during his career at UAB, the NMT Program will establish a student scholarship in his name as a lasting remembrance of Professor Emeritus Michael Thompson.
SECTION 4: CLINICAL EDUCATION MANUAL

CLINICAL EDUCATION MANUAL
NUCLEAR MEDICINE TECHNOLOGY PROGRAM
Student Technologist Responsibilities

1. Incorporate oneself into the individual department routine. Starting times, coffee breaks and lunch periods are scheduled according to scheduling, staffing needs and constraints, and the educational needs of the student.

2. Consistently attend all scheduled experiences on time. If absence or lateness is unavoidable, both the clinical instructor and the NMT office (975-4237) or (934-3427) must be contacted within 30 minutes of the scheduled starting time. (Names and telephone numbers of clinical instructors appear on pages 58-62.) The supervising technologist at each clinical site will set the starting time for the individual student. The starting time may change during the clinical rotation to afford the student certain clinical experiences. The student must be present in clinic for 8 hours each day, excluding lunch and coffee breaks.

3. Wear nametags and personal dosimetry monitoring devices provided.

4. Wear clinical attire as required by the participating institution. If none is required, appropriate professional attire is still expected. (See CDS Dept. Dress Code page 31 and Clinic Dress Code page 65)

5. Wear disposable gloves when handling radioactive materials.

6. Observe standard precautions when handling patients or patient specimens.

7. Demonstrate professional behavior at all times by:
   a. Refraining from criticizing and/or comparing hospitals, technologists or other students.
   b. Refraining from any discussion concerning the patient with colleagues in patient areas and/or in any way, which is not pertinent or relevant to the procedure or patient care.
   c. Taking care with any words spoken within the patient's hearing range.
   d. Refraining from extraneous or boisterous conversation while any procedure is in progress.
   e. Avoiding the display of emotional reactions (distaste, disgust, surprise) in the presence of patients.
   f. Displaying concern, patience and interest in the patient.
   g. Maintaining confidentiality of patient records and/or any information offered by the patient.
   h. Refraining from discussing one patient with another.
   i. Refrain from using cell phones during assigned clinical times. (See Cellular Phone & Electronic Devices Policy page 67)

8. Work under the supervision of a nuclear medicine technologist or other trained personnel.

9. Demonstrate professional judgment and responsibility by:
   a. Observing the rules and regulations of the department.
   b. Working in an orderly fashion with the assigned clinical instructor.
   c. Considering consequences before acting.
   d. Recognizing which decisions require approval.
   e. Recognizing own limitations and responsibilities in the work situation.
   f. Adjusting the pace to situation requirements.

10. Assume some responsibility for one's own learning by:
    a. Utilizing all available resources (e.g., books, journals, charts, health team personnel).
    b. Using unstructured time wisely.
c. Functioning without prodding.
d. Showing interest by asking questions and seeking new learning experiences.
e. Accepting constructive criticism gracefully.
f. Evaluating one's own performance and checking those perceptions with instructors.

11. Maintain a clinical journal and enter into it a daily report of clinical experiences.
   Program faculty will review students’ journals during each clinic visit to ascertain that students
   are receiving a comprehensive clinical experience and are participating at a level commensurate
   with their clinical experience.

12. Adhere to the policies and procedures described in this handbook. (See Failure to Follow
    Policies/Procedures, page 69)

13. Evaluate the clinical experience received at a particular site at the conclusion of each rotation.
    (See Student Evaluation of Clinical Experience, page 70)

**Nuclear Medicine Technology Program Clinical Affiliates**

1. **Baptist Medical Center-Trinity**
   Nuclear Medicine Department
   800 Montclair Road
   Birmingham, AL 35213
   *Richard Croom, CNMT, RT
   Lena Abdoli, CNMT
   (205) 592-1315

2. **Baptist Medical Center-Princeton**
   Nuclear Medicine Department
   701 Princeton Avenue SW
   Birmingham, AL 35211
   *James Nance, MSRS, CNMT
   Nicholas Hatfield, CNMT
   Sharon Berry, CNMT
   Donna Barber, CNMT
   Sara Mayo, CNMT
   Whitney Falkner Henderson, CNMT
   (205) 783-3020

3. **Brookwood Medical Center**
   Nuclear Medicine Department
   2010 Brookwood Medical Center Drive
   Birmingham, AL 35209
   *Jennifer Potts, CNMT
   Cheryl Counce, CNMT, ARRT (RT)(NM)
   Ted Hodnett, CNMT, ARRT
   Jazmine Sharpe, CNMT
   Jean Schor, CNMT, ARRT(RT)
   Rose Marie Nelson, CNMT
   Meghan Webb, CNMT
   Kevin McClure, CNMT
   (205) 877-1354
4. **Cardinal Health Nuclear Pharmacy Services**  
   1218 Third Avenue South  
   Birmingham, AL  35233  
   *(205) 324-3673*  
   *James Underwood, PharmD  
   Corey Nichols, PharmD*

5. **Cardiology PC**  
   Professional Building,  
   701 Princeton Avenue SW  
   Birmingham, AL  35211  
   *(205) 786-8733*  
   *Sue Hunt, CNMT, R.T.(R)(N)(ARRT)  
   Jay Roberson, CNMT  
   Larry Hyche, CNMT  
   Phillip Russell, CNMT  
   Leigh Ann Cooper, CNMT  
   Nick Munkachy, CNMT*

6. **Brookwood Cardiology Diagnostic Center**  
   3980 Colonnade Parkway  
   Birmingham, AL  35243  
   *(205) 795-5033*  
   *Cassandra Fuqua, CNMT, NCT  
   Kristi Lawson, CNMT, NCT, PET  
   Dwana Yancey, CNMT, NCT  
   Lisa Wilson, RN  
   Nikki Ardendale, RN  
   Aleshka Kerley, CNMT  
   Stephany Moore, CNMT, NCT  
   Regan Grimm, CNMT  
   Tamara Mayhall, RN  
   Tonya West, RN*

7. **Children's Hospital**  
   Nuclear Medicine  
   1600 7th Avenue South  
   Birmingham, AL  35233  
   *(205) 939-9667*  
   *Sharon Jordan, CNMT  
   Tonya Veitch, CNMT  
   Evelyn Mosquera, CNMT  
   Chasity Townley, CNMT*

8. **Citizens Baptist Medical Center**  
   604 Stone Street  
   Talladega, AL 35160  
   *(256) 761-4498*  
   *Linda Hutchinson, RT, CNMT*

9. **Cullman Medical Center**  
   Nuclear Medicine  
   1912 AL Hwy 157  
   Cullman, AL  35055  
   *(256) 737-2799*
10. **HH Decatur Morgan Hospital**  
1201 7th St. S.E  
P.O. Box 2236  
Decatur, AL 35609  
(256) 341-2545  
*Melissa Shryock, CNMT  
Barbara Moore, CNMT  
Cindy Conway, CNMT  
Sonya Hines, CNMT  
Valerie Goodwin, CNMT

11. **Heart South Cardiovascular Group, PC**  
1022 1st Street North Suite 500  
Alabaster, AL 35007  
(205) 739-2043  
*Sylvester Atkinson, CNMT  
Loukisha Collins, CNMT  
Aleshka Kerley, CNMT  
Mary Meechum, CNMT  
Amy Petersen, CNMT  
Kennedy Harrison, CNMT

12. **UAB Highlands**  
Nuclear Medicine  
1201 11th Avenue South  
Birmingham, AL 35205  
(205) 930-7040  
*Shawn Roberts, CNMT

13. **The Kirklin Clinic, Cardiology Center**  
2000 6th Avenue South  
Birmingham, AL 35233  
(205) 731-9380  
*Ashley Russell, CNMT  
Roslyn Sherrod, CNMT  
Nathan Nichols, CNMT  
Frances Beth Baker, CNMT  
Theresa Diane Guarino, CNMT  
David Kynard, CNMT

14. **The Kirklin Clinic**  
PET Center, 2000 6th Avenue South  
Birmingham, AL 35233  
(205) 801-7561  
*Marc Coleman, CNMT  
Tommy Mahone, CNMT  
Bobby Jackson
15. **St. Vincent’s East**  
Nuclear Medicine Department  
50 Medical Park Drive East  
Birmingham, AL  35235  
(205) 838-3435  
*Crystal Garrett, CNMT  
Matt Patterson, CNMT, RT  
Leigh Ann Burns, CNMT  
Cody Sweatman, CNMT  
Laura Daily, RN

16. **Image South PET Center**  
924 Montclair Rd, Suite 108  
Birmingham, AL  35213  
(205) 591-4738  
*Brittney Gray, CNMT

17. **Shelby Baptist Medical Center**  
Nuclear Medicine  
U. S. Highway 31  
Alabaster, AL  35007  
(205) 620-8602  
* Lisa Moody, RT(R), CNMT  
Diane Guarino, RT(N)  
Brenda Washburn, RT(R), CNMT

18. **UAB Hospital**  
Molecular Imaging and Therapeutics  
7th Floor-Quarterback Towers  
619 19th Street South,  
Birmingham, AL  35233-6835  
(205) 975-8325  
*Daniel Yoder, CNMT  
David Kynard, CNMT  
Jennifer Hill, CNMT  
Jeff Black, RT(N)  
Cynthia Robinson, CNMT  
Rusty Caranto, CNMT  
Jeanette Bythwood, CNMT

19. **UAB Medical West**  
Nuclear Medicine  
US Highway 11 South  
Bessemer, AL  35020  
(205) 481-7190  
*Tiffany Jennings, CNMT  
Christina Self, CNMT  
Stefane’ Glover, CNMT
20. **Department of Veterans Affairs Medical Center**  
Nuclear Medicine Service  
700 19th Street South  
Birmingham, AL  35233  
(205) 933-8101, x 6615  
*Denois Lockett, RT(N)  
Amikka Watts, CNMT  
Cassandra Smith, CNMT  
Shantia King, CNMT  
JD Billingsley, CNMT  
Tracey Britton, CNMT  
Johnathan Crayton, CNMT  
**Radiation Safety:**  
(205) 933-8101, x 6610  
*Kathy Boyd, MS, CNMT  
Kim Holland  

21. **Walker Baptist Medical Center**  
Nuclear Medicine Department  
3400 U. S. Highway 78 East  
Jasper, Alabama 35501  
or  
P.O. Box 3547  
Jasper, AL  35502-3547  
(205) 387-4080  
*Brett Black, CNMT  
Amanda Aaron  

22. **Walker Medical Diagnostics, LLC**  
Nuclear Medicine Department  
1450 Jones Dairy Road  
Jasper, Alabama 35501  
(205) 295-4100  
*Jackie Lee, RT, CNMT  
Kim James, RT  

*Denotes supervisory personnel
<table>
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<tr>
<th>Clinical Site</th>
<th>Phone #</th>
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<td>BMC Princeton</td>
<td>(205) 783-3020</td>
<td>(205)783-7463</td>
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<td>Brookwood Medical Center</td>
<td>(205) 877-1354</td>
<td>(205) 877-2523</td>
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<td>(207) 324-3673</td>
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<td>(205) 786-8733</td>
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<td>(205) 795-5033</td>
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<td>HH Decatur Morgan Hospital</td>
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<td>Heart South Cardiovascular Group, PC</td>
<td>(205) 739-2043</td>
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<td>(205) 591-4738</td>
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<td>(205) 801-7561</td>
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<td>(205) 620-8602</td>
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<td>(205) 930-7040</td>
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<td>(205) 481-7190</td>
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<td>VAMC</td>
<td>(205) 933-8101 (X 6615)</td>
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<tr>
<td>Walker Baptist Medical Center</td>
<td>(205) 387-4080</td>
<td>(205) 387-4618</td>
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<td>Walker Medical Diagnostics, LLC</td>
<td>(205) 295-4100</td>
<td>(205)295-4101</td>
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**DOOR TO DEPARTMENT DIRECTIONS**

(Some clinic sites do not have door to department directions)

**Brookwood Medical Center**

On the first day, the student may park in the employee parking deck but will need to state his/her name into the intercom along with the clinic supervisor and department. Go across the street and up the hill. Enter through the main entrance of the hospital. Take a right and follow the directions to the nuclear medicine department.

**Brookwood Cardiology Diagnostic Center (CVA 280 Location)**

Go to the main entrance. The diagnostic halls are located to the right of main entrance. The entrance to Nuclear Department is on Spect Hall
Cardiology PC
If you park on the street near the ER or in the parking deck across the street from the ER - you should enter the hospital at the door 50 feet to the left of the ER. Take an immediate left when you enter the building. Walk down the ramp and when the tile turns to carpet our door is the first on the right - the

Children’s Hospital
If you are coming from campus, you will just follow the “river” on the 2nd floor across to the Benjamin Russell Building. When you arrive at the lobby, you will take the glass elevators to the first floor and enter the Imaging doors. Once in the department, there will be signs to the Nuclear Medicine Department.

Cullman
Once you enter the main entrance of CRMC, you will go straight until you come to the elevators; take the hall to the left of the elevators. Continue down the hall until you see a sign hanging from the ceiling that says DIAGNOSTIC IMAGING. The door to the right is the waiting room. Go through the waiting room to the desk and the students will ask for someone in Nuclear Medicine department. One of the members of our staff will meet them at the receptionist desk. The doors to Nuclear medicine are locked and you must have an access card to enter.

HH Decatur Morgan
Coming into the admission center door on Somerville Road, go down the hallway (green tile line on floor) right and immediate right into the Nuclear Medicine Department.

Heart South
Enter into the 1022 Tower building, walking straight ahead and take elevators (either on the left or right) up to the 5th floor of the building. Once on the 5th floor, enter into suite 500. Approach front desk; identify yourself as nuclear student and front office staff will notify someone in the nuclear department of student’s arrival.

Image South PET Center
When you come thru the door with the Image South awning over it, you take a left at the hallway and come to the first door on your left and you have arrived at your destination.

Attendance Policy
1. Students are expected to be present in clinic for 8 hours, plus 30 minutes for lunch and two-15 minute breaks if the work schedule permits.
2. Punctual attendance is mandatory.
3. If absence or lateness is unavoidable, both the clinical site and the NMT office (975-4237) must be notified within 30 minutes of the scheduled starting time each day that the student is late or absent.
4. Excessive tardiness or absences may affect the clinical grade adversely.
5. Excessive absences are defined as more than a total of three (3) days per semester or more than one (1) day per rotation period shorter than four weeks.
6. Absences must be made up if they exceed more than three (3) days per semester or more than one (1) day per rotation shorter than 4 weeks.
7. Absences should be made up within two (2) weeks of the end of the semester in which they occurred.
8. If class cancellation occurs due to inclement weather on an assigned clinical day, every effort should be made to be present since it is possible the clinics could be in need of assistance on such days. Your safety, however, should take priority. If you cannot get to your clinical site, notify your clinical instructor and the NMT office.
9. UAB Attendance / Absence Policy (Undergraduate)
   http://catalog.uab.edu/undergraduate/academicstudentresources/progresstowardadegree/#enrollmenttext

**Dress Code**
1. All students must wear a long sleeved, knee length lab coat over appropriate street clothes or uniform. No jeans, short skirts, revealing clothing, caps or headwear of any kind are permitted. Headdresses may be worn for religious reasons if approved by faculty, staff and clinical affiliate.
2. The only uniform permitted is defined scrubs with a white or black undershirt. The color of the scrubs will be voted on and determined by each class.
3. Whole body and finger personal dosimetry badges must be properly worn whenever in clinic particularly due to handling radioactive material as required by federal, state and institutional regulations.
4. Student name badges must be worn at all times.
5. Footwear should be clean, cover the entire foot, closed-toed and provide good balance. No high heels, clogs, open-toed shoes are permitted. Properly and securely laced black or white athletic shoes in good condition may be worn.
6. Jewelry, make-up, cologne, and perfume should be understated and kept to a minimum. Fingernails should be clean and neatly trimmed. While piercings other than one set of earrings are discouraged, all students must abide by the clinical affiliates’ rules and regulations concerning this issue.
7. Hair should be neat in appearance. Longer hair must be worn up and secured off the face. Excessive or unconventional hairstyles or colors are prohibited. Facial hair must be trimmed and neatly kept.
8. No visible tattoos are allowed.
9. Students may be required to comply with the dress code of a particular institution. See Appendix C, D & E, Institutional Dress Codes (UAB Highlands, UAB Hospital, and CVA).

**Radiation Dosimeters**
1. NMT students are issued a whole body badge and TLD ring badge to monitor radiation exposure.
2. Students are responsible for the security of their radiation dosimeters, and are expected to wear them appropriately in the clinical and laboratory settings at all times.
3. Whole body and ring badges will be collected during the last week of each month. Students must review and initial their radiation exposure reports as they become available.

4. Lost badges should be reported to the Clinical Coordinator immediately. Students are not permitted to participate in instructional or clinical activities involving radioactivity without appropriate radiation dosimeters. There is a replacement charge of $5.00 for ring badges and $5.00 for whole body badges, payable at the time the new badge(s) is (are) received. A lost film badge report form must also be completed as required by the UAB Radiation Safety Office.

**ACCIDENTS AT CLINICAL SITES**

Students who are involved in accidents while in clinic should report the incident to the clinical supervisor immediately. Initial treatment for the injury may be rendered by the clinical site. A charge may be made to the student or the student’s insurance for all or part of that treatment. If more extensive treatment is required, depending on the nature of the injury, the student should report to the Student Health Service or the UAB Hospital Emergency Department. If the injury involves a needle stick or exposure to infectious disease, see policy by this link: [http://www.uab.edu/studenthealth/emergencies/blood-a-body-fluid-exposure](http://www.uab.edu/studenthealth/emergencies/blood-a-body-fluid-exposure)

An incident report should be completed at the site where the accident occurred and copies should be forwarded to the Student Health Service and the NMT Program Director.

The NMT Program Director or Clinical Coordinator should be informed promptly after the accident has occurred.

**EXPOSURE TO INFECTIOUS DISEASE**

Students who have received a needle stick injury or who may have been exposed to an infectious disease (e.g., HIV, hepatitis B, tuberculosis) should report the incident to the clinical supervisor immediately.

If the student is in clinic at UAB:
Contact UAB Employee Health (934-3675) during regular daytime working hours or page the Rapid Response Needlestick Team (934-3411) after hours. The student will be instructed where to report for evaluation and treatment.

If the student is in clinic in Birmingham, but outside UAB:
If the institution will not provide care free of charge to the student, contact UAB Student Health (934-3580) or UAB Employee Health (934-3675) for advice about where to report for evaluation and treatment.

If the student is in clinic outside of Birmingham:
Contact UAB Student Health (934-3580) during regular business hours or, if after hours, page the Rapid Response Needlestick Team (934-3411) for advice about where to be evaluated. If travel to Birmingham is not practical, the student will be advised to seek care at the local emergency department if the clinical facility will not provide evaluation through its own employee health service.
An incident report should be completed at the site where the exposure occurred and should include the following details:

a) the type of exposure  
b) the hepatitis or HIV status of the patient  
   (If the patient’s serological status is unknown, the clinical supervisor should contact the patient’s attending physician and request the physician obtain a specimen for serologic testing.)

The student should submit a copy of the incident report and/or copy of the treatment received at the emergency department within a week of the injury/exposure. This documentation should be mailed or hand delivered. Faxes will not be accepted to comply with guidelines governing patient confidentiality.

The NMT Program Director or Clinical Coordinator should be informed promptly after the needle stick/exposure has occurred.

**CELLULAR PHONE AND ELECTRONIC DEVICES POLICY**

While in clinic, a student is permitted to have a cell phone; however, the use of a cell phone is only permitted during breaks and lunch periods.

If an emergency situation occurs where the student must be in contact with family or friends, cell phones may be left on in silent or vibrate mode only and any emergency calls must be taken away from patient areas. If this emergency situation occurs in clinic, then the student must notify the Clinical Supervisor of such situation beforehand.

Any other personal electronic devices must only be used during breaks and lunch periods.

**PREGNANCY POLICY**

The purpose of the student pregnancy policy is to assure students a safe pregnancy and to be in compliance with federal and state radiation control regulations as well as the Equal Employment Opportunity Commission guidelines. Pregnant student nuclear medicine technologists may continue in the Nuclear Medicine Technology program. It is the individual student’s responsibility to utilize the guidelines set forth in this policy for protection of the embryo/fetus and self. (see Pregnancy Acknowledgement)

**Procedure:**

1. Any suspected or known pregnancy can be voluntarily reported to the Program Director and/or the Academic Clinical Coordinator in writing. The program faculty will discuss with the pregnant nuclear medicine technology student the effects of irradiation in utero inclusive of radioprotective procedures.

2. The pregnant student will sign the Pregnancy Release form to acknowledge comprehension of the information provided by the Program faculty. The student will also be referred to the ASRT guidelines and other pertinent references on the subject.

3. The pregnant student will be issued an additional fetal monitor (radiation dosimeter) which will be worn at the waist and **under** a protective apron.

4. According to the NCRP Report # 53, the maximum permissible dose equivalent from occupation
exposure to the expectant mother is 500 mrem (5 mSv) for the entire pregnancy.

5. The monthly radiation exposure report inclusive of accumulative dose for each individual is made available to the Program faculty and the student.

6. In accordance with the pregnancy policy of the specific clinical assignment, a student will wear an appropriate lead apron while in clinic.

7. It is not recommended that a pregnant student perform or observe any radiation therapy technique or PET procedure for the duration of the pregnancy.

8. Clinical rotation schedules may be modified to schedule the pregnant student through low radiation areas especially during the first trimester.

9. The pregnant student is expected to meet all objectives and clinical competencies of each clinical education course without exception. Failure to complete all required clinical assignments could possibly result in a failing grade for that clinical course.

10. For further information on this matter, visit the NRC website at www.nrc.gov/ then proceed by using the following prompts:
   - NRC Library
   - basic reference
   - key guidance documents
   - regulatory guides
   - occupation health
   - guide 8.13

11. A student is offered two alternatives after the consultation with the Program Director upon voluntarily declaring pregnancy. These options are:
   a. The declared pregnant student can immediately withdraw from all clinical and didactic courses and write a letter to the Radiography Program Director requesting re-entry the following year.
   b. The declared pregnant student can continue in the program after being given specific instruction regarding radiation safety practices, additional radiation monitoring, and specific clinical and laboratory assignments.

12. The student must abide by the regulations set forth by UAB Radiation Safety concerning Occupationally Exposed Pregnant Personnel and complete any advised training or informational programs requested by UAB Radiation Safety.

13. See NMT Program Policy and Procedure manual for more information.

**Essential Functions**
The following skills are needed by applicants to the Nuclear Medicine Technology Program. Applicants and students should possess these abilities, or with the help of compensatory techniques and/or assistive devices, be able to demonstrate the ability to become proficient.
Manual dexterity: Use of extremities for patient care purposes
  wrists (both) grasping pulling twisting
  hands (both) fingering holding
  arms (both) pushing extending cutting

Sensation: palpation auscultation percussion
capable of hearing voices of normal range in the presence of background noise

Visual Perception: depth acuity (corrected to 20/40)
ability to distinguish shades of gray/color

Physical strength: to support another person
to position another person
to transfer/ambulate with walker, cane, crutches, bed, wheelchair another person
to stand for long periods of time
to perform CPR; resuscitation
to walk at a rapid pace for eight hours
to lift 10-15 pounds

Ability to operate and maintain equipment (eg., nuclear medicine instrumentation, ventilator, electronic monitor, etc.)

Interpersonal skills: able to function (consult, negotiate, share) as part of a team
  able to use oral communication skills
  able to respond to others’ requests
  willing to accept direction and supervision

Perform duties while under stress

Students requesting disability accommodations must do so by filing a disability accommodation request with the UAB Disability Services Office.

**FAILURE TO FOLLOW POLICIES AND PROCEDURES OF THE CLINICAL HANDBOOK**

Students are required to follow the policies and procedures outlined in the Clinical Education Handbook. The Handbook is distributed at the beginning of the third term, the term in which the clinical experience begins. **Ignorance of the contents of the Clinical Handbook is not an excuse for noncompliance.**

Violations of the policies and procedures will be handled in the following manner:

**First violation:**
The program director or clinical coordinator will review the policy or procedure in question with the student to ensure that the student understands the expected behavior. The counseling session will be documented in writing and maintained in the student's file.

**Second violation:**
The student will receive written notification that he/she is being placed on probation for failing to adhere to a policy or procedure for the second time. The period of probation will extend for the remainder of the term in which the second violation took place and the following term.
Third violation:
The third infraction will result in the student's dismissal from the program.

Scheduled Clinical Site Visit Policy:
Students are to remain at the clinical site until the scheduled visit has been changed or is complete. A scheduled site visit will be conducted by one of the University of Alabama at Birmingham Nuclear Medicine Program personnel. No student is to leave the clinic site prior to the clinical site visit unless an emergency occurs. In the event of an excusable emergency, proper documentation should be submitted.

Student Evaluation of Clinical Experience
Students' perceptions about the effectiveness of clinical teaching are very helpful in improving and strengthening the clinical portion of the NMT curriculum. To gather this information in a systematic way, students are asked to evaluate the clinical instruction they have received at the conclusion of each rotation. The completed evaluation form (see Appendix E) should be returned to the Clinical Coordinator within three days of the end of a rotation.

Clinical Education

Overview of Clinical Education
The purpose of clinical education is to provide students with experiences that cannot easily be reproduced in a classroom or instructional laboratory setting. Each student in the Nuclear Medicine Technology Program will be placed in the following areas:

- General Imaging
- Nuclear Cardiology
- Radiopharmacy
- PET Imaging
- Elective - pediatric nuclear medicine

While an attempt is made to standardize the clinical experience, each student’s experience will be slightly different based on the student’s initiative and prior clinical experience and the clinic site’s patient population and workload.

To assure that students receive comparable clinical experiences, the clinical education system is composed of five areas that include both written assignments and hands-on skills learning. The five areas are summarized on the next page, Clinical Evaluation System. The written assignments are designed to help students apply their didactic knowledge to clinical practice, and to assist them in evaluating individual strengths and weaknesses as they progress through the clinical practicums. Attaining certain clinical skills is the major focus of the clinical practicum. Hence, the clinical competencies comprise 50% to 80% of the clinical grade, with the greater emphasis on these skills in the last two semesters of the curriculum.

At the end of each term, the student meets with the Clinical Coordinator or Program Director to review the student’s self-assessment and to identify the clinical competencies to be completed in the following term.

While in clinic, the student shall be supervised by clinical faculty that are certified nuclear medicine technologists with at least two year’s experience.
# Clinical Evaluation System

<table>
<thead>
<tr>
<th>Clinical Assignments</th>
<th>Second Semester</th>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Assignments</td>
<td>20%</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>1. General Orientation</td>
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<td>(unless unable to complete during the 3rd Semester)</td>
<td>(unless unable to complete during the 3rd Semester)</td>
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<tr>
<td>2. Camera Quality Control</td>
<td></td>
<td>Third semester: 70%</td>
<td>Fourth semester: 70%</td>
</tr>
<tr>
<td>3. NRC Regulation Compliance</td>
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<td>Third semester:</td>
<td>Fourth semester:</td>
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*Clinical Competencies*

<table>
<thead>
<tr>
<th>Clinical Competencies</th>
<th>Second Semester</th>
<th>Third Semester</th>
<th>Fourth Semester</th>
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<tr>
<td></td>
<td>50%</td>
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<td>Fourth semester: 70%</td>
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<td>Camera quality control</td>
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<td>Stefan Cardiology</td>
<td>General Imaging</td>
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<tr>
<td>Dose calibrator quality control</td>
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<td>Stress test</td>
<td>As assigned</td>
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<tr>
<td>Radiation safety/protection</td>
<td></td>
<td>Myocardial perfusion imaging</td>
<td>Myocardial perfusion processing</td>
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<tr>
<td>Areas surveys/wipe testing</td>
<td></td>
<td>Bone imaging</td>
<td>As assigned</td>
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<tr>
<td>IV injections (if permitted)</td>
<td></td>
<td>Other general imaging competencies as assigned</td>
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*In addition to the imaging rotations, each student will complete at least 1 week rotation in Radiopharmacy and a 4-6 week rotation in PET imaging. Students may also complete a 2-3 week elective in pediatric nuclear medicine.

**Summary Evaluation**

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<th>Summary Evaluation</th>
<th>Second Semester</th>
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**Case Studies**

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**Self-Assessment**

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**TOTAL**

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*Please note that clinical competencies may vary for each semester depending on the clinical rotation site the student is assigned to.*
### Sites for Completion of Clinical Competencies

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<tr>
<th>Camera Qc</th>
<th>Dose Calb Qc</th>
<th>Area Survey</th>
<th>Bone</th>
<th>Hepatobil</th>
<th>Lung Perf</th>
<th>Lung Vent</th>
<th>Renal</th>
<th>Renal Process</th>
<th>Thyroid</th>
<th>Thy Upt</th>
<th>Muga</th>
<th>Muga Process</th>
<th>IV Inj</th>
<th>Stress Test</th>
<th>Myocard Perf Imag</th>
<th>Myocard Process</th>
<th>IV Placement</th>
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Y = Yes
N = No
## Sites for Completion of Clinical Competencies (Nuclear Cardiology)

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<th>BMC CARDIO</th>
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<td></td>
<td></td>
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<tr>
<td>dose calb</td>
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<tr>
<td>qc</td>
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<tr>
<td>area survey</td>
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<td>muga process</td>
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<td>IV inj</td>
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<td>stress test</td>
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<td>myocard perf imag</td>
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<td>myocard process</td>
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<tr>
<td>IV Placement</td>
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<td>N</td>
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<tr>
<td>Attenuation Correction</td>
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<td>N</td>
<td>Possible</td>
<td>N</td>
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</table>

**Y = Yes**  
**N = No**
NUCLEAR MEDICINE TECHNOLOGY PROGRAM CLINICAL OBJECTIVES:
Upon completion of the clinical portion of the NMT curriculum (NMT 491-493), the student will be able to perform the following tasks in the clinical setting.

DEPARTMENT ADMINISTRATION/MANAGEMENT FUNCTIONS
1. State the code numbers and the emergency dialing procedures for cardiac arrest, fire, and security.
2. State the location of the emergency equipment for use in the nuclear medicine department.
3. Describe the daily department routine in relation to patient scheduling, radiation surveys, radiopharmaceutical ordering, and general supplies ordering.
4. Interact with hospital and departmental staff to schedule examinations most effectively.

RADIATION SAFETY/PROTECTION
1. Use time, distance and shielding techniques consistently to minimize radiation exposure to self and others.
2. Wear protective clothing and personnel monitoring devices consistently.
3. Use appropriate methods for storing and disposing of radioactive materials and waste.
4. Perform area radiation surveys and wipe tests for contamination on a regular schedule.
5. Perform decontamination procedures as required.
6. Review own monthly radiation exposure and take appropriate action to decrease exposure, as needed.
7. Receive and process radioactive shipments according to department protocol and regulatory requirements.
8. Maintain records of radiation surveys, wipe tests, waste disposal, radioactive material receipt, and radioactive spills and decontamination according to regulatory requirements.

PATIENT CARE
1. Maintain the patient’s dignity and comfort.
2. Communicate with the patient throughout the procedure to provide reassurance and elicit cooperation.
3. Consistently use standard precautions and appropriate isolation techniques, as necessary.
4. Use proper body mechanics and techniques for transferring patients to and from imaging beds.
5. Operate oxygen delivery equipment, as needed.

6. Observe and maintain intravenous tubing, nasogastric tubing, chest tubes, urinary catheters, CVP lines, and oxygen administration lines.

7. Assist patients with bedpans, urinals, and emesis basins.

8. Determine vital signs as needed.

9. Recognize emergency medical situations and notify appropriate personnel.

10. Initiate CPR, if necessary.

11. Provide appropriate first aid in response to patient seizures, hemorrhage, or fainting.

**IMAGING AND NON-IMAGING PROCEDURES**

1. Verify the identity of all patients and confirm the written orders for a procedure before proceeding with an examination.

2. Explain the procedure to the patient in a clear, honest and reassuring manner, and address any questions or concerns the patient may have.

3. Obtain pertinent medical history by reviewing the medical record or interviewing the patient.

4. Identify contraindications for the nuclear medicine study and confirm that necessary pre-examination procedures have been completed.

5. Administer the appropriate radiopharmaceutical by the proper route.

6. Prepare the necessary equipment for the procedure.

7. Enter appropriate patient data into the computer and select the correct computer acquisition software.

8. Position the patient correctly and comfortably, and position the equipment to encompass the area to be studied.

9. Initiate imaging/data collections at the appropriate time(s) following tracer administration.

10. Perform venipuncture as required to collect venous blood samples.

11. Process examination data using the appropriate computer protocol.

12. Place all examination results in the proper format and label them accurately and completely.

13. Review the examination results for completeness and technical quality.
14. Perform the following routine examinations independently using the appropriate protocol and instrumentation:
   - bone imaging
   - gated equilibrium left ventricular function
   - hepatobiliary imaging
   - lung perfusion imaging
   - lung ventilation imaging
   - myocardial stress/rest imaging
   - renal function imaging
   - thyroid imaging
   - thyroid uptake

**INSTRUMENTATION**

1. Perform routine scintillation camera quality control (uniformity, linearity, resolution and center of rotation) using standardized parameters.

2. Review scintillation camera quality control results and compare with previous results to determine acceptability and need for service.

3. Perform dose calibrator quality control (constancy, linearity, accuracy, geometric variation,) at prescribed intervals using the appropriate radiation sources.

4. Review dose calibrator quality control results and compare with previous results to determine acceptable performance.

5. Calibrate a scintillation spectrometer.

6. Perform daily background checks, chi-square evaluations and energy resolution checks on a scintillation spectrometer.

7. Review scintillation spectrometer quality control and compare with previous results to determine acceptable performance.

8. Operate a survey meter, checking the batteries and check source before each use.

9. Maintain records of instrumentation quality control results according to regulatory requirements.

**RADIOPHARMACY**

1. Correctly elute a Mo-99/Tc-99m generator using aseptic and radiation protection techniques.

2. Assay the eluate and determine its concentration.

3. Perform Mo-99 and Al$^{3+}$ breakthrough checks on Tc-99m eluate, determine if the eluate is acceptable for administration and record the results.

4. Prepare Tc-99m-labeled radiopharmaceuticals according to kit instructions.
5. Calculate the final concentration of the preparation.

6. Determine the radiochemical purity of each prepared Tc-99m radiopharmaceutical, analyze and record the results.

7. Using a calculator and decay factor chart, calculate the volume or number of capsules in a unit dose.

8. Dispense a unit dose using appropriate radiation safety and aseptic techniques, and label the syringe or syringe shield.

9. Verify each unit dose in a dose calibrator before administration.

10. Record unit dose information in the appropriate format.

11. Dispose of radioactive and bio-hazardous waste appropriately.

12. Maintain records of eluate and radiopharmaceutical quality control, and unit dose records according to regulatory requirements.

**Professional Behavior**

1. Assess his/her own work objectively and implement changes for improvement.

2. Exercise independent judgment while remaining within limits of responsibility.

3. Interact with patients in a professional and empathetic manner.


5. Cooperate effectively with other staff members.
CLINICAL ASSIGNMENTS
NMT 491 CLINICAL PRACTICE I

CLINICAL ASSIGNMENT #1: ORIENTATION

Name: _____________________________  Clinical Site: ____________________
Date: _____________________________

1. Who is the clinical supervisor/chief technologist in this department?

2. How many other nuclear medicine technologists work in this department?

3. Identify the physicians who interpret the nuclear medicine studies.

4. If there are other personnel who participate in the performance of patient studies, who are they (e.g., nurse, paramedic) and what are their responsibilities?

5. Who do you call to report an emergency and what is/are the emergency phone numbers? Consider the different types of emergencies: cardiac arrest, fire, security, etc.
Clinical Assignment #1: Orientation Continued...

6. Where is the emergency equipment kept? What equipment does this include?

7. How are the following supplies obtained? From whom are they ordered; who places the order; when is the order placed?
   
   Linen

   Non-radioactive drugs
   (e.g. persantine)

   Radiopharmaceuticals

8. Where is the nuclear medicine procedure manual kept? What is the purpose of this document? When was it last updated? What information is contained in this manual?

9. How is nuclear medicine staff made aware of a referring physician's order?
10. What is this department's procedure for verifying the physician's order for a nuclear medicine study?

11. Who is responsible for transporting patients to nuclear medicine? How is this arranged for?
NMT 491 CLINICAL PRACTICE I

CLINICAL ASSIGNMENT #2: CAMERA QUALITY CONTROL

Name: _______________________________           Clinical Site: ____________________

Date: _______________________________

1. How many scintillation cameras does this department have?

Choose one camera and answer the following questions about it.

2. State the manufacturer's name and model of the camera you have chosen.

3. How large is the crystal in this camera? Crystal size is typically reported as the diameter of the crystal in mm.

4. How many photomultiplier tubes (PMTs) are in this camera?
Clinical Assignment #2: Camera Quality Control Continued...

5. List the collimators available for use with this camera. (Be sure to define the energy ranges for collimators designated as low, medium or high energy.)

6. How is the photopeak and window set on this camera?

7. Is camera quality control performed intrinsically or extrinsically? If extrinsically, identify the collimator that is used.

8. In performing quality control on this camera, what radioactive source is used for uniformity testing? Where is the source placed in relation to the crystal?

9. What type of phantom is used to monitor the camera's resolution and linearity? What is the smallest bar width or hole in the phantom? How does it compare to the camera's intrinsic resolution?
Clinical Assignment #2: Camera Quality Control Continued...

10. Review today's uniformity and this week's resolution/linearity quality control images performed on this camera. Describe the results. How do the most recent images compare with previous images?

11. Based on the most recent quality control images, can this camera be used for patient imaging?

12. How are the results of these quality control results recorded and stored?
NMT 491 CLINICAL PRACTICE I

CLINICAL ASSIGNMENT #3: ASSESSMENT OF COMPLIANCE WITH NRC REGULATIONS

Name: ____________________________ Date: ________________

COMPLIANCE EVALUATION STUDENT CHECK LIST

Specific Licenses

Human use by institutions:

Appointed Radiation Safety Officer? ___ Name: ___________ Qualifications: __________

Medical Radiation Safety Committee instituted? ____ If no, reasons: __________

___________________________________________________________________

If yes, committee members:

___________________________________________________________________

___________________________________________________________________

Users are physicians trained in isotopes? ____ Isotopes authorized _____________

Purpose of use (10 CFR 35.100, 200, etc. with description): ____________________

___________________________________________________________________

Clinical facilities for patient care?:

___________________________________________________________________

___________________________________________________________________

Registration of Sources

Sealed source inventory on file?: ________________________________________

Security

Sources locked up when not in use? _______________________________________

Uncontrolled Area Levels

At all points, dose rate less than 2 mrem/hr. or 100 mrem/week or 0.5 rem/year? ___

___________________________________________________________________

Surveys & Tests

Periodic area surveys? ________________ How often? ________________

Periodic contamination surveys? ____________ How often? ________________
Clinical Assignment #3: Assessment of Compliance with NRC Regulations Continued...

Semi-annual leak test of sealed sources? _________________________________

Instrument calibration

Periodic instrument calibrations? ________ Briefly explain each type with frequency:

- Gamma Camera_____________________________________________________
- Uptake Probe_____________________________________________________
- Well Counter_____________________________________________________
- Dose Calibrator___________________________________________________
- Survey meter____________________________________________________
- Software (eg: flood correction tables)_______________________________
- Any other_________________________________________________________

Waste Disposal

- Disposal by sewer? ________________________ Burial? ________________________
- Transfer? ________________________________ To whom? _______________________

Package Receipt

- Radioisotope orders placed by RSO/ designee?__________________________
- Packages monitored upon receipt? ______________________________________

Personnel Dosimeters

- Available to persons likely to be exposed? ________________ How many? ______
- Radiations measured: ________________________________________________
- Available at all high radiation areas? _________________________________

Signs and Labels

- Radioactive materials areas posted? ___________________________________
- Radiation areas posted? _____________________________________________
- High radiation areas posted? _________________________________________

Instruction of Personnel

- Regulations, licenses and operating procedures available? ________________
- “Notice to Employees” posted in work areas? _____________________________
- Personnel exposure records available? _________________________________
- Emergency procedures posted? ________________________________________
- Adequate training in safety procedures? _________________________________

Records
Clinical Assignment #3: Assessment of Compliance with NRC Regulations Continued

Calibrations? _____________________________ Surveys? _____________________________
Receipt, transfer & disposal of sources? ____________________________________________
Personnel exposures? ________________ Contamination surveys? ______________
Wipe tests? ______________________ Employee training? ______________________

Results of student performed tests

Wipe test for contamination:
Locations of wipes ________________________________
Activities found ________________________________

Area surveys:
Locations of surveys ________________________________
Measures Dose Equivalent Rates ________________________________

_________________________________________  ___________________________
(Signature)                          (Date)
COMPETENCIES:

RADIATION SAFETY & QUALITY CONTROL
Competency Evaluation

**CAMERA QUALITY CONTROL**

**STUDENT:** ________________________________  **DATE:** ________________

Before this evaluation is attempted, the student must have completed independently camera quality control at least 5 times under the supervision of a technologist. The technologist evaluating the student should circle the performance level for each item.

1. Remove existing collimator
2. Raise detector to correct height
3. Place point source at correct distance
4. Place sheet source at correct distance
5. Place bar phantom in correct position
6. Prepare camera &/or computer to begin acquisition (correct energy setting, window setting, acquisition parameters)
7. Label images with appropriate information
8. Present images to supervisor
9. Return camera to operational status
10. Perform qc tests efficiently
11. Observe radiation safety procedures

**Comments:**

After observing the student complete uniformity, resolution, and linearity tests on the gamma camera, I believe that he/she is competent to perform these procedures with minimal assistance.

**Technologist:** ____________________________  **Date:** ____________________________
Dose Calibrator Constancy Check

Student: ____________________________  Date: __________________

Before this evaluation is attempted, the student must have completed independently daily dose calibrator quality control at least 3 times under the supervision of a technologist. The technologist evaluating the student should circle the performance level for each item.

1. Choose correct reference for constancy test
   Met  Not met  Not applicable

2. Measure standard at appropriate radionuclide settings
   Met  Not met  Not applicable

3. Obtain background at each radionuclide setting
   Met  Not met  Not applicable

4. Subtract background from measurement at each radionuclide setting
   Met  Not met  Not applicable

5. Correct each measurement for decay
   Met  Not met  Not applicable

6. Calculate percent difference between calculated and measured readings.
   Met  Not met  Not applicable

7. Record and review results; determine if calibrator is operating within acceptable limits.
   Met  Not met  Not applicable

Comments:

After observing the student complete constancy testing on the dose calibrator, I believe that he/she is competent to perform this procedure with minimal assistance.

Technologist: ____________________________  Date: __________________

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## Competency Evaluation

**Radiation Safety/Protection Practices**

<table>
<thead>
<tr>
<th>STUDENT: ________________________________</th>
<th>DATE: ______________</th>
</tr>
</thead>
</table>

The technologist evaluating the student should circle the performance level for each item.

1. Consistently wears personal radiation dosimeters correctly
   
   - Met
   - Not met
   - Not applicable

2. Consistently uses appropriate measures to reduce radiation exposure (time, distance, shielding)
   
   - Met
   - Not met
   - Not applicable

3. Routinely uses syringe shields when preparing or administering doses
   
   - Met
   - Not met
   - Not applicable

4. Routinely monitors hands & feet before leaving clinical area
   
   - Met
   - Not met
   - Not applicable

5. Disposes of radioactive waste appropriately
   
   - Met
   - Not met
   - Not applicable

6. Consistently wears gloves when handling radioactive materials
   
   - Met
   - Not met
   - Not applicable

7. Promptly cleans radioactive spills and decontaminates area correctly
   
   - Met
   - Not met
   - Not applicable

Comments:

After observing the student complete this task, I believe that he/she is competently performs these procedures with minimal assistance or reminders.

Technologist: ________________________________ Date: ______________________
**Competency Evaluation**

**Area Surveys / Wipe Testing**

**STUDENT:** ________________________________  **DATE:** ______________

Before this evaluation is attempted, the student must have completed independently at least 3 area surveys and wipe tests under the supervision of a technologist. The technologist evaluating the student should circle the performance level for each item.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>1. Check batteries in survey meter before making measurements</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td>2. Measure background radiation level</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td>3. Use survey meter properly</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td>(adjust scale; aim window at area being measured; move probe slowly over area to obtain accurate measurement)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Monitor areas according to department floor plan</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td>5. Record measurements in appropriate format</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td>6. Correctly identify areas needing Decontamination</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td>7. Perform wipe tests on contaminated areas to determine removable condition</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td>8. Decontaminate areas, as necessary, to background level</td>
<td>Met</td>
<td>Not met</td>
</tr>
</tbody>
</table>

Comments:

After observing the student, I believe that he/she competently performs these procedures with minimal assistance.

Technologist: ________________________________  **Date:** ______________
COMPETENCIES:

GENERAL IMAGING
Competency Evaluation

**INTRAVENTOUS INJECTION COMPETENCY**

**STUDENT:** ____________________________  **DATE:** ________________

Before this evaluation is attempted, the student must have completed independently at least 10 intravenous injections under the supervision of a technologist. The technologist evaluating the student should circle the performance level for each item.

1. * Verify written orders for the study  
   | Met | Not met | Not applicable |
2. * Verify patient identification  
   | Met | Not met | Not applicable |
3. Use effective communication skills  
   | Met | Not met | Not applicable |
4. Assemble injection materials  
   (supplies ready, accessible, organized)  
   | Met | Not met | Not applicable |
5. Choose appropriate site  
   (position, assessment)  
   | Met | Not met | Not applicable |
6. Place tourniquet correctly  
   (occlude vein 2-3 in. above site)  
   | Met | Not met | Not applicable |
7. * Use appropriate aseptic technique  
   (alcohol prep used to swab site in spiral inward to outward motion; re-swab if repeat palpation)  
   | Met | Not met | Not applicable |
8. * Wear gloves  
   | Met | Not met | Not applicable |
9. Handle syringe proficiently  
   (inspect contents; remove cap smoothly, place in holder if one used; hold dose to minimize radiation exposure)  
   | Met | Not met | Not applicable |
10. Access vein proficiently  
    (bevel up; vein anchored; syringe securely held; smooth entry; shallow angle of injection; needle penetrates top wall of vein; sufficient depth; minimize manipulation)  
    | Met | Not met | Not applicable |
11. Administer radiopharmaceutical  
    (infuse dose slowly checking for infiltration)  
    | Met | Not met | Not applicable |
12. Release tourniquet  
    (release tourniquet without disturbing needle; release tourniquet before removing needle)  
    | Met | Not met | Not applicable |
13. Remove needle  
    (cotton held lightly over puncture site until needle removed; needle removed in smooth action)  
    | Met | Not met | Not applicable |
**Intravenous Injection Competency continued...**

<table>
<thead>
<tr>
<th>Task Description</th>
<th>Met</th>
<th>Not met</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>14. Care for puncture site (apply pressure to site; apply bandage; check for bleeding)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. * Dispose of waste appropriately (needle not recapped or “scoop” technique used to cover needle; bio-hazardous and radioactive waste disposed of in appropriate containers)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. * Demonstrate proper radiation protection and universal precautions techniques throughout procedure</td>
<td></td>
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</tbody>
</table>

* Failure to perform these tasks constitutes an automatic failure of this competency. Student must complete an additional 10 intravenous injections under the supervision of a technologist before attempting the competency evaluation a second time.

Comments:

After observing the student complete this task, I believe that he/she is competent to perform an intravenous injection independently.

Technologist: ________________________________________  Date: _____________________
Competency Evaluation

**BONE: IMAGING**

**STUDENT:** ________________________________  **DATE:** ________________

Before this evaluation is attempted, the student must have completed independently at least 3 bone-imaging studies under the supervision of a technologist. The technologist evaluating the student should circle the performance level for each item.

**PATIENT CARE:**

1. * Verify patient identification and written orders for study  
   Met  Not met  Not applicable
2. Communicate with patient  
   Met  Not met  Not applicable
3. Obtain appropriate history  
   Met  Not met  Not applicable
4. Perform aseptic IV injection  
   Met  Not met  Not applicable
5. Provide appropriate patient care  
   Met  Not met  Not applicable
6. Assist in patient transfer  
   Met  Not met  Not applicable
7. Provide safe and dignified environment  
   Met  Not met  Not applicable
8. Discharge the patient  
   Met  Not met  Not applicable

**INSTRUMENTATION:**

9. Calibrate camera for radionuclide  
   Met  Not met  Not applicable
10. Choose and install correct collimator  
    Met  Not met  Not applicable
11. Set acquisition parameters correctly  
    Met  Not met  Not applicable
12. Enter patient information  
    Met  Not met  Not applicable
13. Operate camera efficiently  
    Met  Not met  Not applicable

**PERFORM BONE IMAGE:**

14. Remove attenuating objects  
    Met  Not met  Not applicable
15. Request that patient void bladder  
    Met  Not met  Not applicable
16. Position patient correctly  
    Met  Not met  Not applicable
17. Compensate for positioning problems  
    Met  Not met  Not applicable
18. Place detector at appropriate distance  
    Met  Not met  Not applicable
19. Perform image efficiently  
    Met  Not met  Not applicable

**COMPLETING THE BONE IMAGE:**

20. Label images correctly  
    Met  Not met  Not applicable
21. Present study to supervisor  
    Met  Not met  Not applicable
22. Prepare room for next patient  
    Met  Not met  Not applicable

**RADIATION / BIOHAZARDS:**

23. Observe precautions throughout study  
    Met  Not met  Not applicable
PROBLEM SOLVING:
24. Recognizing problems & handle each appropriately

*Failure to perform this task constitutes an automatic failure of this competency.

Comments:

After observing the student complete this study, I believe that he/she is competent to perform this study with minimal assistance.

Technologist: _______________________________ Date: ________________
Competency Evaluation

**BOONE: SPECT IMAGING**

**STUDENT:** ________________________________  **DATE:** ______________

Before this evaluation is attempted, the student must have completed independently at least 3 bone-imaging studies under the supervision of a technologist. The technologist evaluating the student should circle the performance level for each item.

**PATIENT CARE:**
1. * Verify patient identification and written orders for study  
   - Met  - Not met  - Not applicable
2. Communicate with patient (including procedure explanation)  
   - Met  - Not met  - Not applicable
3. Obtain appropriate history  
   - Met  - Not met  - Not applicable
4. Perform aseptic IV injection  
   - Met  - Not met  - Not applicable
5. Provide appropriate patient care  
   - Met  - Not met  - Not applicable
6. Assist in patient transfer  
   - Met  - Not met  - Not applicable
7. Provide safe and dignified environment  
   - Met  - Not met  - Not applicable
8. Discharge the patient  
   - Met  - Not met  - Not applicable

**INSTRUMENTATION:**
9. Calibrate camera for radionuclide  
   - Met  - Not met  - Not applicable
10. Choose and install correct collimator  
    - Met  - Not met  - Not applicable
11. Set acquisition parameters correctly  
    - Met  - Not met  - Not applicable
12. Enter patient information  
    - Met  - Not met  - Not applicable
13. Operate camera efficiently  
    - Met  - Not met  - Not applicable

**PERFORM BONE SPECT IMAGE:**
14. Remove attenuating objects  
    - Met  - Not met  - Not applicable
15. Request that patient void bladder  
    - Met  - Not met  - Not applicable
16. Position patient correctly  
    - Met  - Not met  - Not applicable
17. Compensate for positioning problems  
    - Met  - Not met  - Not applicable
18. Place detector at surface of patient  
    - Met  - Not met  - Not applicable
19. Perform SPECT image efficiently  
    - Met  - Not met  - Not applicable

**COMPLETING THE BONE SPECT IMAGE:**
20. Process and label the image correctly  
    - Met  - Not met  - Not applicable
21. Present study to supervisor  
    - Met  - Not met  - Not applicable
22. Prepare room for next patient  
    - Met  - Not met  - Not applicable

**RADIATION / BIOHAZARDS:**
23. Observe precautions throughout study  
    - Met  - Not met  - Not applicable
PROBLEM SOLVING:

24. Recognizing problems & handle each  Met  Not met  Not applicable appropriately

*Failure to perform this task constitutes an automatic failure of this competency.

Comments:

After observing the student complete this study, I believe that he/she is competent to perform this study with minimal assistance.

Technologist: ________________________________ Date: ________________
## Competency Evaluation

### BONE: LIMITED BONE IMAGING

**STUDENT:** ________________________________  **DATE:** ________________

Before this evaluation is attempted, the student must have completed independently at least 3 limited bone-imaging studies under the supervision of a technologist. The technologist evaluating the student should circle the performance level for each item.

### PATIENT CARE:

<p>| | | | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>* Verify patient identification and written orders for study</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td>2.</td>
<td>Communicate with patient (including procedure explanation)</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td>3.</td>
<td>Obtain appropriate history</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td>4.</td>
<td>Perform aseptic IV injection</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td>5.</td>
<td>Provide appropriate patient care</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td>6.</td>
<td>Assist in patient transfer</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td>7.</td>
<td>Provide safe and dignified environment</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td>8.</td>
<td>Discharge the patient</td>
<td>Met</td>
<td>Not met</td>
</tr>
</tbody>
</table>

### INSTRUMENTATION:

<p>| | | | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>9.</td>
<td>Calibrate camera for radionuclide</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td>10.</td>
<td>Choose and install correct collimator</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td>11.</td>
<td>Set acquisition parameters correctly</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td>12.</td>
<td>Enter patient information</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td>13.</td>
<td>Operate camera efficiently</td>
<td>Met</td>
<td>Not met</td>
</tr>
</tbody>
</table>

### PERFORM LIMITED BONE IMAGE:

<p>| | | | |</p>
<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>14.</td>
<td>Remove attenuating objects</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td>15.</td>
<td>Request that patient void bladder</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td>16.</td>
<td>Position patient correctly</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td>17.</td>
<td>Compensate for positioning problems</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td>18.</td>
<td>Place detector at surface of patient</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td>19.</td>
<td>Perform image efficiently</td>
<td>Met</td>
<td>Not met</td>
</tr>
</tbody>
</table>

### COMPLETING THE LIMITED BONE IMAGE:

<p>| | | | |</p>
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<tr>
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</thead>
<tbody>
<tr>
<td>20.</td>
<td>Label the image correctly</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td>21.</td>
<td>Present study to supervisor</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td>22.</td>
<td>Prepare room for next patient</td>
<td>Met</td>
<td>Not met</td>
</tr>
</tbody>
</table>

### RADIATION / BIOHAZARDS:

<p>| | | | |</p>
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</tr>
</thead>
<tbody>
<tr>
<td>23.</td>
<td>Observe precautions throughout study</td>
<td>Met</td>
<td>Not met</td>
</tr>
</tbody>
</table>
Competency Evaluation Bone: Limited Bone Imaging continued...

PROBLEM SOLVING:
24. Recognizing problems & handle each appropriately

Met Not met Not applicable

*Failure to perform this task constitutes an automatic failure of this competency.

Comments:

After observing the student complete this study, I believe that he/she is competent to perform this study with minimal assistance.

Technologist: ________________________________ Date: ________________
Competency Evaluation

**BONE: THREE-PHASE BONE IMAGING**

**STUDENT:** ________________________________  **DATE:** ____________

Before this evaluation is attempted, the student must have completed independently at least 3 three-phase bone-imaging studies under the supervision of a technologist. The technologist evaluating the student should circle the performance level for each item.

**PATIENT CARE:**
1. * Verify patient identification and written orders for study     Met  Not met  Not applicable
2. Communicate with patient (including procedure explanation)  Met  Not met  Not applicable
3. Obtain appropriate history   Met  Not met  Not applicable
4. Perform aseptic IV injection  Met  Not met  Not applicable
5. Provide appropriate patient care  Met  Not met  Not applicable
6. Assist in patient transfer  Met  Not met  Not applicable
7. Provide safe and dignified environment  Met  Not met  Not applicable
8. Discharge the patient  Met  Not met  Not applicable

**INSTRUMENTATION:**
9. Calibrate camera for radionuclide  Met  Not met  Not applicable
10. Choose and install correct collimator  Met  Not met  Not applicable
11. Set acquisition parameters correctly  Met  Not met  Not applicable
12. Enter patient information  Met  Not met  Not applicable
13. Operate camera efficiently  Met  Not met  Not applicable

**PERFORM 3-PHASE BONE IMAGE:**
14. Remove attenuating objects  Met  Not met  Not applicable
15. Request that patient void bladder  Met  Not met  Not applicable
16. Position patient correctly  Met  Not met  Not applicable
17. Compensate for positioning problems  Met  Not met  Not applicable
18. Place detector at surface of patient  Met  Not met  Not applicable
19. Perform image efficiently  Met  Not met  Not applicable

**COMPLETING THE 3-PHASE BONE IMAGE:**
20. Label the image correctly  Met  Not met  Not applicable
21. Present study to supervisor  Met  Not met  Not applicable
22. Prepare room for next patient  Met  Not met  Not applicable

**RADIATION / BIOHAZARDS:**
23. Observe precautions throughout study  Met  Not met  Not applicable
PROBLEM SOLVING:

24. Recognizing problems & handle each appropriately

Met Not met Not applicable

*Failure to perform this task constitutes an automatic failure of this competency.

Comments:

After observing the student complete this study, I believe that he/she is competent to perform this study with minimal assistance.

Technologist: ______________________________ Date: ________________
## Competency Evaluation

### Brain: Dynamic Imaging

**STUDENT:** ________________________________  **DATE:** ____________

Before this evaluation is attempted, the student must have completed independently at least 3 dynamic brain-imaging studies under the supervision of a technologist. The technologist evaluating the student should circle the performance level for each item.

#### Patient Care:

1. * Verify patient identification and written orders for study
   - **Met**  **Not met**  **Not applicable**
2. Communicate with patient (including procedure explanation)
   - **Met**  **Not met**  **Not applicable**
3. Obtain appropriate history
   - **Met**  **Not met**  **Not applicable**
4. Perform aseptic IV injection
   - **Met**  **Not met**  **Not applicable**
5. Provide appropriate patient care
   - **Met**  **Not met**  **Not applicable**
6. Assist in patient transfer
   - **Met**  **Not met**  **Not applicable**
7. Provide safe and dignified environment
   - **Met**  **Not met**  **Not applicable**
8. Discharge the patient
   - **Met**  **Not met**  **Not applicable**

#### Instrumentation:

9. Calibrate camera for radionuclide
   - **Met**  **Not met**  **Not applicable**
10. Choose and install correct collimator
    - **Met**  **Not met**  **Not applicable**
11. Set acquisition parameters correctly
    - **Met**  **Not met**  **Not applicable**
12. Enter patient information
    - **Met**  **Not met**  **Not applicable**
13. Operate camera efficiently
    - **Met**  **Not met**  **Not applicable**

#### Perform Dynamic Brain Image:

14. Remove attenuating objects
    - **Met**  **Not met**  **Not applicable**
15. Request that patient void bladder
    - **Met**  **Not met**  **Not applicable**
16. Position patient correctly
    - **Met**  **Not met**  **Not applicable**
17. Compensate for positioning problems
    - **Met**  **Not met**  **Not applicable**
18. Place detector at surface of patient
    - **Met**  **Not met**  **Not applicable**
19. Perform image efficiently
    - **Met**  **Not met**  **Not applicable**

#### Completing the Dynamic Brain Image:

20. Process and label the image correctly
    - **Met**  **Not met**  **Not applicable**
21. Present study to supervisor
    - **Met**  **Not met**  **Not applicable**
22. Prepare room for next patient
    - **Met**  **Not met**  **Not applicable**

#### Radiation / Biohazards:

23. Observe precautions throughout study
    - **Met**  **Not met**  **Not applicable**

#### Problem Solving:
24. Recognizing problems & handle each appropriately

| Met | Not met | Not applicable |

*Failure to perform this task constitutes an automatic failure of this competency.

Comments:

After observing the student complete this study, I believe that he/she is competent to perform this study with minimal assistance.

Technologist: ________________________ Date: ________________
Competency Evaluation

BRAIN: PLANAR IMAGING

STUDENT: ________________________________  DATE: ______________

Before this evaluation is attempted, the student must have completed independently at least 3 planar brain-imaging studies under the supervision of a technologist. The technologist evaluating the student should circle the performance level for each item.

PATIENT CARE:
1. * Verify patient identification and written orders for study
2. Communicate with patient (including procedure explanation)
3. Obtain appropriate history
4. Perform aseptic IV injection
5. Provide appropriate patient care
6. Assist in patient transfer
7. Provide safe and dignified environment
8. Discharge the patient

INSTRUMENTATION:
9. Calibrate camera for radionuclide
10. Choose and install correct collimator
11. Set acquisition parameters correctly
12. Enter patient information
13. Operate camera efficiently

PERFORM BRAIN IMAGE:
14. Remove attenuating objects
15. Request that patient void bladder
16. Position patient correctly
17. Compensate for positioning problems
18. Place detector at surface of patient
19. Perform image efficiently

COMPLETING THE BRAIN IMAGE:
20. Label the image correctly
21. Present study to supervisor
22. Prepare room for next patient

RADIATION / BIOHAZARDS:
23. Observe precautions throughout study
PROBLEM SOLVING:
24. Recognizing problems & handle each appropriately

Met  Not met  Not applicable

*Failure to perform this task constitutes an automatic failure of this competency.

Comments:

After observing the student complete this study, I believe that he/she is competent to perform this study with minimal assistance.

Technologist: ________________________________ Date: ________________
Competency Evaluation

GI BLEED

STUDENT: ________________________________    DATE: ________________

Before this evaluation is attempted, the student must have completed independently at least 3 GI Bleed-imaging studies under the supervision of a technologist. The technologist evaluating the student should circle the performance level for each item.

**PATIENT CARE:**
1. * Verify patient identification and written orders for study  
   Met    Not met    Not applicable
2. Communicate with patient (including procedure explanation)  
   Met    Not met    Not applicable
3. Obtain appropriate history  
   Met    Not met    Not applicable
4. Draw blood and perform aseptic IV injection  
   Met    Not met    Not applicable
5. Provide appropriate patient care  
   Met    Not met    Not applicable
6. Assist in patient transfer  
   Met    Not met    Not applicable
7. Provide safe and dignified environment  
   Met    Not met    Not applicable
8. Discharge the patient  
   Met    Not met    Not applicable

**INSTRUMENTATION:**
9. Calibrate camera for radionuclide  
   Met    Not met    Not applicable
10. Choose and install correct collimator  
    Met    Not met    Not applicable
11. Set acquisition parameters correctly  
    Met    Not met    Not applicable
12. Enter patient information  
    Met    Not met    Not applicable
13. Operate camera efficiently  
    Met    Not met    Not applicable

**PERFORM GI Bleed IMAGE:**
14. Remove attenuating objects  
    Met    Not met    Not applicable
15. Request that patient void bladder  
    Met    Not met    Not applicable
16. Position patient correctly  
    Met    Not met    Not applicable
17. Compensate for positioning problems  
    Met    Not met    Not applicable
18. Place detector at surface of patient  
    Met    Not met    Not applicable
19. Perform image efficiently  
    Met    Not met    Not applicable

**COMPLETING THE GI Bleed IMAGE:**
20. Process and label image correctly  
    Met    Not met    Not applicable
21. Present study to supervisor  
    Met    Not met    Not applicable
22. Prepare room for next patient  
    Met    Not met    Not applicable

**RADIATION / BIOHAZARDS:**
23. Observe precautions throughout study  
    Met    Not met    Not applicable
**Competency Evaluation GI Bleed continued...**

**PROBLEM SOLVING:**

| 24. Recognizing problems & handle each appropriately | Met | Not met | Not applicable |

*Failure to perform this task constitutes an automatic failure of this competency.*

Comments:

---

After observing the student complete this study, I believe that he/she is competent to perform this study with minimal assistance.

Technologist: ________________________________ Date: ________________
Competency Evaluation

**GALLIUM IMAGING**

**STUDENT:** ________________________________  **DATE:** ______________

Before this evaluation is attempted, the student must have completed independently at least 3 gallium-imaging studies under the supervision of a technologist. The technologist evaluating the student should circle the performance level for each item.

**PATIENT CARE:**
1. * Verify patient identification and written orders for study  
   Met  Not met  Not applicable
2. Communicate with patient (including procedure explanation)  
   Met  Not met  Not applicable
3. Obtain appropriate history  
   Met  Not met  Not applicable
4. Perform aseptic IV injection  
   Met  Not met  Not applicable
5. Provide appropriate patient care  
   Met  Not met  Not applicable
6. Assist in patient transfer  
   Met  Not met  Not applicable
7. Provide safe and dignified environment  
   Met  Not met  Not applicable
8. Discharge the patient  
   Met  Not met  Not applicable

**INSTRUMENTATION:**
9. Calibrate camera for radionuclide  
   Met  Not met  Not applicable
10. Choose and install correct collimator  
    Met  Not met  Not applicable
11. Set acquisition parameters correctly  
    Met  Not met  Not applicable
12. Enter patient information  
    Met  Not met  Not applicable
13. Operate camera efficiently  
    Met  Not met  Not applicable

**PERFORM GALLIUM IMAGE:**
14. Remove attenuating objects  
    Met  Not met  Not applicable
15. Request that patient void bladder  
    Met  Not met  Not applicable
16. Position patient correctly  
    Met  Not met  Not applicable
17. Compensate for positioning problems  
    Met  Not met  Not applicable
18. Place detector at surface of patient  
    Met  Not met  Not applicable
19. Perform image efficiently  
    Met  Not met  Not applicable

**COMPLETING THE GALLIUM IMAGE:**
20. Process and label image correctly  
    Met  Not met  Not applicable
21. Present study to supervisor  
    Met  Not met  Not applicable
22. Prepare room for next patient  
    Met  Not met  Not applicable

**RADIATION / BIOHAZARDS:**
23. Observe precautions throughout study  
    Met  Not met  Not applicable
Competency Evaluation Gallium Imaging continued...

PROBLEM SOLVING:

24. Recognizing problems & handle each appropriately

<table>
<thead>
<tr>
<th>Met</th>
<th>Not met</th>
<th>Not applicable</th>
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</thead>
</table>

*Failure to perform this task constitutes an automatic failure of this competency.*

Comments:

After observing the student complete this study, I believe that he/she is competent to perform this study with minimal assistance.

Technologist: ____________________________ Date: ______________
Competency Evaluation

**GASTRIC EMPTY SCAN (GETS)**

STUDENT: ________________________________  DATE: ________________

Before this evaluation is attempted, the student must have completed independently at least 3 gastric empty-imaging studies under the supervision of a technologist. The technologist evaluating the student should circle the performance level for each item.

**PATIENT CARE:**

1. * Verify patient identification and written orders for study  
   Met  Not met  Not applicable
2. Communicate with patient (including procedure explanation)  
   Met  Not met  Not applicable
3. Obtain appropriate history  
   Met  Not met  Not applicable
4. Administer dose (solid or liquid)  
   Met  Not met  Not applicable
5. Provide appropriate patient care  
   Met  Not met  Not applicable
6. Assist in patient transfer  
   Met  Not met  Not applicable
7. Provide safe and dignified environment  
   Met  Not met  Not applicable
8. Discharge the patient  
   Met  Not met  Not applicable

**INSTRUMENTATION:**

9. Calibrate camera for radionuclide  
   Met  Not met  Not applicable
10. Choose and install correct collimator  
    Met  Not met  Not applicable
11. Set acquisition parameters correctly  
    Met  Not met  Not applicable
12. Enter patient information  
    Met  Not met  Not applicable
13. Operate camera efficiently  
    Met  Not met  Not applicable

**PERFORM GASTRIC EMPTY IMAGE:**

14. Remove attenuating objects  
    Met  Not met  Not applicable
15. Wait appropriate time prior to image  
    Met  Not met  Not applicable
16. Position patient correctly  
    Met  Not met  Not applicable
17. Compensate for positioning problems  
    Met  Not met  Not applicable
18. Place detector at surface of patient  
    Met  Not met  Not applicable
19. Perform image efficiently  
    Met  Not met  Not applicable

**COMPLETING THE GASTRIC EMPTY SCAN:**

20. Process and label the image correctly  
    Met  Not met  Not applicable
21. Present study to supervisor  
    Met  Not met  Not applicable
22. Prepare room for next patient  
    Met  Not met  Not applicable

**RADIATION / BIOHAZARDS:**

23. Observe precautions throughout study  
    Met  Not met  Not applicable
PROBLEM SOLVING:

24. Recognizing problems & handle each appropriately  

   Met       Not met       Not applicable

*Failure to perform this task constitutes an automatic failure of this competency.

Comments:

After observing the student complete this study, I believe that he/she is competent to perform this study with minimal assistance.

Technologist: ____________________________ Date: __________
Competency Evaluation

**GATED EQUILIBRIUM CARDIAC FUNCTION STUDY (ALSO CALLED ERNA OR MUGA)**

**STUDENT:** ________________________________  **DATE:** ______________

Before this evaluation is attempted, the student must have completed independently at least 3 equilibrium cardiac function studies. The technologist evaluating the student should circle the performance level for each item.

**PATIENT CARE / PREPARATION:**
1. * Verify patient identification and written orders for study  
   Met  Not met  Not applicable
2. Communicate with patient (including procedure explanation) (also verify correct patient preparation for study; rule out contraindications)  
   Met  Not met  Not applicable
3. Obtain appropriate history (also verify correct patient preparation for study; rule out contraindications)  
   Met  Not met  Not applicable
4. Administer cold “PYP” IV using aseptic technique  
   Met  Not met  Not applicable
5. Administer radiopharmaceutical at appropriate time using aseptic technique  
   Met  Not met  Not applicable
6. Prepare sites and place ECG leads on patient  
   Met  Not met  Not applicable
7. Provide safe and dignified environment  
   Met  Not met  Not applicable
8. Observe universal and radiation safety precautions throughout test  
   Met  Not met  Not applicable
9. Assist patient to imaging table  
   Met  Not met  Not applicable

**INSTRUMENTATION:**
10. Calibrate camera for radionuclide  
    Met  Not met  Not applicable
11. Choose and install correct collimator  
    Met  Not met  Not applicable
12. Choose correct acquisition protocol  
    Met  Not met  Not applicable
13. Enter patient information  
    Met  Not met  Not applicable
14. Operate camera efficiently  
    Met  Not met  Not applicable

**PERFORM IMAGING:**
15. Remove attenuating materials  
    Met  Not met  Not applicable
16. Position patient correctly  
    Met  Not met  Not applicable

Ensure patient comfort to minimize motion; compensate for positioning problems
17. Place detector at appropriate distance  Met  Not met  Not applicable
18. Perform required views  Met  Not met  Not applicable

COMPLETING THE STUDY AND COMPUTER PROCESSING:
19. Choose the correct computer protocol  Met  Not met  Not applicable
20. Choose correct patient data  Met  Not met  Not applicable
21. Draw appropriate background ROI(s)  Met  Not met  Not applicable
22. Draw appropriate organ(s) ROI(s)  Met  Not met  Not applicable
23. Apply appropriate smoothing filters  Met  Not met  Not applicable
24. Generate time/activity curve  Met  Not met  Not applicable
25. Perform other quantitation, as required  Met  Not met  Not applicable
26. Display data in appropriate format  Met  Not met  Not applicable
27. Label data/images with appropriate information  Met  Not met  Not applicable
28. Place data/images on hard copy if required.  Met  Not met  Not applicable
29. Review data for technical quality and completeness  Met  Not met  Not applicable
30. Present study to supervisor  Met  Not met  Not applicable
31. Discharge the patient  Met  Not met  Not applicable
32. Prepare room for next patient  Met  Not met  Not applicable

RADIATION / BIOHAZARDS:
33. Observe precautions throughout study  Met  Not met  Not applicable

PROBLEM SOLVING:
34. Recognize problems & handle each appropriately  Met  Not met  Not applicable

*Failure to perform this task constitutes an automatic failure of this competency.

Comments:

After observing the student, I believe that he/she is competent to perform this study with minimal assistance.

Technologist: _____________________________ Date: _________________
Competency Evaluation

**Hepatobiliary Imaging**

| STUDENT: ________________________________ | DATE: ________________ |

Before this evaluation is attempted, the student must have completed independently at least 3 hepatobiliary studies under the supervision of a technologist. The technologist evaluating the student should circle the performance level for each item.

**PATIENT CARE:**

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<tr>
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<tbody>
<tr>
<td>1. *</td>
<td>Verify patient identification and written orders for study</td>
<td>Met</td>
</tr>
<tr>
<td>2.</td>
<td>Communicate with patient (including procedure explanation)</td>
<td>Met</td>
</tr>
<tr>
<td>3.</td>
<td>Obtain appropriate history (also verify correct patient preparation for study; rule out contraindications)</td>
<td>Met</td>
</tr>
<tr>
<td>4.</td>
<td>Perform aseptic IV injection</td>
<td>Met</td>
</tr>
<tr>
<td>5.</td>
<td>Provide appropriate patient care</td>
<td>Met</td>
</tr>
<tr>
<td>6.</td>
<td>Assist in patient transfer</td>
<td>Met</td>
</tr>
<tr>
<td>7.</td>
<td>Provide safe and dignified environment</td>
<td>Met</td>
</tr>
<tr>
<td>8.</td>
<td>Discharge the patient</td>
<td>Met</td>
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</tbody>
</table>

**INSTRUMENTATION:**

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<tbody>
<tr>
<td>9.</td>
<td>Calibrate camera for radionuclide</td>
<td>Met</td>
</tr>
<tr>
<td>10.</td>
<td>Choose and install correct collimator</td>
<td>Met</td>
</tr>
<tr>
<td>11.</td>
<td>Set acquisition parameters correctly</td>
<td>Met</td>
</tr>
<tr>
<td>12.</td>
<td>Enter patient information</td>
<td>Met</td>
</tr>
<tr>
<td>13.</td>
<td>Operate camera efficiently</td>
<td>Met</td>
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</table>

**PERFORM HEPATOBILIARY IMAGING:**

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<tbody>
<tr>
<td>14.</td>
<td>Remove attenuating objects</td>
<td>Met</td>
</tr>
<tr>
<td>15.</td>
<td>Position patient correctly</td>
<td>Met</td>
</tr>
<tr>
<td>16.</td>
<td>Compensate for positioning problems</td>
<td>Met</td>
</tr>
<tr>
<td>17.</td>
<td>Place detector at surface of patient</td>
<td>Met</td>
</tr>
<tr>
<td>18.</td>
<td>Perform imaging efficiently</td>
<td>Met</td>
</tr>
<tr>
<td>19.</td>
<td>Determine necessity of delayed images &amp;/or administration of CCK or morphine</td>
<td>Met</td>
</tr>
<tr>
<td>20.</td>
<td>Assist in the administration of CCK or morphine</td>
<td>Met</td>
</tr>
<tr>
<td>21.</td>
<td>Perform additional images, as needed</td>
<td>Met</td>
</tr>
</tbody>
</table>

**COMPLETING THE STUDY:**

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<tbody>
<tr>
<td>22.</td>
<td>Process and label the image correctly</td>
<td>Met</td>
</tr>
<tr>
<td>23.</td>
<td>Present study to supervisor</td>
<td>Met</td>
</tr>
<tr>
<td>24.</td>
<td>Prepare room for next patient</td>
<td>Met</td>
</tr>
</tbody>
</table>
**Competency Evaluation Hepatobiliary Imaging Continued...**

**RADIATION / BIOHAZARDS:**
25. Observe precautions throughout study  
   Met  Not met  Not applicable

**PROBLEM SOLVING:**
26. Recognize problems & handle each appropriately  
   Met  Not met  Not applicable

*Failure to perform this task constitutes an automatic failure of this competency.

Comments:

After observing the student complete this study, I believe that he/she is competent to perform this study with minimal assistance.

Technologist: __________________________ Date: ________________

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Competency Evaluation

Liver SPECT Imaging

STUDENT: ________________________________ DATE: ________________

Before this evaluation is attempted, the student must have completed independently at least 3 liver SPECT-imaging studies under the supervision of a technologist. The technologist evaluating the student should circle the performance level for each item.

PATIENT CARE:
1. * Verify patient identification and written orders for study Met Not met Not applicable
2. Communicate with patient (including procedure explanation) Met Not met Not applicable
3. Obtain appropriate history Met Not met Not applicable
4. Perform aseptic IV injection Met Not met Not applicable
5. Provide appropriate patient care Met Not met Not applicable
6. Assist in patient transfer Met Not met Not applicable
7. Provide safe and dignified environment Met Not met Not applicable
8. Discharge the patient Met Not met Not applicable

INSTRUMENTATION:
9. Calibrate camera for radionuclide Met Not met Not applicable
10. Choose and install correct collimator Met Not met Not applicable
11. Set acquisition parameters correctly Met Not met Not applicable
12. Enter patient information Met Not met Not applicable
13. Operate camera efficiently Met Not met Not applicable

PERFORM LIVER SPECT IMAGE:
14. Remove attenuating objects Met Not met Not applicable
15. Request that patient void bladder Met Not met Not applicable
16. Position patient correctly Met Not met Not applicable
17. Compensate for positioning problems Met Not met Not applicable
18. Place detector at surface of patient Met Not met Not applicable
19. Perform SPECT image efficiently Met Not met Not applicable

COMPLETING THE LIVER SPECT IMAGE:
20. Process and label the image correctly Met Not met Not applicable
21. Present study to supervisor Met Not met Not applicable
22. Prepare room for next patient Met Not met Not applicable

RADIATION / BIOHAZARDS:
23. Observe precautions throughout study Met Not met Not applicable
PROBLEM SOLVING:
24. Recognizing problems & handle each appropriately    Met    Not met    Not applicable

*Failure to perform this task constitutes an automatic failure of this competency.

Comments:

After observing the student complete this study, I believe that he/she is competent to perform this study with minimal assistance.

Technologist: ___________________________ Date: ______________

114
Competency Evaluation

Lung Perfusion Imaging

STUDENT: ________________________________  DATE: ________________

Before this evaluation is attempted, the student must have completed independently at least 3 lung perfusion studies under the supervision of a technologist. The technologist evaluating the student should circle the performance level for each item.

PATIENT CARE:
1. Verify patient identification and written orders for study  Met  Not met  Not applicable
2. Communicate with patient (including procedure explanation)  Met  Not met  Not applicable
3. Obtain appropriate history (also verify correct patient preparation for study; rule out contraindications)  Met  Not met  Not applicable
4. Perform aseptic IV injection  Met  Not met  Not applicable
5. Provide appropriate patient care  Met  Not met  Not applicable
6. Assist in patient transfer  Met  Not met  Not applicable
7. Provide safe and dignified environment  Met  Not met  Not applicable
8. Discharge the patient  Met  Not met  Not applicable

INSTRUMENTATION:
9. Calibrate camera for radionuclide  Met  Not met  Not applicable
10. Choose and install correct collimator  Met  Not met  Not applicable
11. Set acquisition parameters correctly  Met  Not met  Not applicable
12. Enter patient information  Met  Not met  Not applicable
13. Operate camera efficiently  Met  Not met  Not applicable

PERFORM IMAGING:
14. Remove attenuating objects  Met  Not met  Not applicable
15. Position patient correctly  Met  Not met  Not applicable
16. Compensate for positioning problems  Met  Not met  Not applicable
17. Place detector at surface of patient  Met  Not met  Not applicable
18. Perform imaging efficiently

COMPLETING THE STUDY:
19. Process and label the image correctly  Met  Not met  Not applicable
20. Present study to supervisor  Met  Not met  Not applicable
21. Prepare room for next patient  Met  Not met  Not applicable

RADIATION / BIOHAZARDS:
22. Observe precautions throughout study  Met  Not met  Not applicable
Competency Evaluation Lung Perfusion Imaging continued...

PROBLEM SOLVING:
23. Recognize problems & handle each appropriately
   Met   Not met   Not applicable

* Failure to perform this task constitutes an automatic failure of this competency.

Comments:

After observing the student complete this study, I believe that he/she is competent to perform this study with minimal assistance.

Technologist: ___________________________ Date: ________________
## Competency Evaluation

### Lung Ventilation Imaging (Gas or Aerosol)

**STUDENT:** ________________________________  
**DATE:** ________________

Before this evaluation is attempted, the student must have completed independently at least 3 lung ventilation studies under the supervision of a technologist. The technologist evaluating the student should circle the performance level for each item.

### PATIENT CARE:

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<tbody>
<tr>
<td><strong>1.</strong> Verify patient identification and written orders for study</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td><strong>2.</strong> Communicate with patient (including procedure explanation)</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td><strong>3.</strong> Obtain appropriate history (also verify correct patient preparation for study; rule out contraindications)</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td><strong>4.</strong> Provide appropriate patient care</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td><strong>5.</strong> Assist in patient transfer</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td><strong>6.</strong> Provide safe and dignified environment</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td><strong>7.</strong> Discharge the patient</td>
<td>Met</td>
<td>Not met</td>
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### INSTRUMENTATION:

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<tbody>
<tr>
<td><strong>8.</strong> Calibrate camera for radionuclide</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td><strong>9.</strong> Choose and install correct collimator</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td><strong>10.</strong> Set acquisition parameters correctly</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td><strong>11.</strong> Enter patient information</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td><strong>12.</strong> Operate camera efficiently</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td><strong>13.</strong> Set up &amp; operate xenon or aerosol administration apparatus</td>
<td>Met</td>
<td>Not met</td>
</tr>
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### PERFORM IMAGING:

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<tbody>
<tr>
<td><strong>14.</strong> Remove attenuating objects</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td><strong>15.</strong> Instruct patient about administration apparatus</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td><strong>16.</strong> Position patient correctly (includes placement of gas or aerosol administration apparatus)</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td><strong>17.</strong> Compensate for positioning problems</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td><strong>18.</strong> Place detector at surface of patient</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td><strong>19.</strong> Perform imaging efficiently</td>
<td>Met</td>
<td>Not met</td>
</tr>
</tbody>
</table>

### COMPLETING THE STUDY:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>20.</strong> Process and label the image correctly</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td><strong>21.</strong> Present study to supervisor</td>
<td>Met</td>
<td>Not met</td>
</tr>
<tr>
<td><strong>22.</strong> Prepare room for next patient</td>
<td>Met</td>
<td>Not met</td>
</tr>
</tbody>
</table>
Competency Evaluation Lung Ventilation Imaging continued...

RADIATION / BIOHAZARDS:
23. Observe precautions throughout study    Met     Not met     Not applicable

PROBLEM SOLVING:
24. Recognize problems & handle each appropriately    Met     Not met     Not applicable

*Failure to perform this task constitutes an automatic failure of this competency.

Comments:

After observing the student complete this study, I believe that he/she is competent to perform this study with minimal assistance.

Technologist: ___________________________ Date: _____________________
Competency Evaluation

**Lymphoscintigraphy**

**STUDENT:** ________________________________  
**DATE:** _______________

Before this evaluation is attempted, the student must have completed independently at least 3 lymphoscintigraphy studies under the supervision of a technologist. The technologist evaluating the student should circle the performance level for each item.

**PATIENT CARE:**
1. * Verify patient identification and written orders for study  
   Met  Not met  Not applicable
2. Communicate with patient (including procedure explanation)  
   Met  Not met  Not applicable
3. Obtain appropriate history (also verify correct patient preparation for study; rule out contraindications)  
   Met  Not met  Not applicable
4. Perform or assist in injection  
   Met  Not met  Not applicable
5. Provide appropriate patient care  
   Met  Not met  Not applicable
6. Assist in patient transfer  
   Met  Not met  Not applicable
7. Provide safe and dignified environment  
   Met  Not met  Not applicable
8. Discharge the patient  
   Met  Not met  Not applicable

**INSTRUMENTATION:**
9. Calibrate camera for radionuclide  
   Met  Not met  Not applicable
10. Choose and install correct collimator  
    Met  Not met  Not applicable
11. Set acquisition parameters correctly  
    Met  Not met  Not applicable
12. Enter patient information  
    Met  Not met  Not applicable
13. Operate camera efficiently  
    Met  Not met  Not applicable

**PERFORM LYMPHOSCINTIGRAPHY IMAGING:**
14. Remove attenuating objects  
    Met  Not met  Not applicable
15. Position patient correctly  
    Met  Not met  Not applicable
16. Compensate for positioning problems  
    Met  Not met  Not applicable
17. Place detector at surface of patient  
    Met  Not met  Not applicable
18. Perform imaging efficiently  
    Met  Not met  Not applicable
19. Determine necessity of delayed images  
    Met  Not met  Not applicable
20. Perform additional images, as needed  
    Met  Not met  Not applicable

**COMPLETING THE STUDY:**
21. Process and label the image correctly  
    Met  Not met  Not applicable
22. Present study to supervisor  
    Met  Not met  Not applicable
23. Prepare room for next patient  
    Met  Not met  Not applicable

**RADIATION / BIOHAZARDS:**
24. Observe precautions throughout study  
    Met  Not met  Not applicable
Competency Evaluation Lymphoscintigraphy Imaging continued...

PROBLEM SOLVING:
25. Recognize problems & handle each appropriatively

*Failure to perform this task constitutes an automatic failure of this competency.

Comments:

After observing the student complete this study, I believe that he/she is competent to perform this study with minimal assistance.

Technologist: ____________________________ Date: ________________
## Competency Evaluation

### Meckel’s Diverticulum Imaging

**STUDENT:** ___________________________  **DATE:** ____________

Before this evaluation is attempted, the student must have completed independently at least 3 Meckel’s-imaging studies under the supervision of a technologist. The technologist evaluating the student should circle the performance level for each item.

### PATIENT CARE:

1. * Verify patient identification and written orders for study  
   Met  |  Not met  |  Not applicable
2. Communicate with patient (including procedure explanation)  
   Met  |  Not met  |  Not applicable
3. Obtain appropriate history  
   Met  |  Not met  |  Not applicable
4. Draw blood and perform aseptic IV injection  
   Met  |  Not met  |  Not applicable
5. Provide appropriate patient care  
   Met  |  Not met  |  Not applicable
6. Assist in patient transfer  
   Met  |  Not met  |  Not applicable
7. Provide safe and dignified environment  
   Met  |  Not met  |  Not applicable
8. Discharge the patient  
   Met  |  Not met  |  Not applicable

### INSTRUMENTATION:

9. Calibrate camera for radionuclide  
   Met  |  Not met  |  Not applicable
10. Choose and install correct collimator  
    Met  |  Not met  |  Not applicable
11. Set acquisition parameters correctly  
    Met  |  Not met  |  Not applicable
12. Enter patient information  
    Met  |  Not met  |  Not applicable
13. Operate camera efficiently  
    Met  |  Not met  |  Not applicable

### PERFORM MECKEL’S IMAGE:

14. Remove attenuating objects  
    Met  |  Not met  |  Not applicable
15. Request that patient void bladder  
    Met  |  Not met  |  Not applicable
16. Position patient correctly  
    Met  |  Not met  |  Not applicable
17. Compensate for positioning problems  
    Met  |  Not met  |  Not applicable
18. Place detector at surface of patient  
    Met  |  Not met  |  Not applicable
19. Perform image efficiently  
    Met  |  Not met  |  Not applicable

### COMPLETING THE MECKEL’S IMAGE:

20. Process and label the image correctly  
    Met  |  Not met  |  Not applicable
21. Present study to supervisor  
    Met  |  Not met  |  Not applicable
22. Prepare room for next patient  
    Met  |  Not met  |  Not applicable

### RADIATION / BIOHAZARDS:

23. Observe precautions throughout study  
    Met  |  Not met  |  Not applicable
PROBLEM SOLVING:
24. Recognizing problems & handle each appropriately

*Failure to perform this task constitutes an automatic failure of this competency.

Comments:

After observing the student complete this study, I believe that he/she is competent to perform this study with minimal assistance.

Technologist: ___________________________ Date: ______________
### Competency Evaluation

#### Parathyroid Imaging

**STUDENT: ________________________________**

**DATE: _______________**

Before this evaluation is attempted, the student must have completed independently at least 3 parathyroid-imaging studies under the supervision of a technologist. The technologist evaluating the student should circle the performance level for each item.

### PATIENT CARE:

1. * Verify patient identification and written orders for study  
   **Met**  **Not met**  **Not applicable**
2. Communicate with patient (including procedure explanation)  
   **Met**  **Not met**  **Not applicable**
3. Obtain appropriate history  
   **Met**  **Not met**  **Not applicable**
4. Perform aseptic IV injection  
   **Met**  **Not met**  **Not applicable**
5. Provide appropriate patient care  
   **Met**  **Not met**  **Not applicable**
6. Assist in patient transfer  
   **Met**  **Not met**  **Not applicable**
7. Provide safe and dignified environment  
   **Met**  **Not met**  **Not applicable**
8. Discharge the patient  
   **Met**  **Not met**  **Not applicable**

### INSTRUMENTATION:

9. Calibrate camera for radionuclide  
   **Met**  **Not met**  **Not applicable**
10. Choose and install correct collimator  
    **Met**  **Not met**  **Not applicable**
11. Set acquisition parameters correctly  
    **Met**  **Not met**  **Not applicable**
12. Enter patient information  
    **Met**  **Not met**  **Not applicable**
13. Operate camera efficiently  
    **Met**  **Not met**  **Not applicable**

### PERFORM PARATHYROID IMAGE:

14. Remove attenuating objects  
    **Met**  **Not met**  **Not applicable**
15. Request that patient void bladder  
    **Met**  **Not met**  **Not applicable**
16. Position patient correctly  
    **Met**  **Not met**  **Not applicable**
17. Compensate for positioning problems  
    **Met**  **Not met**  **Not applicable**
18. Place detector at surface of patient  
    **Met**  **Not met**  **Not applicable**
19. Perform image efficiently  
    **Met**  **Not met**  **Not applicable**

### COMPLETING THE PARATHYROID IMAGE:

20. Process and label the image correctly  
    **Met**  **Not met**  **Not applicable**
21. Present study to supervisor  
    **Met**  **Not met**  **Not applicable**
22. Prepare room for next patient  
    **Met**  **Not met**  **Not applicable**

### RADIATION / BIOHAZARDS:

23. Observe precautions throughout study  
    **Met**  **Not met**  **Not applicable**
Competency Evaluation Parathyroid Imaging continued...

PROBLEM SOLVING:
24. Recognizing problems & handle each appropriately

Met Not met Not applicable

*Failure to perform this task constitutes an automatic failure of this competency.

Comments:

After observing the student complete this study, I believe that he/she is competent to perform this study with minimal assistance.

Technologist: ____________________________ Date: ________________
Competency Evaluation

Renal Function Study

STUDENT: ________________________________  DATE: ______________

Before this evaluation is attempted, the student must have completed independently at least 3 renal function studies under the supervision of a technologist. The technologist evaluating the student should circle the performance level for each item.

PATIENT CARE:
1. *Verify patient identification and written orders for study Met Not met Not applicable
2. Communicate with patient (including procedure explanation) Met Not met Not applicable
3. Obtain appropriate history (also verify correct patient preparation for study; rule out contraindications) Met Not met Not applicable
4. Perform aseptic IV injection Met Not met Not applicable
5. Provide appropriate patient care Met Not met Not applicable
6. Assist in patient transfer Met Not met Not applicable
7. Provide safe and dignified environment Met Not met Not applicable
8. Discharge the patient Met Not met Not applicable

INSTRUMENTATION:
9. Calibrate camera for radionuclide Met Not met Not applicable
10. Choose and install correct collimator Met Not met Not applicable
11. Set acquisition parameters correctly Met Not met Not applicable
12. Enter patient information Met Not met Not applicable
13. Operate camera efficiently Met Not met Not applicable

PERFORM RENAL FUNCTION STUDY:
15. Remove attenuating objects Met Not met Not applicable
16. Position patient correctly Met Not met Not applicable
17. Compensate for positioning problems Met Not met Not applicable
18. Place detector at surface of patient Met Not met Not applicable
19. Perform imaging efficiently Met Not met Not applicable
20. Determine necessity for delayed images &/or administration of furosemide Met Not met Not applicable
21. Assist in the administration of furosemide Met Not met Not applicable
22. Perform additional images, as needed Met Not met Not applicable
23. Collect blood/urine samples at appropriate times Met Not met Not applicable

COMPLETING THE STUDY AND COMPUTER PROCESSING:
24. Choose the correct computer protocol Met Not met Not applicable
**Competency Evaluation Renal Function Study Continued...**

<table>
<thead>
<tr>
<th>Task</th>
<th>Met</th>
<th>Not met</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>25. Choose correct patient data</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26. Draw appropriate background ROI(s)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27. Draw appropriate organ(s) ROI(s)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28. Apply appropriate smoothing filters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29. Generate time/activity curve</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30. Perform other quantitation, as required</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31. Display data in appropriate format</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32. Label data/images with appropriate information</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33. Place data/images on hard copy, if required</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34. Review data for technical quality and completeness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35. Present study to supervisor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36. Prepare room for next patient</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RADIATION / BIOHAZARDS:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37. Observe precautions throughout study</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PROBLEM SOLVING:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>38. Recognize problems &amp; handle each appropriately</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Failure to perform this task constitutes an automatic failure of this competency.*

Comments:

After observing the student complete this study, I believe that he/she is competent to perform this study with minimal assistance.

Technologist:__________________________________________________________________________ Date ______________
Competency Evaluation

**Thyroid Imaging**

**STUDENT:** ________________________________  **DATE:** ______________

Before this evaluation is attempted, the student must have completed independently at least 3 thyroid images under the supervision of a technologist. The technologist evaluating the student should circle the performance level for each item.

**PATIENT CARE:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Performance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. *Verify patient identification and written orders for study</td>
<td>Met</td>
</tr>
<tr>
<td>2. Communicate with patient (including procedure explanation)</td>
<td>Met</td>
</tr>
<tr>
<td>3. Obtain appropriate history (also verify correct patient preparation for study; rule out contraindications)</td>
<td>Met</td>
</tr>
<tr>
<td>4. Perform aseptic IV injection or administer capsule</td>
<td>Met</td>
</tr>
<tr>
<td>5. Provide appropriate patient care</td>
<td>Met</td>
</tr>
<tr>
<td>6. Assist in patient transfer</td>
<td>Met</td>
</tr>
<tr>
<td>7. Provide safe and dignified environment</td>
<td>Met</td>
</tr>
</tbody>
</table>

**INSTRUMENTATION:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Performance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. Calibrate camera for radionuclide</td>
<td>Met</td>
</tr>
<tr>
<td>9. Choose and install correct collimator</td>
<td>Met</td>
</tr>
<tr>
<td>10. Set acquisition parameters correctly</td>
<td>Met</td>
</tr>
<tr>
<td>11. Enter patient information</td>
<td>Met</td>
</tr>
<tr>
<td>12. Operate camera efficiently</td>
<td>Met</td>
</tr>
</tbody>
</table>

**PERFORM IMAGING:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Performance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. Wait appropriate time following tracer administration</td>
<td>Met</td>
</tr>
<tr>
<td>14. Remove attenuating objects</td>
<td>Met</td>
</tr>
<tr>
<td>15. Position patient correctly</td>
<td>Met</td>
</tr>
<tr>
<td>16. Compensate for positioning problems</td>
<td>Met</td>
</tr>
<tr>
<td>17. Place detector at correct distance from patient</td>
<td>Met</td>
</tr>
<tr>
<td>18. Perform imaging efficiently</td>
<td>Met</td>
</tr>
<tr>
<td>19. Perform additional images, as needed</td>
<td>Met</td>
</tr>
</tbody>
</table>

**COMPLETING THE STUDY:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Performance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>20. Process and label the images correctly</td>
<td>Met</td>
</tr>
<tr>
<td>21. Place in hard copy format, if required</td>
<td>Met</td>
</tr>
<tr>
<td>22. Present study to supervisor</td>
<td>Met</td>
</tr>
<tr>
<td>23. Prepare room for next patient</td>
<td>Met</td>
</tr>
</tbody>
</table>
Competency Evaluation Thyroid Imaging Continued...

RADIATION / BIOHAZARDS:
24. Observe precautions throughout study  Met  Not met  Not applicable

PROBLEM SOLVING:
25. Recognize problems & handle each appropriately  Met  Not met  Not applicable

*Failure to perform this task constitutes an automatic failure of this competency.

Comments:

After observing the student complete this study, I believe that he/she is competent to perform this study with minimal assistance.

Technologist: ______________________________ Date: __________________________
Competency Evaluation

**Thyroid Uptake**

**STUDENT:** ________________________________  **DATE:** ________________

Before this evaluation is attempted, the student must have completed independently at least 3 thyroid uptakes under the supervision of a technologist. The technologist evaluating the student should circle the performance level for each item.

**PATIENT CARE:**

1. * Verify patient identification and written orders for study  
   * Met  
   * Not met  
   * Not applicable

2. Communicate with patient (including procedure explanation)  
   * Met  
   * Not met  
   * Not applicable

3. Obtain appropriate history (also verify correct patient preparation for study; rule out contraindications)  
   * Met  
   * Not met  
   * Not applicable

4. Administer capsule  
   * Met  
   * Not met  
   * Not applicable

5. Provide appropriate patient care  
   * Met  
   * Not met  
   * Not applicable

6. Assist in patient transfer  
   * Met  
   * Not met  
   * Not applicable

7. Provide safe and dignified environment  
   * Met  
   * Not met  
   * Not applicable

**INSTRUMENTATION:**

8. Calibrate uptake probe for radionuclide  
   * Met  
   * Not met  
   * Not applicable

9. Acquire room background  
   * Met  
   * Not met  
   * Not applicable

**PERFORM UPTAKE:**

10. Wait appropriate time following tracer administration  
    * Met  
    * Not met  
    * Not applicable

11. Remove attenuating objects  
    * Met  
    * Not met  
    * Not applicable

12. Position patient correctly  
    * Met  
    * Not met  
    * Not applicable

13. Place detector at correct distance from patient  
    * Met  
    * Not met  
    * Not applicable

14. Collect neck and thigh counts for appropriate time interval  
    * Met  
    * Not met  
    * Not applicable

15. Collect standard counts for appropriate time interval  
    * Met  
    * Not met  
    * Not applicable

**COMPLETING THE STUDY:**

16. Label data correctly  
    * Met  
    * Not met  
    * Not applicable

17. Perform uptake calculation correctly  
    * Met  
    * Not met  
    * Not applicable

18. Present data to supervisor  
    * Met  
    * Not met  
    * Not applicable

19. Discharge the patient  
    * Met  
    * Not met  
    * Not applicable
Competency Evaluation Thyroid Uptake continued...

RADIATION / BIOHAZARDS:
20. Observe precautions throughout study  Met  Not met  Not applicable

PROBLEM SOLVING:
21. Recognize problems & handle each appropriately  Met  Not met  Not applicable

*Failure to perform this task constitutes an automatic failure of this competency.

Comments:

After observing the student complete this study, I believe that he/she is competent to perform this study with minimal assistance.

Technologist: ______________________________________ Date: ____________________
Competency Evaluation

**Thyroid: Ablation Therapeutic Procedure**

**STUDENT:** ________________________________  **DATE:** ________________

Before this evaluation is attempted, the student must have completed independently at least 3 thyroid: ablation procedures under the supervision of a technologist. The technologist evaluating the student should circle the performance level for each item.

**PATIENT CARE:**

1. * Verify patient identification and written orders for study  
   Met  Not met  Not applicable

2. Communicate with patient (including procedure explanation)  
   Met  Not met  Not applicable

3. Obtain appropriate history  
   Met  Not met  Not applicable

4. Ensure patient is NOT pregnant  
   Met  Not met  Not applicable

5. Provide appropriate patient care  
   Met  Not met  Not applicable

6. Answer all patient questions  
   Met  Not met  Not applicable

7. Provide safe and dignified environment  
   Met  Not met  Not applicable

8. Discharge the patient  
   Met  Not met  Not applicable

**ADMINISTRATION:**

9. Properly paper the patient’s room  
   Met  Not met  Not applicable

10. Verify the dose with a witness  
    Met  Not met  Not applicable

11. Administer the dose  
    Met  Not met  Not applicable

12. Attach proper signage to doors  
    Met  Not met  Not applicable

13. Monitor the patient’s exposure levels  
    Met  Not met  Not applicable

**RADIATION / BIOHAZARD**

14. Observe precautions throughout study  
    Met  Not met  Not applicable

**PROBLEM SOLVING:**

15. Recognizing problems & handle each appropriately  
    Met  Not met  Not applicable

*Failure to perform this task constitutes an automatic failure of this competency.*

Comments:

After observing the student complete this study, I believe that he/she is competent to perform this study with minimal assistance.

Technologist: ________________________________  Date: ________________
Competency Evaluation

Thyroid: Hyperthyroidism

STUDENT: ________________________________  DATE: ________________

Before this evaluation is attempted, the student must have completed independently at least 3 thyroid: hyperthyroidism procedures under the supervision of a technologist. The technologist evaluating the student should circle the performance level for each item.

PATIENT CARE:
1. * Verify patient identification and written orders for study  
   Met  Not met  Not applicable
2. Communicate with patient (including procedure explanation)  
   Met  Not met  Not applicable
3. Obtain appropriate history  
   Met  Not met  Not applicable
4. Ensure patient is NOT pregnant  
   Met  Not met  Not applicable
5. Provide appropriate patient care  
   Met  Not met  Not applicable
6. Answer all patient questions  
   Met  Not met  Not applicable
7. Provide safe and dignified environment  
   Met  Not met  Not applicable
8. Discharge the patient  
   Met  Not met  Not applicable

ADMINISTRATION:
9. Verify the dose with a witness  
   Met  Not met  Not applicable
10. Administer the dose  
    Met  Not met  Not applicable

RADIATION / BIOHAZARDS:
11. Observe precautions throughout study  
    Met  Not met  Not applicable

PROBLEM SOLVING:
12. Recognizing problems & handle each appropriately  
    Met  Not met  Not applicable

*Failure to perform this task constitutes an automatic failure of this competency.

Comments:

After observing the student complete this study, I believe that he/she is competent to perform this study with minimal assistance.

Technologist: ________________________________  Date: ________________

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STUDENT HANDBOOK 2015
COMPETENCIES:

NUCLEAR CARDIOLOGY
Competency Evaluation

**Stress Test**

STUDENT: ________________________________  DATE: ________________

Before this evaluation is attempted, the student must have participated in at least 5 stress tests. The technologist evaluating the student should circle the performance level for each item.

1. * Verify patient identification and written orders for study Met Not met Not applicable
2. Communicate with patient (including procedure explanation) Met Not met Not applicable
3. Obtain appropriate history (also verify correct patient preparation for study; rule out contraindications) Met Not met Not applicable
4. Establish IV line Met Not met Not applicable
5. Prepare sites and place ECG leads on patient Met Not met Not applicable
6. Obtain baseline blood pressure, pulse, and ECG tracing Met Not met Not applicable
7. Administer radiopharmaceutical when directed during stress test Met Not met Not applicable
8. Provide safe and dignified environment Met Not met Not applicable
9. Observe universal and radiation safety precautions throughout test Met Not met Not applicable
10. Assist patient to imaging table Met Not met Not applicable
11. Prepare room for next patient Met Not met Not applicable

*Failure to perform this task constitutes an automatic failure of this competency.*

Comments:

After observing the student complete this study, I believe that he/she is competent to participate in stress testing with minimal assistance.

Technologist: ________________________________  Date: ________________
Competency Evaluation

**Myocardial Perfusion Imaging and Tomographic Processing**

**STUDENT:** ________________________________  **DATE:** ________________

Before this evaluation is attempted, the student must have participated in at least 5 stress/rest tomographic myocardial perfusion studies. The technologist evaluating the student should circle the performance level for each item.

### PATIENT CARE:

1. * Verify patient identification and written orders for study  
   - Met  
   - Not met  
   - Not applicable
2. Communicate with patient (including procedure explanation)  
   - Met  
   - Not met  
   - Not applicable
3. Obtain appropriate history (also verify correct patient preparation for study; rule out contraindications)  
   - Met  
   - Not met  
   - Not applicable
4. Administer radiopharmaceutical for rest images at appropriate time  
   - Met  
   - Not met  
   - Not applicable
5. Provide safe and dignified environment  
   - Met  
   - Not met  
   - Not applicable
6. Assist patient to imaging table  
   - Met  
   - Not met  
   - Not applicable

### INSTRUMENTATION

7. Calibrate camera for radionuclide  
   - Met  
   - Not met  
   - Not applicable
8. Choose and install correct collimator  
   - Met  
   - Not met  
   - Not applicable
9. Set acquisition parameters correctly  
   - Met  
   - Not met  
   - Not applicable
10. Enter patient information  
    - Met  
    - Not met  
    - Not applicable
11. Operate camera efficiently  
    - Met  
    - Not met  
    - Not applicable

### PERFORM IMAGING:

12. Remove attenuating materials  
    - Met  
    - Not met  
    - Not applicable
13. Position patient correctly  
    - Met  
    - Not met  
    - Not applicable
14. Ensure patient comfort to minimize motion  
    - Met  
    - Not met  
    - Not applicable
15. Place detector at appropriate distance  
    - Met  
    - Not met  
    - Not applicable
16. Perform second set of images (rest or stress) using same acquisition parameters as first  
    - Met  
    - Not met  
    - Not applicable

### PROCESSING

17. Choose the correct computer protocol  
    - Met  
    - Not met  
    - Not applicable
18. Choose correct patient data  
    - Met  
    - Not met  
    - Not applicable
19. Choose area to be reconstructed into transaxial slices  
    - Met  
    - Not met  
    - Not applicable
20. Apply appropriate filters  
    - Met  
    - Not met  
    - Not applicable
**Competency Evaluation Myocardial Perfusion Imaging and Tomographic Processing Continued...**

21. Draw angles on transaxial and vertical long axes to reorient data
   - Met
   - Not met
   - Not applicable

22. Review representative slices in 3 planes to ensure correct angles were drawn
   - Met
   - Not met
   - Not applicable

23. Repeat 3-6 second data set
   - Met
   - Not met
   - Not applicable

24. Perform quantitation, if required
   - Met
   - Not met
   - Not applicable

25. Display rest/stress slices in appropriate format
   - Met
   - Not met
   - Not applicable

26. Label images with appropriate information
   - Met
   - Not met
   - Not applicable

27. Place images on hard copy, if required
   - Met
   - Not met
   - Not applicable

28. Label film with appropriate information
   - Met
   - Not met
   - Not applicable

**COMPLETING THE STUDY:**

29. Discharge the patient
   - Met
   - Not met
   - Not applicable

30. Prepare room for next patient
   - Met
   - Not met
   - Not applicable

**RADIATION / BIOHAZARDS:**

31. Observe precautions throughout study
   - Met
   - Not met
   - Not applicable

**PROBLEM SOLVING:**

32. Recognize problems & handle each appropriately
   - Met
   - Not met
   - Not applicable

*Failure to perform this task constitutes an automatic failure of this competency.

Comments:

After observing the student complete this study, I believe that he/she is competent to perform tomographic myocardial imaging with minimal assistance.

Technologist: ___________________________ Date: __________________

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STUDENT HANDBOOK 2015
Competency Evaluation

Intravenous Catheter Placement

STUDENT: ________________________________  DATE: ________________

Before this evaluation is attempted, the student must have processed independently at least 8 intravenous catheter placements under the supervision of a technologist. The technologist evaluating the student should circle the performance level for each item.

This is an optional competency that can be obtained at clinical sites allowing students to practice IV catheter placement.

1. * Verify written orders for the study
2. * Verify patient identification
3. Use effective communication skills
4. Assemble catheter materials (proper catheter size/gauge, gauze, alcohol, tape, saline bag or syringe with bubbles properly “bled” through line or syringe so that no air pockets remain)
5. Choose appropriate site (position, assessment)
6. * Wear gloves
7. Place tourniquet correctly (occlude vein; 2-3 in. above site)
8. * Use appropriate aseptic technique (alcohol prep used to swab site in spiral inward to outward motion; re-swab if repeat palpitation)
9. Handle catheter proficiently (bevel up, anchor vein, insert into vein at shallow depth, smooth entry, catheter penetrates top wall of vein with sufficient depth and look for “flash back” of blood into catheter unit)
10. Thread catheter into vein (push sheath of catheter into vein watching for possible kinks)
11. Remove catheter needle
12. Attach tubing and/or syringe to catheter bulb
13. Open saline or test syringe for patient venous access
14. * Dispose of catheter needle in appropriate Sharps container
15. Securely tape catheter placement to patient
Competency Evaluation IV Catheter Placement continued…

16. Adjust flow of saline to patient
   Met   Not met   Not applicable

17. * Demonstrate proper universal precautions techniques throughout procedure
   Met   Not met   Not applicable

*Failure to perform these tasks constitutes an automatic failure of this competency. Student must complete an additional 8 intravenous catheter placements under the supervision of a technologist before attempting the competency evaluation a second time.

Comments:

After observing the student complete this study, I believe that he/she is competent to perform an intravenous catheter placement independently.

Technologist: ___________________________ Date: _______________
Competency Evaluation

Attenuation Correction

STUDENT: ________________________________  DATE: ________________

Before this evaluation is attempted, the student must have processed independently at least 5 attenuation corrections under the supervision of a technologist. The technologist evaluating the student should circle the performance level for each item.

PATIENT CARE:
1. *Verify patient identification and written orders for study
   Met  Not met  Not applicable
2. Communicate with patient (including procedure explanation)
   Met  Not met  Not applicable
3. Provide appropriate patient care
   Met  Not met  Not applicable
4. Assist in patient transfer
   Met  Not met  Not applicable
5. Provide safe and dignified environment
   Met  Not met  Not applicable

INSTRUMENTATION:
6 Calibrate camera for radioisotope
   Met  Not met  Not applicable
7. Choose and install correct collimator
   Met  Not met  Not applicable
8. Set acquisition parameters correctly
   Met  Not met  Not applicable
9. Choose the correct computer protocol
   Met  Not met  Not applicable
10. Choose correct patient data
    Met  Not met  Not applicable
11. Choose area to be corrected
    Met  Not met  Not applicable
12. Apply appropriate filters
    Met  Not met  Not applicable
13. Enter patient information
    Met  Not met  Not applicable
14. Choose display
    Met  Not met  Not applicable
15. Operate camera efficiently
    Met  Not met  Not applicable
16. Label images with appropriate information
    Met  Not met  Not applicable
17. Place images on hard copy, if required
    Met  Not met  Not applicable
18. Label images with appropriate information
    Met  Not met  Not applicable

*Failure to perform this task constitutes an automatic failure of this competency.

Comments:

After observing the student using attenuation correction, I believe that he/she is competent to perform such processing with minimal assistance.

Technologist: ________________________________  Date: ________________

STUDENT HANDBOOK 2015
RADIOPHARMACY
# Radiopharmacy Checklist

**STUDENT: ___________________________  DATE: ____________________**

**CLINICAL INSTRUCTOR: ______________________________________________**

<table>
<thead>
<tr>
<th></th>
<th>Performed</th>
<th>Not Performed</th>
<th>N/A</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GENERATOR ELUTION/QC</strong></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1. Elutes generator properly</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2. Assays eluate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Calculates eluate concentration</td>
<td></td>
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<tr>
<td>4. Performs Al$^{174}$ testing</td>
<td></td>
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<tr>
<td>5. Performs Mo-99 breakthrough test</td>
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<tr>
<td>6. Calculates radionuclidic purity correctly</td>
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<tr>
<td><strong>RADIOPHARMACEUTICAL QC</strong></td>
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<tr>
<td>1. Performs chromatography on radiopharmaceuticals</td>
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<td></td>
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<tr>
<td>2. Calculates radiochemical purity correctly</td>
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<tr>
<td><strong>UNIT DOSE PREPARATION</strong></td>
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</tr>
<tr>
<td>1. Withdraws appropriate volume/activity</td>
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<tr>
<td>2. Uses proper aseptic technique</td>
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<tr>
<td>3. Assays dose</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>4. Labels dose correctly</td>
<td></td>
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<tr>
<td><strong>RADIATION PROTECTION</strong></td>
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</tr>
<tr>
<td>1. Wears lab coat and personal monitors</td>
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<td></td>
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<tr>
<td>2. Wears gloves when handling radioactivity</td>
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<tr>
<td>3. Uses time, distance and shielding effectively</td>
<td></td>
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<tr>
<td><strong>RECEIPT/HANDLING</strong></td>
<td></td>
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</tr>
<tr>
<td>1. Correctly packages radiopharmaceutical for shipment</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2. Checks incoming/outgoing boxes for contamination</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>3. Checks exposure levels on outgoing boxes</td>
<td></td>
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</tbody>
</table>
Radiopharmacy Checklist continued...

<table>
<thead>
<tr>
<th>Performed</th>
<th>Not Performed</th>
<th>N/A</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Attaches appropriate DOT label on outgoing shipments</td>
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</tr>
</tbody>
</table>

**MISCELLANEOUS**

1. Performs daily constancy check on dose calibrator
2. Other (indicate task)
3. Other (indicate task)
4. Other (indicate task)

Comments:
Radiopharmacy Clinical Assignment

1. Supply the following information about the Mo-99/Tc-99m generators used in this radiopharmacy.

   Manufacturer _____________________________________________

   Wet or dry column? ______________________________________

   Size (Mo-99 activity at calibration) __________________________

2. For “dry” column generators, what volume of saline is added to the generator? What size evacuated vials are used to collect the eluate?

3. Is the eluate concentration approximately the same from one elution to the next?

4. How often is a particular generator eluted?

5. Calculate the elution efficiency of one of the generators in use at this facility. Show all your work.

6. For how many days is a generator used?
Radiopharmacy Clinical Assignment Continued...

7. What is the expiration time of the Tc-99m eluate?

8. Identify the quality control tests performed on the eluate. State the acceptable limits for each test performed.

9. What is the DOT Transport Index on the generator shipping container when it is received?

10. For how long is a spent generator stored before it is returned to the manufacturer?

11. Describe the packaging process used to return a spent generator to the manufacturer.

12. What is the Transport Index on the spent generator shipping container when it is returned to the manufacturer? How is the Transport Index determined?
CHILDREN’S HOSPITAL
# UAB Nuclear Medicine Technology Program

## Children’s Hospital Checklist

Student: _________________________________  Date: _____________

Clinical Instructor: _______________________________

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Performed /Observed</th>
<th>Not Performed /Seen</th>
<th>N/A</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatobiliary</td>
<td></td>
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<tr>
<td>3-Phase bone imaging</td>
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<tr>
<td>Bone imaging</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>*VCUG</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MUGA</td>
<td></td>
<td></td>
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<tr>
<td>*Gastric emptying</td>
<td></td>
<td></td>
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<tr>
<td>Infection imaging</td>
<td></td>
<td></td>
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<tr>
<td>Renal – MAG 3</td>
<td></td>
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<tr>
<td>Renal – DMSA</td>
<td></td>
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</tr>
<tr>
<td>V/Q</td>
<td></td>
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<tr>
<td>Thyroid imaging</td>
<td></td>
<td></td>
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<tr>
<td>Camera QC – Uniformity/linearity</td>
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<tr>
<td>Camera QC - COR</td>
<td></td>
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</tr>
</tbody>
</table>

*Should definitely see at Children’s Hospital

On the back of this checklist, write a short comparison of Adult vs Pediatric Nuclear Medicine

Clinical Instructor comments:
PET IMAGING
Competency Evaluation

**PET/CT**

**STUDENT:** _________________________________  **DATE:** ________________

Before this evaluation is attempted, the student must have completed independently at least 5 PET/CT studies under the supervision of a technologist. The technologist evaluating the student should circle the performance level for each item.

**PATIENT CARE:**

1. * Verify patient identification and written orders for study
   Met  Not met  Not applicable
2. Communicate with patient (including procedure explanation)
   Met  Not met  Not applicable
3. Obtain appropriate history
   Met  Not met  Not applicable
4. Perform aseptic IV injection
   Met  Not met  Not applicable
5. Provide appropriate patient care
   Met  Not met  Not applicable
6. Assist in patient transfer
   Met  Not met  Not applicable
7. Provide safe and dignified Environment
   Met  Not met  Not applicable
8. Discharge the patient
   Met  Not met  Not applicable

**PET/CT INSTRUMENTATION:**

9. Calibrate camera for radionuclide
   Met  Not met  Not applicable
10. Choose and install correct collimator
    Met  Not met  Not applicable
11. Set acquisition parameters correctly
    Met  Not met  Not applicable
12. Enter patient information
    Met  Not met  Not applicable
13. Operate camera efficiently
    Met  Not met  Not applicable

**PERFORM PET/CT IMAGING:**

14. Remove attenuating objects
    Met  Not met  Not applicable
15. Position patient correctly
    Met  Not met  Not applicable
16. Compensate for positioning problems
    Met  Not met  Not applicable
17. Place patient table at appropriate height and starting location
    Met  Not met  Not applicable
18. Perform image efficiently
    Met  Not met  Not applicable

**COMPLETE THE PET/CT IMAGE:**

19. Record study
    Met  Not met  Not applicable
20. Process study
    Met  Not met  Not applicable
21. Label study correctly
    Met  Not met  Not applicable
22. Present study to supervisor
    Met  Not met  Not applicable
23. Prepare room for next patient
    Met  Not met  Not applicable
Competency Evaluation PET/CT Continued...

**RADIATION / BIOHAZARDS:**

24. Ensure proper time, distance and shielding techniques are used for 511 kev photons
   - Met
   - Not met
   - Not applicable

25. Observe precautions throughout study
   - Met
   - Not met
   - Not applicable

**PROBLEM SOLVING:**

26. Recognize problems & handle each appropriately
   - Met
   - Not met
   - Not applicable

*Failure to perform this task constitutes an automatic failure of this competency.*

Comments:

After observing the student complete this study, I believe that he/she is competent to perform this study with minimal assistance.

Technologist: ____________________________ Date: ______________
# PET/CT Imaging – Student Competency Checklist

**Student:** __________________________  **Date:** ____________

**Clinical Instructor:** ______________________________

<table>
<thead>
<tr>
<th></th>
<th>Performed</th>
<th>Not Performed</th>
<th>N/A</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Daily Start-up</strong></td>
<td></td>
<td></td>
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<tr>
<td>Check daily QC numbers &amp; evaluate sinogram</td>
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<tr>
<td>Check dose calibrator constancy</td>
<td></td>
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<tr>
<td>Draw saline &amp; prep for patient injections</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stock injection areas</td>
<td></td>
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<tr>
<td><strong>Patient Prep</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Evaluate patient chart for appropriateness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Code patient chart for proper insurance</td>
<td></td>
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<tr>
<td>Explain procedure to patient</td>
<td></td>
<td></td>
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<tr>
<td>Assay dose for appropriate injection</td>
<td></td>
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<tr>
<td><strong>Camera Setup</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Input patient data</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Input appropriate scan data</td>
<td></td>
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<tr>
<td>Setup patient for WB scan</td>
<td></td>
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<tr>
<td>Setup patient for Brain scan</td>
<td></td>
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<td></td>
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<tr>
<td>Setup scan immobilization device</td>
<td></td>
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<tr>
<td>Start scan</td>
<td></td>
<td></td>
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<tr>
<td>Evaluate scan</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Archive patient data</td>
<td></td>
<td></td>
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<tr>
<td><strong>End of Day</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Survey &amp; wipes</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Stock rooms</td>
<td></td>
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</tr>
</tbody>
</table>

Comments:

**Student Signature:** __________________________  **Date:** ____________

**PET/CT Technologist Signature:** __________________________  **Date:** ____________
Computed Tomography Clinical Hours Documentation

Hours can be obtained in PET/CT, SPECT/CT, and/or CT

Name (print):__________________________________________________________
Equipment:___________________________________________________________
Location:_____________________________________________________________
Name of person confirming clinical hours: __________________________________

(Claims of clinical hours can be confirmed with the Program Director, Technical Supervisor, or Supervising Physician. Please print the name of the person confirming the hours above along with credentials.)

<table>
<thead>
<tr>
<th>Date</th>
<th>Total Hours</th>
<th>Signature of Person confirming hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

I, _______________________, have completed a total of ___________ hours as confirmed above.

___________________________________
Signature
SUMMARY EVALUATION

(A summary evaluation must be completed for every clinic site attended.)
UAB Nuclear Medicine Technology Program
Summary Evaluation

<table>
<thead>
<tr>
<th>STUDENT: ________________________________</th>
<th>DATE: __________</th>
</tr>
</thead>
</table>

Directions: The following categories describe specific behaviors. To the right of each are 4 or 5 descriptors. Please read each carefully and then place an “X” in the box with the descriptor that best applies to the student.

<table>
<thead>
<tr>
<th>Technical Knowledge</th>
<th>Lacks knowledge of fundamental principles</th>
<th>Limited: Needs help with techniques frequently</th>
<th>Superior: Can answer almost any question; performs independently</th>
<th>Fair: Occasionally needs help</th>
<th>Good: Rarely needs help</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of Work</td>
<td>Extremely accurate with rare exceptions</td>
<td>Usually accurate</td>
<td>Often needs major correction</td>
<td>Most work inaccurate; needs constant correction</td>
<td>Consistently accurate; little help needed</td>
</tr>
<tr>
<td>Initiative</td>
<td>Conscientious, requiring some follow-up</td>
<td>Neglects work or wanders; needs frequent reminders</td>
<td>Extremely thorough with all assignments</td>
<td>Stays with job; needing occasional reminders</td>
<td>Avoids work and often leaves with work undone</td>
</tr>
<tr>
<td>Efficiency of Work</td>
<td>Often impedes patient flow</td>
<td>Facilitates patient flow</td>
<td>Steady pace; patient flow is smooth</td>
<td>Occasionally impedes patient flow</td>
<td>Usually impedes patient flow</td>
</tr>
<tr>
<td>Work Attitude</td>
<td>Enthusiastic; considerate and helpful; follows instruction carefully and accurately</td>
<td>Complains occasionally; relates well to others; usually follows instructions</td>
<td>Resents authority; complains about work; does not follow instructions</td>
<td>Complains often; not a good team member; argumentative</td>
<td>Accepts assignments willingly asks when instruction is needed</td>
</tr>
<tr>
<td>Judgment</td>
<td>Good judgment; asks when in doubt</td>
<td>Almost always exercises good judgment independently</td>
<td>Frequently makes faulty judgment</td>
<td>Lacks basics of common sense</td>
<td>Occasionally makes faulty judgment</td>
</tr>
<tr>
<td>Personal Appearance</td>
<td>Always unkempt and untidy; poor personal hygiene</td>
<td>Neat and clean; good personal hygiene</td>
<td>Occasionally unkempt and untidy; poor personal hygiene</td>
<td>Exemplary; very professional</td>
<td></td>
</tr>
<tr>
<td>Patient Attitude</td>
<td>Treats patient indifferently and is rude</td>
<td>Occasionally rude</td>
<td>Is polite and shows some empathy</td>
<td>Always polite and shows utmost concern and empathy</td>
<td></td>
</tr>
<tr>
<td>Use and Care of Equipment</td>
<td>Often misuses equipment and facilities</td>
<td>Is careful with equipment and facilities</td>
<td>Sometimes misuses equipment and facilities</td>
<td>Is careful; interested in maintaining equipment</td>
<td>Careless and wasteful</td>
</tr>
<tr>
<td>Communication</td>
<td>Low; relevant information not transmitted</td>
<td>Inappropriate; voice abrupt and not applicable</td>
<td>Average; transmits pertinent info when prompted</td>
<td>Above Average; transmits pertinent info without prompt</td>
<td>Superior; relays info appropriately and accurately</td>
</tr>
<tr>
<td>Punctuality</td>
<td>Consistently on time</td>
<td>Occasionally tardy</td>
<td>Frequently tardy</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments:

On __________(date), a conference regarding the contents of this evaluation was held.

Student: ________________________________________________  Clinical Instructor: ____________________________________________
UAB Nuclear Medicine Technology Program

Case Study Form

Name: __________________________ Study: __________________________

A. PATIENT DATA

Clinical indication for study:

Relevant medical history:

B. DOSE PREPARATION

1. Radiopharmaceutical: ________________________________

   a. Activity administered: ________________________________
   
   b. Volume administered: ________________________________

2. Dose recorded in logbook? Yes ______ No ______

3. Dose checked in dose calibrator before administration? Yes______ No ______

   Does it match prescribed dose within limits? Yes ______ No ______

4. What type of radiation protection was practiced during dose preparation?

C. DOSE ADMINISTRATION

1. Patient’s ID checked before administration? Yes______ No ______

2. Dose administered by what route? ______________________________

3. Syringe shield used? Yes______ No ______
Case Study Form continued...

4. Aseptic technique used? Yes ______ No ______
   Describe the technique

5. Patient observed for reaction to radiopharmaceutical? Yes _____ No _____

D. PATIENT HANDLING
   1. How was patient transported to department?

   2. How was transfer to imaging table performed?

   3. List any patient preparation required for this study.

   4. Who explained procedure to patient?

      What information was conveyed to the patient?

      What questions did patient ask?

   5. Special instruction / precautions Yes _____ No _____
      IV __________________________
      Oxygen ______________________
      Catheter ______________________
      Isolation technique __________
      Other (describe) ______________

E. INSTRUMENTATION

   1. Name of instrument __________________________
Case Study Form continued...

2. What quality control was performed on this instrument on the day of this test?

3. Collimator

4. Acquisition parameters

F. EXAMINATION PROCEDURE

1. Study performed how long following radiopharmaceutical administration?

2. What routine views were acquired?

3. What special views were required?

4. What alternatives were offered if the patient was unable to cooperate?
G. **EXAMINATION RESULTS**

1. What information was included on the films?

2. Briefly describe the principle of this diagnostic procedure (relate it to the clinical indication for this study).

3. Briefly describe the findings of this study in your own words.

4. Describe any problems that were encountered during this study and how they were solved. List alternative solutions and identify which would be the best. Analyze your decision by discussing the advantages and disadvantages of each alternative. (Use back of this sheet if necessary.)
SELF-ASSESSMENT

(One self-assessment should be completed at the end of the semester.)
UAB Nuclear Medicine Technology Program

Self-Assessment

Student: ________________________________  Date: __________________________

Clinical Site: __________________________  Reviewed: _____________________

The ability to assess your own performance is an important skill. This is one skill that professionals can use to direct their own professional development over their entire career. The following questions are designed to help you reflect on the clinical experience you have just finished. After you have completed this form, it should be reviewed with the clinical coordinator. This activity is 5% of your final clinical grade.

Note: Only one self-assessment is needed per term, no matter how many clinical rotations a student completes during a term.

In completing this form, consider technical, communication, and administrative/management skills.

1. During this clinical term, what new skills have you acquired that you can now perform independently?

2. What new skills can you perform with assistance? What aspects of these skills are least familiar or comfortable for you to perform independently? Are there any competencies that you wish to re-comp to get more experience?
Self-Assessment continued...

3. What might help you achieve competency (independent performance) in the areas identified in #2?

4. What skills do you still lack overall? (That is, you felt uncomfortable not being able to perform this task during the clinical term, or it may have hindered your other work in some way.)
APPENDICES
All students are covered by professional liability insurance when they are enrolled and participate in the clinical education courses of the NMT Program. Students who become employees in a clinical area and whose work takes place outside of the NMT curriculum are not covered by student liability insurance.

For work that requires monitoring of radiation exposure, unless the student is a UAB employee, students must wear dosimeters provided by their employers. Students must wear personnel dosimeters provided by UAB only when they are functioning as a UAB NMT student in an assigned clinical facility or when they are working as a UAB employee in an area where occupational radiation exposure is monitored.
Purpose:
Our personal appearance creates an impression on patients and visitors. The impression you create reflects the standards of UAB Highlands and the pride you have on your job. It is essential that we project professionalism, cleanliness, friendliness and safety awareness. Our efforts of creating a pristine experience for you patients and visitors begin with maintaining a positive personal appearance.

POLICY:

I. Appearance – Uniformed Personnel (includes all clinical employees and all others who wear a specific form of apparel in connection with their job.)
   A. Uniforms must be neat and clean at all times.
   B. Employees must wear their name badge at all times to identify themselves to patients, visitors and fellow employees.
   C. The wearing of jewelry and/or accessories should complement the uniform in a conservative way and may not clash with the overall appearance of the uniform. In some departments, jewelry and accessories may not be worn due to the nature of the work performed.
      1. Employees may not wear large, and/or brightly colored accessories.
      2. Examples of what may be worn include: One set of small earrings (for reference purposes, earrings must fit within the dimensions of your picture on the back of your name badge); one or two small hair accessories (for reference purposes hair accessories may not be longer than the length of your name badge).
   D. The number of accessory items worn must be minimal so the accessories do not detract from employees’ neat and professional appearance.
      1. An employee may wear no more than:
         a. One set of earrings (as described in C.2 above)
         b. A total of two rings on both hands (engagement ring and wedding band may be counted as one)
         c. One wristwatch
Appendix B Continued...

d. One necklace
e. Two hair accessories (as described in C.2 above)

2. Employees may not wear body piercing accessories that can be seen, with the exception of earrings noted above.

E. Shoes must protect employees' feet appropriately and must meet requirements within employees' work units.
   1. No canvas shoes, clogs, sandals, open-heeled or open-toed shoes.

F. Shirts or blouses worn as part of a uniform must be solid in color with no prints or designs (or as stipulated in your department’s approved policy).

G. Employees may not wear shorts, “skorts”, or culottes.

H. Uniforms must fit appropriately with not tight uniforms worn and fabric must be thick enough so the under clothes do not show through.

I. Employee may not wear blue jeans, “leggings”, stirrup-pants or sweat pants.

II. Appearance – Non-Uniformed Personnel
   A. Employees should dress in a professional manner wearing accepted business attire and accessories.
      1. Employee may not wear blue jeans, “leggings”, stirrup-pants or sweat pants.
      2. Employees may not wear shorts, “skorts”, or culottes.

B. Employees must wear their name badge at all times to identify themselves to patients, visitors, and fellow employees.

C. Shoes must protect employees’ feet appropriately and must meet requirements within employees’ work units.
   1. No canvas shoes, clogs, sandals, open-heeled or open-toed shoes.

III. Personal Grooming and Hygiene
   A. Employees must appear well-groomed and clean with neat and clean hair, fingernails, teeth, and make-up (if employee chooses to wear make-up).

   B. Hair styles must be neat and professional and may not be extreme in nature.

   C. Fingernails must be moderate in length. No nail polish with glitter or artificial nail may be worn.
Appendix B Continued...

D. If make-up is worn, it must not be too bright or too thick.

E. Perfume or cologne, if worn, may only be light in fragrance. It may only be worn if it does not disturb patients, visitors or your fellow employees.

IV. Pins, Insignia and Buttons
A. Pins, insignia and buttons that are inappropriate in a hospital setting or otherwise detract from professional appearance are prohibited.

V. Responsibility Compliance
A. It is each employee’s responsibility to comply with this policy and other practices that may exist in a particular work area.

B. It is each supervisor’s responsibility to ensure employees within their unit comply with this policy and others that may exist in a particular work area.
   1. At management’s discretion, an employee not in compliance with this policy will not be permitted to work until the matter is corrected.
   2. An incident of absence will be recorded if an employee is sent home due to non-compliance before the end of his/her shift.

C. Each department manager and division director has the responsibility of maintaining dress code policies within his/her department/division that are consistent with accepted health care practices of uniforms, appearance and safety.
   1. All department-specific practices/policies/guidelines must be on file with Human Resources.
   2. Management personnel must ensure all affected employees are knowledgeable about the department-specific practices through new employee orientation, in-services, etc.

D. Employees who are chronically non-compliant with this policy are subject to progressive discipline, up to and including termination of employment.
   1. Management personnel must counsel employees who are non-compliant and administer disciplinary action.

E. Employees may use UAB Highland’s Conflict Resolution procedure for questions concerning interpretation and compliance.
The University of Alabama at Birmingham  
School of Health Professions  
NUCLEAR MEDICINE TECHNOLOGY PROGRAM  

Appendix C:  
University of Alabama Hospital Dress Code Standard  

UNIVERSITY OF ALABAMA HOSPITAL  
DRESS CODE STANDARD  

1. **PURPOSE:**  
To set forth dress standards that will present a professional image of UAB University Hospital.  

2. **PHILOSOPHY:**  
It is our belief that the dress/appearance of staff promotes a positive, professional image that projects a caring atmosphere to our patients/customers. It is the responsibility of each Department director/manager to use discretion in the interpretation of this policy to ensure that these standards are met.  

3. **POLICY:**  
3.1 All employees are expected to maintain the standards of neatness, cleanliness, grooming and dress. The following guidelines represent minimum standards. Department directors/managers may adopt additional dress standards more stringent (but not less stringent) than the requirements indicated below.  

3.2 Hospital identification badges will be worn at collar/shoulder level while on the Hospital premises for work related purposes. The name and picture will be visible. Clinical areas may alter the location of the identification badge when engaging in an activity that may affect patient safety.  

3.3 Street clothes/uniforms will be clean, wrinkle free and loose fitting to allow for freedom of movement. No halter tops, sweat pants/shirts, or leggings (that are not part of the department uniform) will be worn. Shirt tails must be tucked into pants.
Appendix C Continued...

3.4 Clothing with slogans, advertisements, or logos will not be worn (except that employees may wear clothing with slogans, advertisements, or logos promoting Hospital-sponsored events and initiatives that are authorized by Hospital management (department directors/managers)).

3.5 Dresses/skirts cannot exceed two inches above the knee in length.

3.6 Dress shorts can be worn with a jacket/blazer and cannot exceed two inches above the knee in length.

3.7 Hosiery will be worn with dresses, skirts and dress shorts. Patterned, appliquéd or seamed hosiery are not acceptable.

3.8 Shoes should be comfortable, appropriate for the work environment and consistent with professional attire.

3.9 Sunshades (or other tinted, non-prescription glasses) shall not be worn inside hospital facilities.

3.10 Caps or hats are not acceptable unless a part of the uniform.

3.11 Under garments will be worn and will not be visible.

3.12 Each employee is responsible for his/her daily personal hygiene.

3.13 Jewelry will be conservative/no facial jewelry permitted (except on earlobes).

   No more than:
   3.13.1 Anklets – 1

   3.13.2 Rings may be on 2 fingers per hand (not to extend above the knuckle).

   3.13.3 Earrings – No more than 2 pairs may be worn. Earrings will be no larger than two inches in diameter or length.

   3.13.4 Necklace – 2 necklaces

   3.13.5 Bracelet – 1 to each arm

   3.13.6 Watch – 1 watch

3.14 Nails will be neat and clean; no longer than one-half inch from the end of finger.

3.15 Hair will be neat and clean.

3.16 A minimum amount of perfume, cologne or other scented products may be worn outside patient care areas.
Appendix C Continued...

3.17 Uniforms and other applicable items supplied by the Hospital Department (i.e., keys identification badge, etc.) must be returned to the department when an individual ends employment with the Hospital or transfers to another area within the Hospital.

3.18 Dress standards will be adhered to anytime an employee is on the hospital premises and wearing an identification badge. Requests for exceptions to any of the dress standards based on cultural, religious or medical reasons must be submitted in writing by the employee to the Director, Hospital Human Resources Management for consideration. The employee will receive a written response.

4. DISCIPLINARY ACTION – Rolling 12-Month Basis:
Employees who are in violation of this standard may be sent home without pay to change clothes and return immediately to work. The Department director/manager may use their discretion as to whether or not the employee may make up time missed.

The disciplinary process will be activated consistently with University policy:
4.1 Verbal Warning with Education of Hospital and Departmental Policy (if applicable)
4.2 Written Warning with Education of Hospital and Department Policy
4.3 Suspension and Imposed Probation
4.4 Termination

5. EDUCATION:
5.1 New employees will be presented a copy of the Hospital Dress Code Standard and the Department Dress Code Standard (if applicable) during orientation.

5.2 Each Department Dress Code Standard will address specific requirements for the area (i.e., uniforms) and take into consideration the safety needs of employees and patients, or other customers (i.e., no sandals or open toed shoes, appropriate cover worn over scrub suits when outside sterile environment, etc.). It will also state locations and under what conditions the garments will be worn (i.e., no surgical shoe covers outside surgical area, etc.).

5.3 Department Dress Code Standards will be approved by the respective Associate Executive Director and a copy will be sent to the Human Resource Management, Department of Relations, Administration Building, extension 4-4458.

5.4 Hospital Dress Code Standard evaluation will occur at least annually.

6. SCOPE:
Dress Code Standards applies to all areas of the Hospital.
## Appendix C Continued...

### 7. PERFORMANCE IMPROVEMENT TRACKING RECORD

<table>
<thead>
<tr>
<th>Action</th>
<th>Reasons for Development of Standard</th>
<th>Change in Practice</th>
</tr>
</thead>
</table>

**REVISIONS:** This policy is to be reviewed frequently, no less than once every three (3) years, and revised as needed.

**DATE DISTRIBUTED:**

**FILE NAME:** It should have the same name as the old dress code standard.
CARDIOVASCULAR ASSOCIATES, PC
DRESS CODE POLICY

All designated clinical and non-clinical staff will be required to follow the dress and uniform policy as outlined below.

1. All CVA staff are expected to wear a uniform approved by CVA unless otherwise noted in policy. (See Uniform Order Form for more details).

2. A white turtleneck or round neck style white shirt may be worn under the uniform top. (Women should not wear men’s t-shirts).

3. All uniform tops must be closed (snapped or buttoned) when worn over a white shirt.

4. The uniform top and pant must be the same color and will be worn with either the Heartbeat print jacket or a coordinating solid color jacket.

5. Clinical employees must wear professional, closed-toed shoes at all times. Shoes must be predominantly white, tan, gray, brown or black.

6. Uniform pants must be at least ankle length.

7. Skirts must be of a professional length. Managers have the authority to use their discretion.

8. No jeans/jean type pants (this includes overalls) of any color. No pants fitted to legs may be worn. Pants must be loose fitted.

9. No T-shirts/sweat shirts with logo or advertisement may be worn as an outer garment.

10. For non-clinical employees, no shorts or pants shorter than mid-calf may be worn.

11. No crop shirts or shirts that would reveal any skin between your shirt and pants.

12. No rings or studs in the tongue, eyebrows, nose, etc. (Maximum of 2 earrings per ear)

13. No visible tattoos.

14. Only natural hair colors are acceptable - No blue, pink, purple, etc.

15. Please be considerate of co-workers, patients and guests; good personal hygiene is a must. Perfume, scented lotion and cologne are not permitted due to sensitivity (allergies, illness) of employees and patients.
Appendix E:
Student Evaluation of Clinical Experience

Hospital: ________________________  Academic Year: ___________

In an effort to improve the effectiveness of clinical teaching, please respond to the following statements concerning your clinical experience. Use the following rating scale:

| Strongly agree | 4 |
| Agree          | 3 |
| Disagree       | 2 |
| Strongly disagree | 1 |
| Unable to comment | 0 |

1. My knowledge and skill (from classroom and/or previous clinical experience) were assessed at the beginning of this clinical experience.  
   4 3 2 1 0

2. I clearly understood to whom I was directly responsible to at all times.  
   4 3 2 1 0

3. Throughout the rotation, the clinical instructors attempted to determine how much knowledge and skill I possessed before assigning a particular task.  
   4 3 2 1 0

4. After the clinical instructors became familiar with my level of proficiency, I was given the opportunity to “try my wings”.  
   4 3 2 1 0

5. Based on my experience and skill, I would describe the overall degree of supervision I received as:
   Too close ____  Commensurate with need ____  Not close enough ____
   If not commensurate with need, please comment:

6. I clearly understood what my assignments were and what was expected of me.  
   4 3 2 1 0

7. I understood the criteria for acceptable technical performance.  
   4 3 2 1 0

8. I understood what was considered acceptable student behavior.  
   4 3 2 1 0

9. The clinical instructors established daily learning objective for me.  
   4 3 2 1 0
Appendix E Continued...

Use the following rating scale:

<table>
<thead>
<tr>
<th>Rating</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>4</td>
</tr>
<tr>
<td>Agree</td>
<td>3</td>
</tr>
<tr>
<td>Disagree</td>
<td>2</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>1</td>
</tr>
<tr>
<td>Unable to comment</td>
<td>0</td>
</tr>
</tbody>
</table>

10. My rotation provided experiences that reinforced the knowledge and skill I had when I entered the rotation. 4 3 2 1 0

11. The rotation provided new experiences from which I could learn and grow professionally. 4 3 2 1 0

12. The clinical rotation was a well-rounded experience in which I was able to participate in all aspects of the technologist's role. 4 3 2 1 0

13. There were areas that were over or underemphasized. 4 3 2 1 0

Identify those areas.

How was this advantageous or disadvantageous to you?

14. I received constructive evaluations and comments about my progress. 4 3 2 1 0

15. I received these often enough to help me correct my weaknesses. 4 3 2 1 0

16. I received feedback about my clinical performance:

   Daily or whenever appropriate ___   Midway ___   Final ___

17. I feel the following could improve this clinical rotation:

Other comments:
Appendix F:
Policy Regarding Student Participation in I-131 Therapy

Any student participating in or observing an Iodine-131 therapy must notify the Clinical Coordinator within 24-hours of participation and must have a thyroid uptake performed 24 – 48 hours following participation/observation.

The uptake must be performed at the clinical site or at the UAB Radiation Safety Office. A copy of the results should be submitted to the Program Director.
The University of Alabama at Birmingham
School of Health Professions
NUCLEAR MEDICINE TECHNOLOGY PROGRAM

APPENDIX G:
IDENTITY THEFT PREVENTION POLICY

(Red Flags)

April 1, 2011

I. Introduction
The University of Alabama at Birmingham (UAB), also referred to herein as "University," has developed this Identity Theft Prevention Policy to facilitate the University's Identity Theft Prevention Program ("Program") pursuant to the Federal Trade Commission's ("FTC") Red Flags Regulation (16 CFR § 681.2), which implements Section 114 of the Fair and Accurate Credit Transactions (FACT) Act of 2003 and the final rules implementing section 315 of the FACT Act. The regulations require each financial institution or creditor to develop and implement a written Identity Theft Prevention Program (Program) to detect, prevent, and mitigate identity theft in connection with the opening of certain accounts and the maintenance of certain existing accounts. For the purpose of these regulations, UAB is considered a creditor and has developed this policy with consideration of the size and complexity of the University's operations, its account systems and the nature and scope of the University's activities.

II. Scope and Applicability of Policy
Managing and protecting data are responsibilities shared by all members of the University community. This policy complements existing “Red Flags” policies of the UAB Health System (UABHS), and other existing University policies related to data security, data protection, and information disclosure. Such policies include, but are not limited to, the UAB Data Protection and Security Policy and the UAB Information Disclosure and Confidentiality Policy. These and other related policies combine to promote UAB's effort to comply with the Health Insurance and Portability and Accountability Act (HIPAA), the Family Educational Rights and Privacy Act (FERPA), Graham Leach Bliley Act (GLBA), Payment Card Industry (PCI) standards, and the Federal Information Security Management Act (FISMA).

This policy applies to Primary Covered Accounts in Appendix (A) and does not apply to accounts covered under the UABHS “Red Flags” policy.

1. Excepting those individuals covered by the existing UABHS “Red Flags” policy, all other individuals, (faculty, staff, students, and visitors), schools, departments, affiliates and/or other similar entities within the University community, including employees of contracted or outsourced non-UAB entities who have access to covered account Personal Identifying Information (PII) are subject to this policy.
Appendix G Continued...

2. All customer PII not covered by the UABHS “Red Flags” policy is covered under this policy including, but not limited to, PII data contained in centralized institutional systems, department/unit systems, systems created or operated by third party vendors under the direction of UAB, and PII data stored or maintained in any other capacity or medium where there is a reasonable foreseeable risk of identity theft.

III. Definitions and Program

A. Definitions Used in this Program

1. **Identity Theft** is a fraud committed or attempted using the identifying information of another person without authority.

2. **Red Flag** is a pattern, practice, or specific activity that indicates the possible existence of identity theft.

3. An **Account** is a continuing relationship established by a person with a financial institution or creditor to obtain a product or service for personal, family, household or business purposes. Account includes: (i) An extension of credit, such as the purchase of property or services involving a deferred payment; and (ii) A deposit account.

4. A **Covered Account** is (i) any account the University offers or maintains primarily for personal family or household purposes, that allows multiple payments or transactions, including one or more deferred payments; and (ii) any other account the University identifies as having a reasonable foreseeable risk to customers or the safety and soundness of the University from identity theft. A list of covered accounts under this policy can be found in Appendix A.

5. **Program Administrator** is the individual designated with primary responsibility for oversight of the Identity Theft Policy. See Section VII below.

6. An **Identity Theft Prevention Officer** is someone designated by a department with covered accounts to serve as a liaison to the Program Administrator and is responsible for ensuring that the requirements of the Identity Theft Prevention Policy are incorporated in departmental procedures. This person also may be responsible for ensuring the implementation of other University policies that safeguard and protect data from unauthorized access, use, and disclosure.

7. **Personal Identifying Information (PII)** is any name or number that may be used, alone or in conjunction with any other information, to identify a specific person. Below are examples of data fields that are considered PII:

   1. Taxpayer Identification Number (SSN, ITIN or EIN)
   2. System Generated Identification Number (student number or patient number, etc.)
   3. Government Passport Number
   4. Government Issued Driver’s License or Identification Number
   5. Name
   6. Date of Birth
   7. Address
   8. Telephone Number(s)
   9. Personal Identification Number (PIN)
 Appendix G Continued...

10. E-mail Address
11. Blazer ID
12. Password
13. Computer Internet Protocol Address

B. Fulfilling Requirements of the Red Flags Regulations
Under the red flags regulations, the University is required to establish an “Identity Theft Prevention Program” tailored to its size, complexity and the nature of its operation. Each University department with covered accounts that maintains, disseminates or disposes of covered account PII data shall designate an individual who will serve as the department’s Identity Theft Prevention Officer.

The Identity Theft Prevention Program must contain reasonable policies and procedures to:
1. Identify relevant red flags for new and existing covered accounts and incorporate those red flags into the Program;
2. Detect red flags that have been incorporated into the Program;
3. Prevent identity theft by responding appropriately to any red flags that are detected;
4. Mitigate identity theft once it has occurred; and
5. Update the program periodically to reflect changes in risks to the customer and the University from identity theft.

IV. Identification of Red Flags
In order to identify relevant red flags, the University departments should consider the types of accounts that it offers and maintains, methods it provides to open its accounts, methods it provides to access its accounts, and its previous experiences with identity theft. The University has identified the following red flags in each of the categories listed in this section. Additional red flags may be identified by each department and included in the department’s procedures to prevent, detect, and mitigate identity theft.

A. Notifications and Warnings from a Credit Reporting Agency
1. A report of fraud accompanying a credit report;
2. A notice or report from a credit agency of a credit freeze on an applicant;
3. A notice or report from a credit agency of an active duty alert for an applicant;
4. Receipt of a notice of address discrepancy in response to a credit report request; and
5. Indication from a credit report of activity that is inconsistent with an applicant’s usual pattern of activity.
   1. A recent significant increase in the number of inquiries.
   2. An unusual number of recently established credit relationships.
   3. A material change in the use of credit, especially with respect to recently established credit relationships.
   4. An account that was closed for cause or identified for abuse of account privileges by a financial institution or creditor.
Appendix G Continued...

B. Suspicious Documents
1. An identification document or card that appears to be forged, altered or inauthentic;
2. An identification document or card on which a person’s photograph or physical description is not consistent with the person presenting the document;
3. Any other document with information that is not consistent with existing PII maintained by the department or presented by the person opening an account or engaging in an account transaction; and
4. An application for service that appears to have been altered or forged, or gives the appearance of having been destroyed and reassembled.

C. Suspicious Personal Identifying Information (PII)
1. PII presented that is inconsistent with other information on record that the person has provided (example: inconsistent date of birth, SSN, address or telephone numbers, etc.);
2. Identifying information presented that is the same as information shown on other applications that were found to be fraudulent;
3. Identifying information presented that is consistent with fraudulent activity (such as an invalid phone number or fictitious billing address);
4. A Social Security Number presented that is the same as one given by another person;
5. An address or phone number presented that is the same as that of another person not reasonably expected to be a part of the same household; and
6. Failure to provide complete PII in person, on the phone, or on an application when reminded to do so.

D. Suspicious Covered Account Activity or Unusual Use of Account
1. Change of address for an account is followed by a request to change the person’s name;
2. Payments stop on an otherwise consistently up-to-date account;
3. Account is used in a way that is not consistent with prior use;
4. Mail sent to the person is repeatedly returned as undeliverable;
5. Notice is received by the University that a person is not receiving mail sent by the University;
6. Notice is received by the University that an account has unauthorized activity;
7. A breach is detected in the University's computer system security; and
8. Unauthorized access to or use of a person’s account information is detected.

E. Alerts from Others
1. Notice to the University received from an identity theft victim, law enforcement or other individual that the University has opened or is maintaining a fraudulent account for a person engaged in identity theft.
2. Notice to the University from any organization that an account may be fraudulent.
V. Detecting Red Flags

A. New Covered Accounts
In order to detect any of the red flags associated with the establishment of a new covered account, University personnel shall take the following steps to obtain and verify the identity of the person opening the account:

1. Require certain identifying information such as name, date of birth, academic records, home address, or other identification or combination thereof. The identifying information may vary by department contingent upon the nature of the services provided and the data maintained in departmental records.
2. Verify the person’s identity at the time of issuance of an identification card (review of driver’s license, passport, or other government-issued photo identification).
3. Examine documents presented for identification purposes for evidence of falsification or tampering.
4. Validate that the person has met all other University or departmental requirements associated with the opening of a new account.

B. Existing Accounts
In order to detect any of the red flags identified above for an existing account, University personnel shall take the following steps to monitor transactions on an account:

1. Verify the person’s identity at the time of re-issuance of an identification card (review of driver’s license, passport, or other government-issued photo identification etc.).
2. Verify the identification of a person who is requesting information in person or by telephone, facsimile, email, or other media.
3. Verify the validity of requests to change PII by mail, email, or other media and provide the person a reasonable means of promptly reporting incorrect data changes.
4. Notify the individual by e-mail, U. S. mail, telephone, any other means agreed upon by the individual, or by any combination of these methods when PII changes occur and provide the person a reasonable means to promptly report incorrect data changes.
5. Review periodically the list of data fields included in Section III of this policy under the definition of PII and update the list when new data fields are identified that may become relevant to the prevention, detection, and mitigation of identity theft.

C. Consumer (“Credit”) Report Requests
In order to detect any of the red flags identified above when a credit or background report is sought, University personnel will take the following steps to assist in identifying address discrepancies:

1. At the time a request for a credit report is made to the consumer reporting agency, require written verification from the person that the address provided by the person is accurate.
2. In the event that notice of an address discrepancy is received, verify that the credit report pertains to the person for whom the requested report was made.
3. Report to the consumer reporting agency an address for the person that the University has reasonably confirmed is accurate.
Appendix G Continued...

VI. Preventing and Mitigating Identity Theft

In the event University personnel detect any identified red flags, such personnel shall notify their supervisor or the individual designated as the department’s Identity Theft Prevention Officer. Depending on the department’s assessment of the degree of risk posed by the red flag, one or more of the following steps should be taken.

A. Prevent and Mitigate

1. Delay opening an account until a reasonable belief has been formed that the person for whom a business relationship is being established has been properly identified;
2. Continue to monitor a covered account for evidence of identity theft;
3. Contact the person for whom a red flag was detected;
4. Place the account on hold to prevent unauthorized access or use;
5. Change any passwords or other security devices that permit access to covered accounts;
6. Provide the person with a new identification number or account number;
7. Notify the Program Administrator for determination of the appropriate step(s) to take;
8. Notify UAB Police Department, Criminal Investigation Division;
9. Make corrections to the account to remove unauthorized activity, but maintain documentation to support an investigation;
10. File or assist in filing a Suspicious Activities Report (“SAR”); or
11. Determine that no response is warranted under the particular circumstances.

B. Protect Covered Account Personal Identifying Information (PII)

In order to further prevent the likelihood of identity theft occurring with respect to covered account PII, the department’s Identity Theft Prevention Officer shall take the following steps with respect to its internal operating procedures. These steps may require coordination with UAB Information Technology, Health System Information Services, or any other division responsible for the department’s technical support.

1. Secure all websites containing the ability to access covered account PII;
2. Ensure that office computers with access to covered account PII are password protected;
3. Avoid use of Social Security Numbers when possible;
4. Ensure computer virus protection is up to date;
5. Require and keep only the kinds of information that are necessary for University purposes;
6. Properly store and secure all paper documents, files, CDs, floppy disks, zip drives, flash drives, tapes, and backups containing covered account PII in locked cabinets that are not accessible by any unauthorized individual;
7. Store file cabinets containing covered account PII in a locked room that is not accessible by any unauthorized individual;
8. Designate an employee within the department who will be responsible for controlling keys to the file cabinet and room, authorizing copies of the keys, and ensuring distribution of those keys only to employees with legitimate authorized need;
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9. Ensure that sensitive papers are not left on employees’ desks when they are away from their workstations and that employees work with data in such a way as not to cause an unauthorized disclosure of information;
10. Include tracking and delivery confirmation when the University is legally required to provide PII to a third-party; and
11. Ensure complete and secure destruction of paper documents, computer files, and other data storage mechanisms containing covered account PII when a decision has been made to no longer maintain such information.

VII. Program Administration

A. Oversight
The President of the University, or her or his designee, shall appoint a Program Administrator responsible for the identity theft prevention program. The Program Administrator shall work with the identity theft prevention officers designated by the departments to develop, implement, and monitor the effectiveness of this program and policy. Also, the Program Administrator shall communicate policy changes and updates to the Program.

B. Staff Training and Compliance Reports
1. The individual designated as the identity theft prevention officer for a department shall coordinate with the Program Administrator to provide staff training that is necessary to detect, prevent, and mitigate identity theft.
2. Periodically, as requested by the Program Administrator, the department’s identity theft prevention officer shall submit a report to the Program Administrator on compliance with this Program. The annual report should include all known identity theft incidents that have occurred during the year. Also, the annual report should address the effectiveness of this policy and related procedures against the risk of identity theft. Any recommendations for changes to the Program should be included as well.

C. Service Provider Arrangements
In the event the University engages a service provider to perform an activity in connection with one or more covered accounts, the University, through its contract review process, shall take the following steps to ensure the service provider performs its activity in accordance with reasonable policies and procedures designed to detect, prevent, and mitigate the risk of identity theft.
1. Require in any contract that service providers have identity theft policies and procedures in place; and
2. Require in any contract that service providers report any red flags or identity theft incidents associated with University accounts/records to the University employee with primary oversight of the service provider relationship.

D. Non-disclosure of Specific Practices
For the effectiveness of the University’s Identity Theft Prevention Program, knowledge about specific red flag identification, detection, mitigation, and prevention practices should be limited
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to the Program Administrator, Identity Theft Prevention Officers, and departmental employees who are responsible for the implementation of this policy. Any documents that may be reviewed or produced in order to develop or implement this Program that list or describe such specific practices and the information those documents contain are considered confidential and should not be shared with other employees or the public. Also, all documents reviewed or produced as a result of identity theft, or in the investigation of potential identity theft, are considered confidential.

E. Program Updates
Changes in Federal regulations may require immediate changes to this policy. Also, the Program Administrator shall periodically review and update this policy and program to reflect changes in risks to customers and the University from identity theft. In doing so, the Program Administrator will consider the University's experiences with identity theft incidents, changes in identity theft methods related to the prevention, detection and mitigation of identity theft, and changes in the University's business arrangements with other entities. After considering these factors and others as deemed necessary, the Program Administrator will be responsible for recommending policy changes to the appropriate University administrators.

VIII. Implementation of Policy
The Vice President for Financial Affairs and Administration through the Associate Vice President for Financial Affairs is responsible for procedures to implement this policy.
The definition of a “covered account” is promulgated by the following regulatory agencies: Federal Trade Commission (FTC) 16 CFR 681.2; Department of the Treasury Office of the Comptroller of the Currency (OCC) 12 CFR 41.9; Federal Reserve System (FRS) 12 CFR 222.9; Federal Deposit Insurance Corporation (FDIC) 12 CFR 334.9; Department of the Treasury Office of Thrift Supervision (OTS) 12 CFR 571.9; National Credit Union Administration (NCUA) 12 CFR 717.9.

A “covered account” means: (i) an account that a financial institution or creditor offers or maintains, primarily for personal, family, or household purposes, that involves or is designed to permit multiple payments or transactions, such as a credit card account, mortgage loan, automobile loan, margin account, cell phone account, utility account, checking account, or savings account: and (ii) any other account that the financial institution or creditor offers or maintains for which there is a reasonable foreseeable risk to customers or the safety and soundness of the financial institution or creditor from identity theft, including financial, operational, compliance, reputation or litigation risks.

The University will evaluate its accounts and customer relationships to update this list periodically as required by the regulations.

Covered Accounts Identified as of March 1, 2011:

1. **Banner Student Records** - Undergraduate Admissions, Graduate Admissions, Registrar’s Office, Financial Aid, Housing Office, Student Accounting, and all other departments with access to student records in Banner
2. **Student Loan Accounts** - Office of Student Accounting Services
3. **Campus Card** – UAB Campus Card Office
4. **Blazer Bucks Accounts** (BlackBoard) - UAB Campus Card Office
5. **Advancement Accounts** (Banner: Alumni and other Contributors) - Office of Development, Alumni, and External Relations
8. **Patient Accounts** - Dental Clinics - School of Dentistry
9. **Patient Accounts** - Optometry Clinic – School of Optometry