FLORENCE-DARLINGTON TECHNICAL COLLEGE
MCLEOD REGIONAL MEDICAL CENTER

SCHOOL OF RADIOLOGIC TECHNOLOGY

CLINICAL HANDBOOK

Updated: December 2023

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THE PROGRAM DIRECTOR RESERVES THE RIGHT OF FINAL DECISION IN DISPUTES IN INTERPRETATION OF THIS HANDBOOK.

FLORENCE-DARLINGTON TECHNICAL COLLEGE

RADIOLOGIC TECHNOLOGY PROGRAM'S

MISSION STATEMENT

The Florence-Darlington Technical College Program of Radiologic Technology is a two-year Associate of Science Degree program designed to provide entry-level Radiographers capable of delivering quality health care through a competency based clinical and didactic education. The education provided to the students will develop communication and critical thinking skills while instilling the need for a commitment to life-long learning.

Learning Goals/Objectives

Goal: Graduates will become knowledgeable, clinically competent radiographers while demonstrating radiation safety practices.

Student Learning Outcomes:

- Students will comprehend and apply appropriate radiation protection practices.
- Students will demonstrate comprehensive knowledge and accuracy in radiographic procedures and positioning.

Goal: Graduates will acquire appropriate communication skills among all members of the healthcare team and patients.

Student Learning Outcomes:

- Students will demonstrate appropriate written communication skills.
- Students will demonstrate appropriate oral presentation skills.

Goal: Graduates will model appropriate professionalism skills.

Student Learning Outcomes:

- Students will demonstrate professionalism through values and work ethics.
- Students will summarize the requirements and value of continued medical education for lifelong learning.

Goal: Graduates will acquire critical thinking skills in order to problem solve effectively in a changing healthcare environment.

Student Learning Outcomes:

- Students will critique images to determine diagnostic quality.
- Students will be able to practice problem solving through the identification, analysis, and solving of clinical problems.
- Students will be able to modify routine positions according to patient condition.

Goal: Student will develop competency in the theoretical knowledge necessary to prepare for the national certification examination.

Student Learning Outcomes:

- Students will be able to pass the ARRT registry exam on first attempt.

AMERICAN SOCIETY OF RADIOLOGIC TECHNOLOGISTS CODE OF ETHICS

Preamble

This Code of Ethics is to serve as a guide by which Radiologic Technologists may evaluate their professional conduct as it relates to patients, colleagues, and other members of the allied professions and health care consumers.

The Code of Ethics is not law but is intended to assist Radiologic Technologists in maintaining a high level of ethical conduct.

Therefore, in the practice of the profession, we, the members of the American Society of Radiologic Technologists, accept the following principles:

Principle 1

Radiologic Technologists shall conduct themselves in a manner compatible with the dignity of their profession.

Principle 2

Radiologic Technologists shall provide services with consideration of human dignity and the uniqueness of the patient, unrestricted by considerations of age, sex, race, creed, social or economic status, handicap, personal attributes or the nature of the health problem.

Principle 3

Radiologic Technologists shall make every effort to protect all patients from unnecessary radiation.

Principle 4

Radiologic Technologists should exercise and accept responsibility for independent discretion and judgment in the performance of their professional services.

Principle 5

Radiologic Technologists shall judiciously protect the patient's right to privacy and shall maintain all patient information in the strictest confidence.

Principle 6

Radiologic Technologists shall apply only methods of technology founded upon a scientific basis and not accept those methods that violate this principle.

Principle 7

Radiologic Technologists shall not diagnose, but in recognition of their responsibility to the patient, they shall

provide the physician with all information they have relative to radiologic diagnosis or patient management.

Principle 8

Radiologic Technologists shall be responsible for reporting unethical conduct and illegal professional activities to the appropriate authorities.

Principle 9

Radiologic Technologists should continually strive to improve their knowledge and skills by participating in educational and professional activities and sharing the benefits of their attainments with their colleagues.

Principle 10

Radiologic Technologists should protect the public from misinformation and misrepresentations.

Radiologic Technology Program
Essential Functions

Florence-Darlington Technical College (FDTC) complies with Section 504 of the Rehabilitation Act and the Americans with Disabilities Act. If a prospective student who is otherwise qualified requires a reasonable accommodation, he or she should contact Disability Support Services at FDTC. The following essential functions must be met with or without accommodation.

1. **Students must be able to communicate in the English language, both verbally and in written format, with co-workers, hospital staff and patients.**
2. **Students must be able to read and comprehend written material in the English language.**
3. **Students must be able to reach and adjust the X-ray tube that is at a height of 76-80 inches from the floor.**
4. **Using proper body mechanics. Move, adjust, and position clients weighing 200 pounds or more with assistance. Push, pull, lift, or support 50 pounds.**
5. **Students must assist or move patients from wheelchairs and carts (beds) onto the examination tables. This requires the use of their backs and muscles to support and move patients.**
6. **Students' eyesight must be 20/40, either naturally or through correction.**
7. **Students must be able to read the printed words in a textbook, read and adjust the X-ray control panel, read radiographic technique charts/patient dose charts, and read a radiographic image.**
8. **Students must be able to hear instructions from co-workers and be able to respond to verbal requests by patients at a distance of 6 to 10 feet.**
9. **Students must be able to give clear verbal commands to a patient who is positioned for an imaging examination at a distance of 6 to 10 feet from the control area.**
10. **Students must be able to assess the condition of all patients assigned for an imaging examination.**
11. **Students must be able to write legibly with proper spelling of medical terms.**
12. **Students must be able to move around and stand without assistance for long periods of time.**
13. **Students must be physically free of use of non-prescription drugs, illegal drugs and alcohol.**
14. **Students must demonstrate professional demeanor and behavior and must perform all aspects of work in an ethical manner in relation to peers, faculty, staff and patients.**
15. **Students must adhere to the codes of confidentiality.**
16. **Students must conform to appropriate standards of dress, appearance, language and public behavior.**
17. **Students must show respect for individuals of different age, ethnic background, religion and/or sexual orientation**

Student Name Print: _____

Student Signature: _____

Date: _____

CLINICAL SUPERVISION

The Radiology Program adheres to the policy that the number of students assigned to the clinical setting must not exceed the number of clinical staff members assigned to the radiography department. The student to radiography clinical staff ratio must be 1:1. At no time are students scheduled for more than ten (10) clinical hours in one day. The total number of hours for academic and clinical education at no time exceeds forty (40) hours per week.

The clinical education portion of the Radiologic Technology Program at Florence-Darlington Technical College/McLeod Regional Medical Center is carried out by the Clinical Coordinator and approved by the Department Head. The clinical educational portion is designed to reinforce student skills obtained in the classroom and laboratory. This is accomplished through direct clinical supervision by the Clinical Instructor and Registered Staff Technologists. At no time are students left unsupervised or substituted for Staff Technologists. All repeat radiographs are taken under the direct supervision of the Technologist or Clinical Instructor.

Students must have direct supervision during all staff competencies. **Direct supervision** is defined as:

1. A registered technologist must review the request to determine if the student is capable to perform the exam with reasonable success.

2. A registered technologist must also determine if the condition of the patient contraindicates performance by the student.

3. A registered technologist must be present in the room.

4. A registered technologist must approve all images prior to dismissal of the patient.

5. Should a repeat exam be required, a registered technologist must be in the room to check positioning and exposure factors.

6. **No annotation to an image is to be performed by a student.**

Students must have indirect supervision after having received a passing grade on a Category Competency. **Indirect supervision** is defined as:

1. A registered technologist must be in the vicinity of the radiographic area and readily available for immediate assistance if necessary.

2. In addition, if a repeat is required, a registered technologist must be present in the room to check positioning and exposure factors.

ALL Mobile/Surgical Radiography to include mobile C-Arm will be performed with direct

supervision.

Repeat Radiography Policy

In the event a repeat radiograph is required of an examination being done by a student, the radiograph must be critiqued by a registered technologist. **Direct supervision** by a registered technologist must be given to the student when repeating the radiograph.

FLORENCE-DARLINGTON TECHNICAL COLLEGE PROCEDURE FOR REPORTING ACCIDENTAL INJURY/EXPOSURE:

If an accident occurs the Clinical Instructor/Supervisor present at the clinical site with the student is to call Workman's Comp at (877) 709-2667 directly and report the injury. The student **must** be present to answer specific questions.

The Clinical Instructor /Supervisor **must** then fill out the **Internal Student Accident Form** located in Trajecsys and turn it in to **Clinical Coordinator within twenty-four (24) hours**.
(See page 72 of Clinical Handbook for Copy of Form)

CLINICAL ATTENDANCE POLICIES

I. ATTENDANCE

A. It is the student's responsibility to be at his/her clinical assignment on the dates and during the hours assigned. If a student is unable to be at his/her clinical assignment, the student must notify the clinical site and a faculty member 30 minutes prior to the clinical assignment. In addition, students are responsible for entering Time Exceptions with in Trajecsys within 24 hours of the absence.

B. Students are allowed to miss up to 3 clinical days without academic penalty. Should a student miss an additional day 5 points will be deducted from the final clinical average at the end of each semester. This can occur one additional time with another 5-point deduction for a total of 5 absences. Students that exceed 5 absences will be withdrawn from the course and program.

C. Students who are absent from clinical education assignments will have the option to make up time missed up by the time grades are due. Any academic penalty will remain. Make up time is designed for the student to have the opportunity to obtain clinical competency requirements for that semester. Students are still responsible for meeting competency requirements with an overall grade of 77 or higher per semester to proceed and/or graduate from the program.

D. Missed time for competency performance will be coordinated and approved by the clinical Coordinator.

E. The Program Director and Associate Vice-President of the Health and Science Division retain discretionary power as it applies to attendance in the clinical setting.

II. CLINICAL ASSIGNMENTS

A. As stated above it is the student's responsibility to be at his/her clinical assignment on the dates and during the hours assigned. Students are not allowed to participate in clinical activities in facilities that are not affiliated with the program. Students should expect to rotate through each clinical site identified in Section VI Clinical Site Locations. Rotation times (beginning and ending of the clinical day) vary according to the number of clinical hours required in a given semester and clinical site rotation operating hours. Students can expect day rotations and at least two (2) evening rotations during the course of the program. Day rotations will begin no earlier than 7AM and last no later than 5:00PM. Evening rotation hours will begin no earlier than 3:30PM and end no later than 11:00PM. There is no weekend (Saturday or Sunday) rotations.

B. **If a student is unable to be at his/her clinical assignment, the student must notify the clinic and a faculty member 30 minutes prior to the clinical assignment. * Students who fail to notify the clinical site and faculty member as stated above will receive an absence for the day.**

   a. **Over the course of the program, the first (1st) occurrence will result in an oral warning**
   b. **Over the course of the program, the second (2nd) occurrences will result in a written warning and reported. Students will be required to meet with Program Director prior to returning to clinic.**
   c. **Over the course of the program, the third (3rd) occurrence will result in withdrawn from the course and program.**

***Any student dismissed from a clinical site for any reason will not be able to complete their clinical education. This will result in dismissal from the program.**

III. TARDIES

A. Students may be up to Seven (7) minutes late to a clinical assignment without penalty. Students who report to their clinical assignment more than eight (8) minutes late will receive one (1) tardy. For each three (3) tardies accumulated, the student receives one (1) absence. **In the event a student is more than Eight (8) minutes late for a clinical assignment without notification to both the clinical site and faculty, the student will be counted absent.**

8 minutes late = 1 tardy
3 tardies =1 absence
8+ minutes late = 1 absence

IV. DOCUMENTATION OF CLINICAL TIME

A. All students are required to document their own clinical time. This documentation is achieved by signing in and out on Trajecsys.

B. In the event a student is unable to access the Trajecsys program he/she may have the clinical instructor document their time.

C. A student is considered present when they are within their designated clinical department and cannot sign in or out outside this area, including but not limited to parking lots, cafeterias, etc.…...
D. Failure to sign in/out correctly will result in an absence for that day**.**
E. **Signing in inappropriately will be considered falsification of time and result in an absence. Allowances/ Penalty for absences are described in Clinical Attendance Policy.**
F. **Undocumented clinical education time will be considered missed clinical education time.**

V. DISMISSAL BY AGENCY

A. Any student dismissed from a clinical site for any reason will not be able to complete their clinical education. This will result in dismissal from the program.

VI. CLINICAL SITE LOCATIONS

A. Carolina Pines Regional Medical Center
1304 W Bobo Newsome Highway, Hartsville SC

B. MUSC Health-Florence- Medical University of South Carolina
805 Pamplico Hwy, Florence SC

C. MUSC Health Black River Medical Center
3555 N Williamsburg Country Highway, Cades SC

D. McLeod Health MRMC McLeod Regional Medical Center
555 E. Cheves Street, Florence SC

E. McLeod Dillon
301 East Jackson Street, Dillon SC

F. McLeod Orthopedics
1005 East Cheves Street, Florence SC

G. Prisma Health Tuomey- Sumter
129 N Washington St, Sumter SC

FLORENCE-DARLINGTON TECHNICAL COLLEGE
RADIOLOGY TECHNOLOGY PROGRAM
PREGNANCY POLICY

Disclosure of a student becoming pregnant who is in the Florence-Darlington Technical College's Radiologic Technology Program is voluntary. It is the policy of the Florence-Darlington Technical College's Radiologic Technology Program to provide reasonable radiation protection to student radiographers occupationally exposed to radiation. Students who become pregnant and choose not to disclose their pregnancy will continue the program without any modification to the program requirements. Students who choose to report their pregnancy will be provided the additional protective measures detailed below which have been developed to restrict the fetal radiation dose below the maximum permissible dose (MPD) as recommended by the NCRP and the United States Nuclear Regulatory Commission (USNRC).

The National Council on Radiation Protection (NRCP) recommends that the maximum permissible dose equivalent to the embryo-fetus from occupational exposure to the expectant mother should be limited to 0.05 rem for any 30-day period and 0.5 rem for the entire gestation period. Proper instruction in and strict adherence to all radiation safety precautions in conjunction with personnel radiation monitoring make possible to limit all occupational exposure to under 0.5 rem and prevent fetal maximum permissible dose levels from being surpassed. Disclosure of a student's pregnancy is voluntary. However, because of the potentially dangerous effects of escaped anesthetic gases, caustic fumes from orthopedic cement, radiation exposure from fluoroscopic procedures and the occasional urgent setting of emergency cases, it is very strongly encouraged that the student declares the pregnancy immediately upon knowledge of the pregnancy.

Voluntary Declaration of pregnancy is at the discretion of the student:

- To take advantage of the lower exposure limit (0.5 rem or 5mSv) and additional monitoring provisions, the pregnant student **must declare her pregnancy in writing to the Program Director.**

- If the pregnant student elects not to declare her pregnancy, normal occupational exposure limits will continue to apply and no additional monitoring will be provided.

1. The Program strongly encourages the student to notify the Radiologic Technology Program Director immediately upon medical verification of pregnancy to ensure that protective measures for the fetus and mother are initiated.

2. The Program Director will arrange for the student to review her previous radiation exposure history. The Program Director will review protective actions and the risks associated with radiation exposure to the fetus.

3. Upon medical verification that pregnancy exists, and after consultation with the student's physician, (see Physician's Awareness of Pregnancy Form) the Program Director will offer two options to the student.

Voluntary withdrawal Declaration of Pregnancy is at the discretion of the Student:
Must be in writing:

- If the student decides to withdraw her declaration of pregnancy, she must do so in written form to the Program Director.

Option # 1 - Remain in the Program throughout the Pregnancy

If the student so decides, she may continue in the Program under the following requirements:

a. The student shall review and implement radiation safety practices as outlined in the NCRP.

b. The student shall wear exposure - monitoring devices as determined by the NCRP's recommendation.

c. The student shall wear a wrap-around lead apron or two separate lead aprons of 0.5 mm lead or equivalent when performing examinations requiring them to be in the room (i.e. Fluoroscopy, portables, surgery etc.).

d. The student shall participate in all scheduled clinical rotations areas assigned.

Option # 2 - Leave of Absence During Pregnancy

If the student so decides, she may elect to leave the Program during the pregnancy period.

a. If the student decides to accept this option and leave the Program, she must immediately notify the Program Director in writing.

b. An incomplete will be awarded for the course (s) in progress. The remaining course work may be completed upon the student's return, subject to space availability. It may not be feasible for the student to re-enter the program immediately since all courses are offered consecutively and only once a year.

c. All didactic and clinical course work must be completed prior to completion and graduation from the program.

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4. The Program Director will document the student's decision in regard to the two options described above.

5. The student will complete and sign documentation acknowledging receipt of the two options described above.

6. I am aware that I am not required to report any possibility of pregnancy to my Program Director. However, upon doing so, I understand that I will be able to utilize the two options listed in the Program's pregnancy policy.

Although it is both procedure and practice of this Program to offer the utmost in radiation protection to its students, the College and its Affiliates will not assume liability of the mother or the child in case of pregnancy.

Information regarding a student's pregnancy will be held in the utmost confidence.

I have read the above pregnancy policy and understand its content.

Student Name: _____

Signed: _____ _____
Student signature Date

FLORENCE-DARLINGTON TECHNICAL COLLEGE
RADIOLOGIC TECHNOLOGY PROGRAM

I verify by my signature below that:

1. I have notified the Florence-Darlington Technical College Radiologic Technology Program Director of my pregnancy.

2. I have been advised by the Program Director in regard to protective measures as well as the risks associated with radiation exposure to the fetus. I have also been advised to and / or have read NRCP 116.

3. I have received an additional radiation monitoring device that I am wearing at the level of the pelvis to monitor the radiation to the fetus.

4. It has been explained to me that I am required to wear a 0.5 mm lead equivalent wrap around protective apron or two separate protective aprons of 0.5 mm lead equivalent when performing examinations that require me to be present in the room (Fluoroscopy, portable, surgery, etc.).

5. I have had the opportunity to discuss questions concerning radiation safety during my pregnancy with the Program Director. Furthermore, I understand that should additional questions arise; I may again consult with this individual.

_____ I do understand the risks involved to me and to the fetus during my pregnancy in regard to pregnancy - related radiation safety. I elect to remain in the Program and adhere to the requirements as stated in Option # 1 of the attached Pregnancy Policy.

_____ I do understand the risks involved to me and to the fetus during my pregnancy in regard to pregnancy - related radiation safety. I elect not to remain in the Program and that leave of absence from the Program has been granted to me. I understand my return is subject to space availability and I anticipate returning on or around the following date: _____

_____ _____
Student's Name Printed Date

_____ _____
Student's Signature Date

_____ _____
Program Director's Signature Date

FLORENCE-DARLINGTON TECHNICAL COLLEGE
RADIOLOGIC TECHNOLOGY PROGRAM

PHYSICIAN'S AWARENESS OF PREGNANCY

_____ _____
Student Name (printed/typed) Date of Birth

The student named above is presently enrolled in the Radiologic Technology Program at Florence-Darlington Technical College. Due to the nature of the Program, this student may be exposed to ionizing radiation, or other health hazards (i.e. lifting, possible exposure to contagious diseases, etc.). In order to determine the appropriate precautions, we need the following information:

1. Approximate date of conception: _____
2. Approximate date of expected delivery: _____
3. Present health status: _____
4. Will the student be under your care during her pregnancy?

   _____ Yes _____ No

5. Have you informed her of the potential risk (s) involved in continuing her present career goal while pregnant?

   _____ Yes _____ No

6. Do you recommend her continuation in Clinical Education?

   _____ Yes _____ No

7. Do you recommend that she continue the Program?

   _____ Yes _____ No

8. Recommended date maternity leave to begin: _____
9. Recommended date Clinical Education may resume after delivery: _____

NOTE: A written release is required before this student may return to clinical.

_____ _____ _____
Physician's Name (printed) Physician's Signature Date

CONFIDENTIALITY OF PATIENT RECORDS AND INFORMATION

In the process of performing one's assigned duty in the health care facility, it is possible to overhear information regarding patients, physicians, and/or hospital staff, which must be considered confidential. You are directed, therefore, not to discuss outside the healthcare facility or even with other healthcare facility students or employees these bits of information. Even casual conversation with other students may be overheard and thereby violate the right to privacy act of others. Be particularly careful about your conservation in elevators, eating-places, (etc. hospital cafeterias), and other places of assembly within or outside the healthcare facility.

A. Any discussion of patient information must occur for the purpose of fulfilling clinical assignments. Idle conservation regarding patient care is not exhibiting appropriate demeanor for healthcare professionals.

B. The patient owns the information contained in their medical record and healthcare facility owns the medical record document. Therefore, students cannot remove original, microfilmed, or photocopied medical records from the facilities premise. Any health data that identifies a patient, physician, or healthcare provider by name is considered to be confidential information.

C. Confidential information is privileged information that may not be disclosed without proper, written authorization from the patient. Not only is medical information confidential, but also identifying information, such as a patient's age, address or discharge, and the service or medical unit on which the patient was hospitalized. Unauthorized disclosure of health information is a breach of confidentiality punishable by state or federal law. Students who release health information without proper authorization will be dismissed from the program.

IMPAIRED FUNCTIONING

A. Florence-Darlington Technical College must maintain a safe, efficient, academic environment for students to learn. The College must also provide effective, safe patient care while students participate in the clinical setting. The presence or use of substances, lawful or otherwise which interfere with student judgment or motor coordination, pose an unacceptable risk for patients, colleagues, the institution, and healthcare agency. Therefore, the unlawful use, manufacture, possession, distribution, or dispensing of alcohol or illegal drugs, the misuse of legally prescribed or "over-the-counter" drugs, or being under the influence of such substances while engaged in any clinical experience poses an unacceptable risk and is strictly prohibited. For purposes of this policy, "being under the influence" is defined as meaning that the student's judgment or motor coordination is impaired due to the presence or use of any of the substances mentioned above.

B. If a student appears to be under the influence of alcohol or drugs, or is functioning in any impaired manner, the faculty or agency personnel responsible for that student have the responsibility of dismissing the student from clinical experience that day. Random drug screening may be required of a student at any time throughout the course of clinical study. In the event of a student accident/incident the clinical facility may request a drug screen as part of the investigative process. Random and incident related drug screens are performed at the student's expense.

    1. **Alcohol:** Alcohol use by any student while performing assigned responsibilities is prohibited. "Being under the influence" means that alcohol or drugs, or a combination

of drugs/alcohol affects the student, in a detectable manner, which interferes with the safe performance of his/her duties. Symptoms of influence are not confined to those consistent with misbehavior, or to oblivious impairments of physical and mental ability, e.g. slurred speech or difficulty in maintaining balance. A determination of "influence" can be established by a professional opinion, a scientifically valid test, and in some cases such as alcohol, by a layperson's opinion.

2. **Legal Drugs:** Being under the influence of a legal drug, prescribed by or self-administered, by any student performing assigned responsibilities is prohibited if use or influence may affect safety to self, patients, co-workers, or the public. If determined that a student does not pose a safety threat to others and performance is not affected, the student will be allowed to carry out assigned responsibilities.

3 **Illegal Drugs:** The use, sale, purchase, transfer, or possession by a student of any illegal drug, which is defined as any drug (1) which is not legally obtainable, or (2) which is legally obtainable but has not been legally obtained, is prohibited. This includes marijuana. The presence of a detectable amount of illegal drugs while performing assigned responsibilities is prohibited. Students may be required to take blood test, urinalysis, and/or other drug/alcohol screening test.
    1. As part of periodic physical examination.
    2. When clinical supervisory personnel (faculty or hospital employee), fellow students, or a student's self-professed use determine that the circumstances justify testing.

4. Student's consent to submit to such tests is required as a condition to program acceptance. Student refusal to submit to such tests may result in disciplinary action, including program dismissal, for a first refusal or any subsequent refusal. The student will assume testing cost.

5. Policy violation can result in disciplinary action including program dismissal for a first offense. A specific plan will be developed on an individual basis. Students may be required to provide evidence of routine or random laboratory testing and counseling.

6. FDTC provides student counseling and assistance services for those who are identified as requiring help. Upon program dismissal for policy violation, a plan for rehabilitation will be devised which may include mandatory counseling, periodic drug/alcohol screening, and periodic reporting before consideration of student re-admission. The student must assume the responsibility for an approved plan of compliance before program re-admission can be considered.

Criminal Background/Illegal Drug Check

Students will be required to submit to a criminal background/Illegal Drug check for approval by all clinical sites. If for **ANY** reason a student is not allowed to attend all clinical sites for clinical education, the student will be unable to complete the clinical course and will be dropped from the program.

RADIATION PROTECTION

I. HOLDING PATIENTS /IMAGING RECEPTOR FOR AN EXAMINATION

Under no circumstances should a student hold a patient/image receptor during a radiographic procedure. This includes mobile (portable) studies.

II. IDENTIFICATION

Students are required to wear appropriate identification in all Clinical Education sites at all times. Proper identification includes a regulation name badge and student ID. Students are required to carry their student ID's at all times. Students who do not have proper identification will be removed from the Clinical Education site.

III. MARKERS

Students are required to have their own personal radiographic markers with three initials in the Clinical Education site. It is the student's responsibility to purchase and replace lost markers. Each student will adhere to the Radiologic Technology Program's policy on marking images**. (At no time are students allowed to annotate images.)**

IV. PERSONAL RADIATION DOSIMETRY POLICY:

It is required by law that all persons working with or around x-ray machines and/or radioactive materials wear current radiation monitor.

The Personal Radiation monitors are furnished to you in accordance with existing state and federal regulations, which require that you wear it when working in areas where potential radiation exposure may occur. The monthly reports regarding your exposure become a part of your permanent record and are open for your inspection. When you leave this institution, be sure to request a copy of your exposure record to either take with you or to have sent to your next employer. There will be a copy of your monthly radiation monitor report located in the Program's Radiation Safety Officer's Office. You are required to read and sign off within two weeks of the report being received.

In order to utilize the Personal Radiation monitor most effectively and to have the most accurate record possible, the following regulations must be observed:

1. Students must wear Personal Radiation monitors when doing clinical rotations and positioning labs in the energized x-ray lab located in the HSC of Florence-Darlington Technical College. The radiation monitor is to be worn on the uniform collar outside of lead aprons. A student not wearing a radiation monitor will not be allowed in radiation areas and positioning lab. Time missed will be counted as a clinical absence or a class/lab absence.
2. Students will be issued new Personal Radiation monitors each month. It is absolutely imperative that you turn in your prior Personal Radiation monitor within forty-eight (48) hours, so that they may be processed properly. Outdated monitors must be returned to the Radiology Program's Radiation Safety Officer within 48 hours. **Each time a student fails to exchange their Radiation Monitor by the effective deadline it will result in a five (5) point reduction in their final clinical grade.**

*** Students who fail to have their Personal Radiation monitor changed by this date will <u>not</u> be allowed in the Clinical Education site, and time will be counted as a clinical absence.**

- **Student Personal Radiation monitors are at no time to be worn for any activity that is not school related. This will result in dismissal from the Radiologic Technology Program.**

- **A student can receive no more than 100 millirem educational dose annually. Any student(s) receiving twenty-five (25) millirem or more within one quarter of exposure will be counseled by the program's radiation safety officer. The student will be reminded of the program's radiation safety policies. Any further violation(s) could result in the student's dismissal from the program.**

- **Loss of a dosimeter badge must be reported to the Clinical Coordinator immediately.**

V. X-Ray Laboratory Use:

1. Students must wear a dosimeter badge at the front collar level at all times. Students are not permitted in the x-ray laboratory without a dosimeter badge.
2. Student utilization of the x-ray equipment in the school laboratory must be under supervision of a qualified radiographer who is readily available (minimum of indirect supervision to comply with JRCERT Standards)
3. All radiographic equipment must be used with care and with respect to ALARA principles.
4. All students (or any other personnel that may be in the x-ray room) must be standing completely behind the protective control booth barrier before the exposure is made.
5. The student operating the control panel and exposure button/switch must announce the exposure is about to be made prior to making the actual exposure.
6. If an exposure is intended, but the equipment fails to make the exposure, a second attempt is not allowed until all participants are counted and assurance of their position completely behind the control booth barrier is confirmed.
7. Exposures are only allowed using phantoms or quality control test objects.
8. Students must be cognizant of the location and operation of the "emergency off" button/switch.
9. All equipment malfunctions must be immediately reported to the supervising qualified radiographer.

VI. MRI SCREENING FOR STUDENTS:

PURPOSE: The purpose of this policy is to ensure the safety of the Radiologic Technology students before entering a Magnetic Resonance Imaging scanning room/field. It assures appropriate MRI Safety screening has been completed annually on each student.

POLICY: All students in the Radiologic Technology Program will be instructed in MRI Safety basics in the first semester of the program prior to entering clinical rotations. In addition, all students will be screened again the fourth semester of the program to ensure continued safety in the event of clinical rotation within an MRI facility. Students may also be subject to additional screenings at MRI facilities.

Magnetic Resonance Imaging (MRI) scanners generate a very strong magnetic field within and surrounding the MRI scanner. As this field is always on, unsecured magnetically susceptible (ferromagnetic) materials, even at a distance, can accelerate into the bore of the magnet with a force significant enough to cause severe injury or damage to the equipment, patient, and/or any personnel in its path.

Anyone entering the MR environment without being thoroughly screened by qualified MR personnel may potentially compromise his/her safety and/or the safety of everyone in the MR environment. It is the MRI

technologist's responsibility to control all access to the scan room. As a student, you too become part of the safety team adhering to All MRI safety policies and procedures. At any point a student has doubt, an MRI Technologist or Radiologist should be consulted.
Students will be responsible for reporting any changes which impact this screening and may thus compromise safety.

PROFESSIONAL LIABILITY INSURANCE (MALPRACTICE):
All students must show evidence of maintaining liability insurance before being allowed in any Clinical Education course.

REPEAT RADIOGRAPH POLICY
In the event a repeat radiograph is required of an examination being done by a student, the radiograph must be critiqued by a registered technologist. Direct supervision by a registered technologist must be given to the student when repeating the radiograph.

ELECTRONIC DEVICES POLICY
Students should use electronic devices in the department in a professional manner or emergency situations only.

TUBERCULOSIS POLICY
Students are **not** allowed to perform x-ray exams on patients that are TB positive unless the attending clinical site has fit tested them for the appropriate mask. They are to excuse themselves from the procedure.

COVID POLICY
Students within the clinical sites will follow polices related to COVID as stipulated by each site. Changes to site policies will be communicated to the students on an ongoing bases through email as the program receives them.

COMMUNICABLE DISEASE POLICY
Any student who suspects he/she may have been exposed to or contracted a communicable disease must notify the Program Director immediately. In the event a student has been exposed, appropriate action will be taken to insure the health and well-being of the hospital patients, hospital staff, and fellow students. The actions will be in congruence with State TECH Board policies.

COMPLETION REQUIREMENT
It is necessary for a student to maintain a "C" average in each major course both in class and clinic to be eligible to proceed in the following semester in any major course. If a student is not eligible to proceed, he/she will be dismissed from the program. A student will be allowed to reenter the program once according to the Program's Reentry Policy. To enter into the following class, there must be space available and a 2.0 GPA is needed. All radiology and anatomy courses are considered major courses.

Program Grading Scale

A: 93-100 B: 85-92 C: 77-84 D: 69-76 F: 0-68

CLINICAL DRESS CODE POLICY

It is the policy of the Radiologic Technology Program that the student will dress in a professional manner, as outlined in the dress code.

Any student who violates the dress code will be counseled by Faculty and may be sent home to conform to the dress code.

Clinical Dress Code Policy for the Female Student:

I. A. **Professional uniform**, **NAVY BLUE** which must be:

1. Clean
2. Properly fitted
3. In good repair
4. Modest length
5. Completely Navy-Blue scrub top and pants
6. White long sleeve shirt may be worn under
7. Conservative in style
8. Monogrammed appropriately
9. No Denim
10. ID must be worn on Left side at collar level with Dosimeter.

B. **Professional Solid Brown or Black shoes which must be:**

1. Clean
2. Polished
3. In good repair
4. Conservative in style (no clogs, high platforms, Crocs etc.) Must have a lip back to the shoe or strap
5. No fabric or mesh shoes

C. Optional: **White only** Lab Jacket, which must be:

1. Clean
2. Completely white
3. Pressed
4. In good repair
5. Waist length
6. Monogrammed appropriately

Note: Sweaters, sweatshirts, or jackets with hoods may not be worn.

II. The female student must abide by the following, when participating in surgical procedures within the clinical setting:

A. Wear the furnished attire considered appropriate to the procedure (i.e., surgical pants, smocks, gowns, caps, masks, and/or foot coverings, etc.)
B. Wear said attire, or any article thereof, in accordance with established institutional/departmental policies required.
C. Under no circumstances, wear "said" attire, or any article thereof, outside the hospital.
D. Wear said attire, or any article thereof, while participating in "surgical" procedures only.
E. In addition to said attire, wear the official Radiation Safety monitor.

III. The female student must wear the following articles while in the clinical setting:
   A. The official, FDTC ID badge.
   B. The Program's official Radiation Safety monitor.

IV. The female student must not wear the following accessory articles while in the clinical setting:
   A. Rings (other than wedding ring, engagement ring, or school ring)
   B. Earrings which protrude below the ear lobes (**According to clinical site policy**)
   C. Necklaces longer than 18"
   D. Ankle bracelets or arm bracelets
   E. Ostentatious and/or "fad" watches, and/or watch bands
   F. Sunglasses
   G. Colored hairbands or extreme hair ornaments
   H. Unofficial pins, and
   I. Unofficial patches

***Note: One necklace may be worn. Only stud earrings may be worn.**

***Note: Tattoos larger than a quarter must be covered. No inappropriate body piercing or tattoos as determined by clinical site policies.**

V. The female student should practice a regimen of sound personal hygiene habits which must include:

   A. Hair style must be:
      1. Clean
      2. Attractively, groomed, and
      3. Conservative in style with no extreme hair colors
      4. No extreme hair styles will be allowed **(this will be determined by the clinical sites dress codes which the Radiology Program will abide by).**

***Note: Hair longer than shoulder length should be pulled back. Hair should be kept out of face.**

   B. Fingernails must be:
      1. Clean
      2. Neatly trimmed
      3. No artificial nails
      4. **Without colored fingernail polish (pastel ok if allowed by clinical affiliate).**
      5. **Conservative in length (no longer than slightly visible when looking from palm of hand).**

   C. Make-up, which must be:
      1. Conservative in coloring
      2. Moderately applied, and
      3. Conservative in style.
   D. Fragrances, (if any) which must be:
      1. Sparingly applied, and

2. Discrete in aroma.

Appropriate dress should be worn in the clinic at all times (scheduled and unscheduled times).

***Note: THE PROGRAM DIRECTOR in conjunction with the Clinical Site RESERVES THE RIGHT OF FINAL DECISION IN DISPUTE OVER INTERPRETATION**.

The uniform is an external indication of professionalism.

Clinical Dress Code Policy for the Male Student

I. The male student must wear the following articles while in the clinical setting:

A. **Professional uniform,** Scrub Style, **Navy Blue** which must be:

1. Clean
2. Properly fitted
3. In good repair
4. Modest length
5. Conservative in style
6. Monogrammed appropriately
7. Completely Navy-Blue Scrub top and pants
8. No Denim
9. White long sleeve shirt may be worn under scrub top.
10. ID must be worn on Left side at collar level with Dosimeter.

B. **Professional Solid Brown or Black shoes which must be:**

1. Clean
2. Polished
3. In good repair
4. Conservative in style. Must have a lip back to the shoe or strap
5. No stripes, fabric, or mesh

C. Optional**: White only** Lab Jacket, which must be:

1. Clean
2. Completely white
3. Pressed
4. In good repair
5. Waist length
6. Monogrammed appropriately

Note: Sweaters, sweatshirts, jackets with hoods may not be worn.

II. The male student must abide by the following, when participating in "surgical" procedures within the clinical setting:

A. Wear the furnished attire considered appropriate to the procedure (i.e., surgical pants, smocks, gowns, caps, masks, and/or foot coverings, etc.)

B. Wear "said" attire, or any article thereof, in accordance with established institutional/departmental policies as required.

C. Wear "said" attire, or any article thereof, while participating in "surgical" procedures only.

D. Under no circumstances, wear "said" attire, or any article thereof, outside the hospital.

E. In addition to "said" attire, don the official "Radiation Safety" film badge.

III. The male student must wear the following accessory articles while in the clinical setting:

A. The official, FDTC ID badge

B. The Program's official Radiation Safety monitor.

IV. The male student must not wear the following accessory articles while in the clinical setting:
A. Rings (other than wedding or school rings)
B. Bracelets
C. Ostentatious and/or "Fad" watches, and/or watch bands
D. Sunglasses
E. Unofficial pins
F. Unofficial patches

*Note: One neck chain may be worn, must not be visible.

***Note: Tattoos larger than a quarter must be covered. No inappropriate body piercing or tattoos as determined by clinical site policies.**

V. The male student should practice a regimen of sound personal hygiene habits, which must include:
A. Hair Style which must be:
1. Clean
2. Attractively groomed
3. Of a length that does not extend below the shirt collar, and/or protrude more than three inches from the scalp, and
4. Conservative in style

***Note: Hair longer than shoulder length should be pulled back. Hair should be kept out of face.**

B. Facial Hair (if any) which must be:
1. Clean
2. Attractively groomed
3. Closely trimmed
4. Conservative in style
5. If required to don N95, must meet requirements per clinical setting.

C. Fingernails, which must be:
1. Clean
2. Neatly trimmed
3. Conservative in length (no longer than slightly visible when looking from palm of hand)

D. Fragrances (if any) which must be:
1. Sparingly applied
2. Discrete in aroma

E. Hair Length:

1. Must not touch collar of shirt
2. Must be over the ears away from the face

3. Colored hairbands or extreme hair ornaments
4. No extreme hair styles will be allowed **(this will be determined by the clinical sites dress codes which the Radiology Program will abide by).**

*Note: Appropriate dress should be worn in the clinic at all times (scheduled or unscheduled).

***Note: THE PROGRAM DIRECTOR RESERVES THE RIGHT, in conjunction with the Clinical Site, OF FINAL DECISION IN DISPUTES OVER INTERPRETATION**.

CLINICAL COURSE SYLLABI

COURSES: Syllabi are available on D2L.

RAD 153 Applied Radiography I
RAD 165 Applied Radiography II
RAD 175 Applied Radiography III
RAD 257 Advanced Radiography I
RAD 266 Advanced Radiography II

TEXTBOOKS AND OTHER REQUIRED MATERIALS:

Bontrager, Kenneth L, Textbook of Radiographic Positioning and Related Anatomy, 10th Edition. C.V. Mosby.

COURSE OBJECTIVES:

RAD 153

Upon successful completion, the student should be able to complete the following tasks:

Lecture:
1. Describe positioning principles for radiographic imaging
2. Describe room, and patient preparation
3. Describe patient positioning for radiographic exams of chest, abdomen, & upper airway

Lab:
1. Perform selected radiographic procedures of the chest and abdomen
2. Critique finished radiographs of the chest and abdomen for radiographic quality

RAD 165

Upon successful completion, the student should be able to complete the following tasks:

1. Demonstrate proper selection and use of technical factors for producing radiographic images of the upper and lower extremities, pelvis, hips, and sacroiliac joints.
2. Apply radiation protection principles in the performance of imaging.
3. Identify appropriate anatomy of radiographic images
4. Apply basic patient care to patients encountered in the radiology department.

RAD 175

This course is a continuation of RAD 165. Upon successful completion, the student should be able to complete the following tasks:

1. Demonstrate proper selection and use of technical factors for producing radiographic images of the cervical, thoracic, and lumbar spine as well as ribs and sternum.
2. Apply radiation protection principles in the performance of imaging.
3. Identify appropriate anatomy of radiographic images.
4. Apply basic patient care to patients encountered in the radiology department.

RAD 257

This is a continuation of RAD 175. Upon successful completion, the student should be able to complete the following tasks:

1. Demonstrate proper selection and use of technical factors for producing radiographic images of the skull, facial bones, and sinuses, upper and lower Gi tract, small bowel, IVU, and myelograms.
2. Apply radiation protection principles in the performance of imaging.
3. Identify appropriate anatomy of radiographic images
4. Select the proper radiographic contrast media and demonstrate the correct administration of for the exam
5. Demonstrate proper setup of radiographic equipment for fluoroscopic procedures
6. Apply basic patient care to patients encountered in the radiology department.

RAD 266

This course is a continuation of RAD 257. Upon successful completion, the student should be able to complete the following tasks:

1. Demonstrate proper selection and use of technical factors for producing radiographic images.
2. Apply radiation protection principles in the performance of imaging.
3. Critique images for proper image receptor exposure, resolution, and distortion while identifying appropriate anatomy and pathology of radiographic images.
4. Apply basic patient care to patients encountered in the radiology department.

Student will rotate through specialty areas this semester. Upon completion of each rotation a completed rotation form will be turned into the clinical coordinator.

****** A STUDENT MUST DEMONSTRATE INDEPENDENCE IN CLINICAL PERFORMANCE**.

CLINICAL ASSIGNMENTS:

The student will be assigned to a clinical area starting the second semester. The following corresponds to the number of clinical hours in the clinic for each semester.

SEMESTER	COURSE	CLINICAL HOURS
1st	RAD 153	3 lab hours
2nd	RAD 165	15
3rd	RAD 175	22.5

4th	RAD 257	21
5th	RAD 266	18

Student Learning Objectives

The graduate shall be able to:

1. Use oral and written medical communications.
2. Demonstrate knowledge of human structure, function, and pathology.
3. Anticipate and provide basic patient care and comfort.
4. Apply principles of body mechanics.
5. Perform basic mathematical functions.
6. Operate radiographic imaging equipment and accessory devices.
7. Position and patient and imaging system to perform radiographic examination and procedures.
8. Modify standard procedures to accommodate for patient condition and other variables.
9. Process and Evaluate radiographs.
10. Determine exposure factors to obtain diagnostic quality radiographs with minimum radiation exposures.
11. Adapt exposure factors for various patient conditions, equipment, accessories and contrast media to maintain appropriate radiographic quality.
12. Practice radiation protection for the patient, self and others.
13. Recognize emergency patient conditions and initiate first aid and basic life-support procedures.
14. Evaluate radiographic images for appropriate positioning and image quality.
15. Evaluate the performance of radiographic systems, know the safe limits of equipment operation, and report malfunctions to the proper authority.
16. Demonstrate knowledge and skills relating to quality assurance.
17. Exercise independent judgment and discretion in the technical performance of medical imaging procedures.
18. Understand the basics of pharmacology and its application to radiography.
19. Use proper venipuncture technique.
20. Using knowledge and experience gained in achieving one through nineteen above, demonstrate problem solving skills and ability to use critical thinking skills.

CODE OF PROFESSIONAL CONDUCT

The FLORENCE DARLINGTON TECHNICAL RADIOLOGY PROGRAM has adopted a Code of Professional Conduct which all students are expected to follow. Each student's professional conduct will be observed by the faculty, both full-time and part-time clinical instructors, and will be evaluated on a regular basis.

A student receiving an Unsatisfactory evaluation regarding Code of Professional Conduct will be counseled to this effect by the Program Director and one (1) or more faculty members. Upon recommendations of the Program Director and the Associate Vice President of Health Sciences, a student who receives an unsatisfactory evaluation regarding Code of Professional Conduct for one or more occurrences will be reported in accordance to the Student Code of Conduct and Grievance Policies of FDTC. Outcomes of this process may require a withdrawal or dismissal from the Program.

A student enrolled in the Radiology Technology Program is expected to:

- Appear and conduct oneself in a professionally acceptable manner.
- Be cognizant of and adhere to the channels of authority.
- Be academically and professionally honest.
- Show respect for and be mutually supportive of fellow students, faculty, and staff regardless of race, religion, sex, nationality, or economic status.
- Identify truthfully and accurately one's credentials and professional status.
- Refrain from performing any professional service which requires competence that one does not possess or which is prohibited by law, unless the situation morally dictates otherwise.
- Accept responsibility for relating incompetence and unethical conduct to the proper authorities.
- Regard as strictly confidential all information concerning each patient and refrain from discussing this information with any unauthorized individual, including the patient.
- Show respect and consideration for the patient, regardless of race, religion, sex, nationality, or economic status.
- Be guided at all times by concern for the welfare of patient entrusted to one's care

CLINICAL AFFECTIVE OBJECTIVES

While in the clinical setting, the student will:

ALL STUDENTS

1. Maintains professional appearance.
2. Will be in attendance.
3. Arrive on time and be prepared.
4. Demonstrate dependability/reliability by completing assignments with minimal direction, trustworthiness, credibility, and responsibility.
5. Functions effectively as a member of the healthcare team.
6. Contributes to a positive environment within the department.
7. Accepts supervision and work effectively accepting constructive criticism and guidance.
8. Appropriately interacts with patients.
9. Conducts self in an ethical and professional manner.
10. Communicates effectively with the healthcare setting.
11. Efficiently plan and manage time.
12. Be self-directed and responsible for self-actions.
13. Confident in abilities exercising good judgment and maintains composure in stressful situations.
14. Demonstrate clinical participation and performance of procedures.
15. Master equipment operation and manipulation.
16. Utilize Radiation Protection.
17. Utilize Standard Precautions as directed by site protocols and/or patient condition.
18. Utilize lead markers with initials.
19. Utilize technologist assignments.
20. Demonstrate continuous improvement of Radiology skills and performance.

CLINICAL AFFECTIVE EVALUATIONS

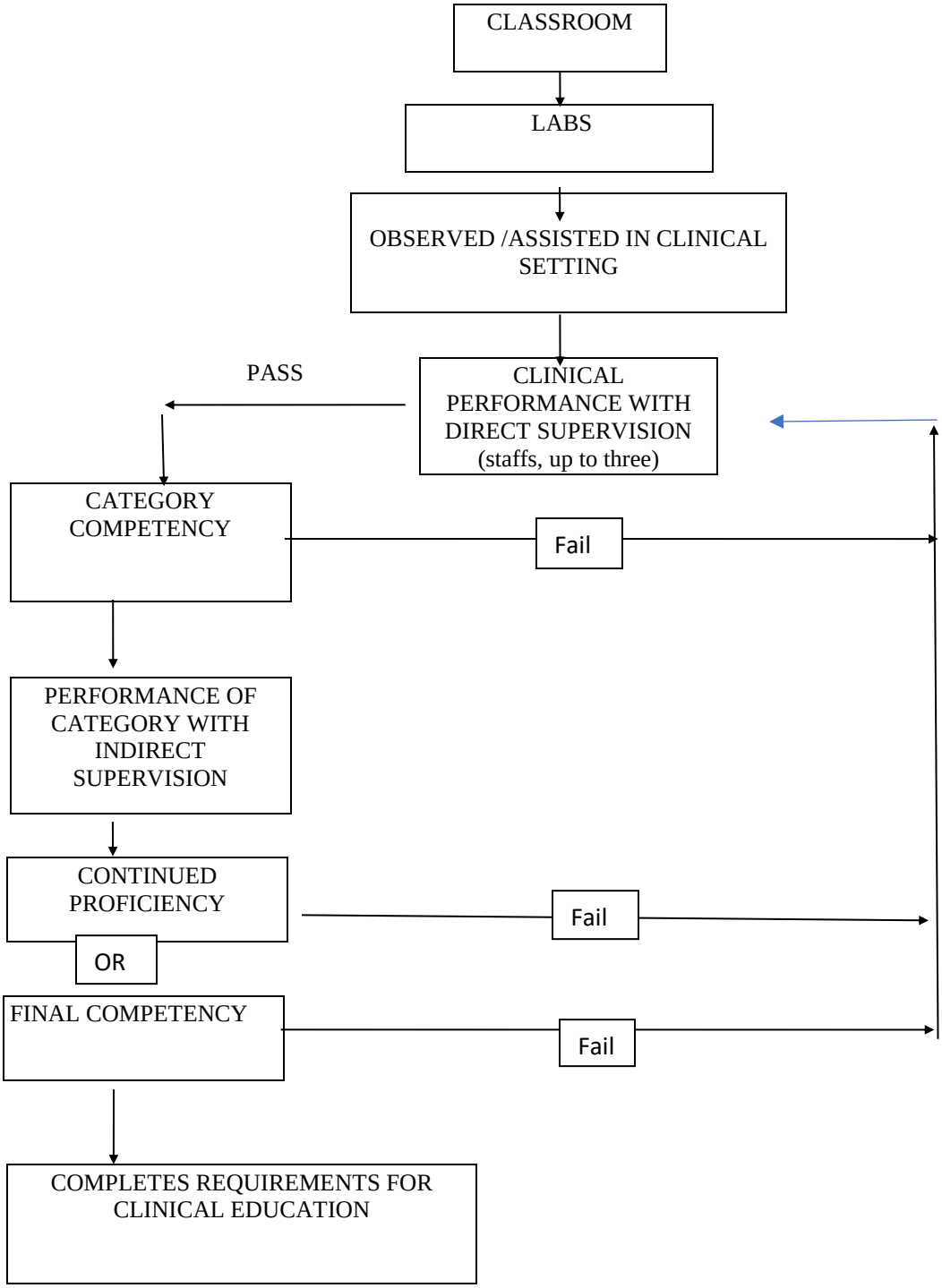
The Trajecsys Clinical Affective Evaluation Form will be used to evaluate the student's professional competency and relevant personal traits (Affective Objectives) in the clinical area. The technologist(s) with whom the student has been working will complete a Clinical Affective Evaluation Form weekly. Faculty will complete a minimum of one (1) affective evaluation during each semester based off of faculty observation of student within the clinical site.

The Clinical Affective Evaluation is graded on the average of the responses on the form. The Clinical Instructor may review the Clinical Affective Evaluation with the student. The student will be counseled by the Clinical Coordinator/ Faculty for any Clinical Affective Evaluation below average.

Clinical Evaluation Forms: refer to page 76-80.

The Clinical Affective Evaluation Form is to be used for all students in all areas.

FLOW CHART FOR CLINICAL PROFICIENCY EVALUATIONS



COMPETENCIES/PROFICIENCIES

INTRODUCTION:

Competencies are the chief method used to evaluate the student's ability to meet the competency objectives of the clinical courses in this Program.

The Psychomotor Evaluation (patient care) is an assessment of the student's ability to perform behavioral objectives (skills) for each radiographic examination.

These competencies are performed under direct supervision with a registered technologist.
Once the student has attempted and passed a Category Competency, the student may then perform the exam with indirect supervision by a registered technologist.

DEADLINES

During the term, each student will be required to successfully challenge a designated number of Proficiencies/Competencies (attached schedule p. 41). The two deadlines for the Proficiencies each semester are as follows:

******* **End of shift two clinical days prior to the official mid-term date**
End of shift on last clinical day for the semester

FAILURE TO COMPLETE PROFICIENCIES:

Students who maintain at least a 77 average in clinical, but fail to successfully complete the designated number of total Proficiencies by the end of the semester will receive a **WF for the course regardless of clinical average**.

However, A student will be allowed to carry over unobtained categories into the third semester **only** of the program as long as the overall clinical average remains 77 or higher. A student must obtain all competencies (designated for semester and those carried over from second semester) to successfully complete the third semester and proceed into the fourth.

PSYCHOMOTOR EVALUATION

The Psychomotor Evaluation is the first portion of the Proficiency where the student is graded on the process of producing radiographs under the observation of a designated evaluator.

A. To complete a Psychomotor Evaluation, the student should follow the outline below:
   1. Select appropriate patient for the Proficiency.
   2. Ask a technologist to perform competency evaluation.
      (If evaluator declines, ask another evaluator. If no evaluators are available, the Psychomotor Evaluation cannot be done at that time.)
   3. Choose appropriate room. The student is responsible for being familiar with departmental procedures and equipment in the room chosen.
   4. Ensure evaluator accompanies the student from the initial contact with patient until completion of evaluation.
   5. Perform examination according to the stated PSYCHOMOTOR Objectives.
   6. After the exam is completed, the student gives Competency form to evaluator to complete.

      - Students are encouraged to gain clinical knowledge while working as part of a healthcare team. However, when obtaining Staff, Category or Final Competencies the one student attempting competency(ies) shall perform all procedures/projections associated with the patient. Those procedures/projections that are exempt are those yet to be introduced in the classroom and lab settings. Students may include these projections as observed/assisted studies.

B. Evaluator cannot interfere or assist with examination, including assistance with technique factors. Exceptions to this rule are as follows:
   1. The evaluator can <u>suggest</u> changes before student makes exposure. The student must be downgraded in the appropriate category (ies).
   2. For 1st year students (Associate Degree Freshmen) the evaluator may suggest changes once a technique is set. The student will be evaluated on the <u>initial</u> technique for the Psychomotor Evaluation.

C. Images should be repeated when the evaluator deems an Image of poor diagnostic quality.

D. To pass the Psychomotor Evaluation portion of the Proficiency, the student must have a minimum score of 80% for staff competencies and 85% for category and final competencies.

E. It is the student's responsibility to ensure that the following information is correctly recorded on the competency form (green card):
   1. A patient history and last four digits of accession number.
   2. Affiliate and room number
   3. Contrast type and/or fluoro time

F. If the student fails a critical portion as indicated on Psychomotor Evaluation, the <u>Proficiency has been failed and must be repeated</u> <u>according to stated procedures</u>.

STAFF COMPETENCY

NOTE: a passing grade on two (2) staff competencies must obtained before attempting a category competency. The student is allowed to attempt up to three (3) staff competencies. The average of all three attempts will be recorded as the grade.

What is a Staff Competency? A staff competency is the method by which a student is evaluated by a staff technologist to determine whether or not he/she is ready to attempt a category competency.

There are two sections to each competency. The student must pass the competency. A minimum of 80% is required.

Instructions: The student will inform the clinical staff when ready to perform.

Upon successfully completing the minimum number of staff competency, the student may then:

1. Attempt a category competency.
2. Perform additional exams until ready to attempt a final competency.

What happens if you pass or fail?

PASS - The student continues work on completing category competencies.
A passing grade is **80** or above.

FAIL - Student must:

1. Review competency with technologist and determine area or areas of weakness.
2. Demonstrate understanding of areas failed (discrepancy of technologist).
3. Attempt and successfully complete a staff competency and receive a passing grade.
4. Attempt another staff competency.
5. Pass - move to next competency.
   Fail - repeat cycle.

If the student fails the staff competency, a second time, he/she will be counseled by the clinical staff giving the exam and the Clinical Coordinator. Remedial work may be required of the student. The type will be determined during the counseling session with the Clinical Coordinator. **The failure of a third attempt will result in the dismissal of the clinical course and Program.**

CATEGORY COMPETENCY

What is a Category Competency? A category competency is the method by which a student is evaluated by a Clinical Preceptor to determine if he/she is competent in performing specific exams.

There are two sections to each competency. The student must the competency. A Minimum of 85% required on each section.

Before a student can ask a clinical staff technologist to evaluate him/her on a competency, the student must have attempted and passed two staff competencies for each exam.
Upon successfully completing the minimum number of staff competencies, the student may then attempt a category competency.

Instructions: The student will inform the clinical staff technologist when ready to perform.

What happens if you pass or fail?

PASS - The student continues work on completing category competencies.
A passing grade is **85** or above.
A student may then perform this exam with indirect supervision.

FAIL - Student must:

1. Review category competency with instructor and determine area or areas of weakness.
2. Demonstrate understanding of areas failed (discrepancy of preceptor).
3. Attempt and successfully complete two (2) staff competency and receive a passing grade.
4. Ask Preceptor for a category competency.
5. Pass - move to next competency in category.

If the student fails the category competency, a second time, he/she may be counseled by the Clinical staff technologist giving the exam and the Clinical Coordinator. Remedial work may be required of the student. This will be determined during the counseling session with the Clinical Coordinator. **The failure of a third attempt will result in the dismissal of the clinical course and Program.**

1. **WHO DOES CATEGORIES?** Any faculty member as well as all designated clinical Preceptors, except when clinical Preceptors cannot, he or she may designate a clinical staff technologist. A faculty member must review images with students for image evaluation criteria and anatomy identification for the category to count. Final category grades are not complete until faculty completes image evaluation section of competency.

SIMULATIONS

Simulations are required for procedures that are not performed on a routine basis due to availability as determined by the ARRT. However, these procedures are important for the student technologist to be familiar with because they are still performed within the profession of Radiography.

The student technologist will be responsible for performing all simulations with the same proficiency as categories.

What is a simulation?

A simulation is an evaluation of a student's ability to perform a given procedure on a model with or without actually, producing a radiograph. In some instances, phantoms may be used to produce radiographs.

When is a simulation performed?

A simulation maybe performed when the adequate numbers of procedures are not available for the student to challenge in the clinical setting as determined by the faculty member.

At any time, a faculty member may require a student to perform a simulation on a previously challenged procedure.

Timing of simulations will be determined by the 60% mark in each semester. After which time, students should be prepared to complete possible simulations on any elective and designated mandatory categories per ARRT guidelines.

Instructions: The faculty will inform the student of the need to complete a simulation.

What happens if you pass or fail?

PASS - The student continues work on completing category competencies.
A passing grade is **85** or above.

FAIL - Student must:

1. Review simulated competency with instructor and determine area or areas of weakness.
2. Demonstrate understanding of areas failed (discrepancy of instructor).
3. Attempt and successfully complete a proficiency and receive a passing grade.
4. Pass - move to next simulation.

If the student fails the simulated competency, a second time, he/she will be counseled by the Faculty giving the exam and the Program Director. Remedial work will be required of the student. This will be determined

during the counseling session with the Faculty and Program Director. **The failure of a third attempt will result in the dismissal of the clinical course and Program.**

*Note: The student must have completed a positioning lab with faculty to be considered eligible to complete a particular simulation.

CONTINUED PROFICIENCY EVALUATION

The Continued Proficiency Evaluation is the method used to evaluate the student's continuing ability to meet the objectives of any completed Competency. At any time, a faculty member may require a student to perform a previously challenged examination for a Continued Proficiency Evaluation.

Continued Proficiency Evaluations are done at the discretion of the Faculty.

Continued Proficiencies may be simulated.

Returning/Transfer students will be asked to perform Continued Proficiency Evaluations on those studies performed prior.

What happens if you pass or fail?

PASS - The student continues work on completing category competencies.
A passing grade is **85** or above.

FAIL - Student must:

1. Review competency with faculty and determine area or areas of weakness. He/she will be counseled by the Faculty giving the exam. Remedial work will be required of the student. This will be determined during the counseling session with the Faculty and Program Director.
2. Demonstrate understanding of areas failed (discrepancy of instructor).
3. Attempt and successfully complete two (2) staff competency and receive a passing grade
4. Ask clinical Preceptor for a category competency.
5. Pass - move to next competency in category.

If the student fails a continued proficiency, a second time, this will result in the dismissal of the clinical course and Program.

ASSOCIATE DEGREE PROGRAM IN RADIOLOGIC TECHNOLOGY
COMPETENCY DEADLINES

By the deadlines indicated, the student will have the following total number of Competencies completed for the semester:

RAD 153 1st Semester Equipment Competency in Energized Lab

RAD 165 2nd Semester

Semester end: 9 MANDATORY COMPETENCIES COMPLETED
1 ELECTIVE

RAD 175 3rd Semester

Semester end: 11 MANDATORY COMPETENCIES COMPLETED
3 ELECTIVES COMPLETED

RAD 257 4th Semester

Semester end: 13 MANDATORY COMPETENCIES COMPLETED
5 FINALS CATEGORIES
5 ELECTIVES COMPLETED

RAD 266 5th Semester:

Semester end: 6 MANDATORY COMPETENCIES COMPLETED
5 FINALS CATEGORIES
3 ELECTIVES

Radiological Procedures				
Mandatory	**Elective**		**Mandatory**	**Elective**
Abdomen			***C-Arm Study***	
Abdomen Supine	Intravenous Urography		*C-Arm Procedure (multiple projections)*	
Abdomen Upright	Abdomen Decubitus		*Surgical C-Arm Procedure (sterile field)*	
Chest/Thorax			***Fluoroscopy Study***	
Chest AP (WC or STR)	Chest Lateral Decubitus		***C****ontrast Enema*	Arthrogram
Chest Routine	Sternum		*Myelogram (LP)*	Cystogram
Ribs	Upper Airway (Soft Tissue Neck)		*UGI*	ERCP
	Sternoclavicular Joints			Esophagus
				Hysterosalpingogram
				Small Bowel Series
Geriatric (At Least 65 &Physically/ Cognitively Impaired due to Aging)			***Pediatric*** (Age 6 or Younger)	
Chest Routine	Hip or Spine		*Chest Routine*	Abdomen
Lower/Upper Extremity				Lower/Upper Extremity
				Mobile Study
Head Candidates must select at least one elective procedure from this section.			***Lower Extremity*** Trauma requires modifications in positioning due to the injury with monitoring of the patient's condition	
	Facial Bones		*Ankle*	Calcaneus
	Mandible/Panorex		Femur	Patella
	Nasal Bones		*Foot*	Toes
	Orbits		*Knee*	
	Skull		Tibia- Fibula	
	Paranasal sinuses		*Trauma Lower Ext*	
	TMJs			
Mobile Study			***Spine & Pelvis***	
Abdomen			*Cervical Spine*	SI Joints
Chest			Cross- Table Lateral Hip (Patient Recumbent)	Sacrum and/or Coccyx
Lower/Upper Extremity			Cross-Table Lateral Spine (Patient Recumbent)	Scoliosis Series
			Hip	

			Lumbar Spine	
			Pelvis	
			Thoracic Spine	
Upper Extremity Trauma requires modifications in positioning due to the injury with monitoring of the patient's condition			***General Patient Care***	
Clavicle	AC joints		Oxygen tank, IV tubing, ETC	
Elbow	Scapula		CPR Certified	
Forearm			Sterile/ Medical Aseptic technique	
Hand			Transfer of Patient	
Humerus			Venipuncture	
Shoulder			Vital signs BP	
Thumb or Finger			Vital signs Pulse	
Trauma Shoulder/Humerus			Vital signs Pulse Oximetry	
Trauma Upper Extremity Non-Shoulder			Vital signs Respiration	
Wrist			Vital signs Temperature	

Note: Procedures in italics can not be simulated.

Clinical Definitions and Examples:

Trauma Studies

"Trauma requires modification in positioning due to injury with monitoring of the patient's condition"- ARRT Didactic and Clinic Competency Requirements, 2022

Trauma Shoulder and Humerus examples (mobile or stationary equipment used):

- Obvious Humerus/Shoulder fracture after neutral AP projection requiring Scapula Y, transthoracic or axial projections with extra level of patient care skills requirement due to pain management, etc...
- Visible Shoulder/Humerus abnormality during initial patient assessment requiring Scapula Y, transthoracic or axial projections with extra level of patient care skills required due to pain management, etc.
- Patient refusal to rotate extremity due to injury with extra level of patient care needed due to pain management, etc.

Trauma Upper Non-Shoulder and Trauma Lower Extremity (mobile or stationary equipment used)

- Initial injury with extremity immobile for standard positioning with extra level of patient care skills required due to pain management, etc...
- Non-weight bearing extremity for standard positioning with extra level of patient care skills required due to pain management etc…
- Images obtained as a response to "trauma call" in Trauma Level ER facilities with imaging of related projection.
- Modifications of positioning due to multiple injuries.

Extra level of patient care skills requirements with trauma imaging includes but not limited to:

GSW in Values of Interest
MVA injuries requiring splinting
Impalements
Mass Causalities or Occurrences
Head Injuries or potential head injuries
Spinal injuries or potential spinal injuries

Mobile Studies

Performed with mobile equipment in any portion of clinical site appropriate for imaging. Patient may be able to position for all required standard projections without modification to adjust for tube, part, image receptor alignment.

Locations within clinical site examples:

- ICU- all Intensive Care Units – to include patients in traction, external fixations, cast, etc.
- OR
- Recovery Rooms- to include patients in traction, external fixations, cast, etc.
- ER
- Patient Room

Geriatric

Any patient at Least 65 & Physically/ Cognitively Impaired due to Aging.
ARRT Didactic and Clinic Competency Requirements, 2022

Pediatric

Any patient Age 6 or Younger
ARRT Didactic and Clinic Competency Requirements, 2022

Deadlines:

The designated number of category competencies shall be completed in the stated semester. The student may not proceed to the next semester unless the required number of category competencies is completed as stated in prior section **FAILURE TO COMPLETE PROFICIENCIES (page 35):**

Your goal should be to average 2 or 3 proficiencies per month as indicated in the syllabus. Procrastination may result in not being able to find the exam that you need.

Failed Competencies:

When the student fails to perform a category exam satisfactorily during a competency check-off, they must do the same exam under direct supervision and receive a passing grade on two (2) staff proficiencies BEFORE asking to be evaluated on a category competency again.

Graduation:

Both category and final competencies are requirements for graduation.

Minimum Grade:

Students must make at least an 85 on clinical category and final competencies in order to pass the competency.

Detach here for filing in permanent records.

Program Grading Scale

A: 93-100
B: 85-92
C: 77-84
D: 69-76
F: 0-68

CATEGORY COMPETENCY SIGNATURE FORM

I, _____, understand the above information and the requirements to maintain a passing grade in clinical education. I, also, understand that I am responsible for deadlines on evaluations and competencies.

DATE: _____ SIGNATURE: _____

GENERAL PROTOCOL FOR RADIOGRAPHY STUDENTS

1. READ AND ASSESS REQUISITION COMPLETELY.
2. PREPARE RADIOGRAPHIC ROOM.
4. VERIFY PATIENT'S IDENTITY (CHECK ARM BAND /DATE OF BIRTH AND HAVE PATIENT REPEAT FULL NAME.)
5. INTRODUCE SELF TO PATIENT.
6. VERIFY PATIENT ORDERS. (IN-PATIENT = CHECK CHART IF INDICATED) (OUT-PATIENT = ASK FOR DRS. ORDERS)
7. OBTAIN PERTINENT HISTORY - PLACE INFORMATION ON REQUISITION.
   (DURING CONTRAST STUDIES DOCUMENTATION IS REQUIRED: (TYPE AND AMOUNT OF CONTRAST, & THE RADIOLOGIST NAME)
8. DRESS PATIENT CORRECTLY.
9. EXPLAIN THE EXAM TO THE PATIENT AND WHAT IS EXPECTED OF THEM.
10. ASK ALL FEMALES OF CHILDBEARING AGE ABOUT "POSSIBLE PREGNANCY"
11. FOLLOW UNIVERSAL PRECAUTIONS. GLOVES ARE REQUIRED WITH ALL PATIENTS UNLESS WAIVED BY CLINIC SITE.
12. ASSIST THE PATIENT TO AND FROM RADIOGRAPHIC WALL STAND OR TABLE.
13. DETERMINE THE RADIOGRAPHIC TECHNIQUE TO BE USED AND SET ON THE MACHINE.
14. POSITION THE PATIENT ACCURATELY.
15. CENTER THE TUBE / IMAGING RECEPTOR / TABLE. COLLIMATE THE BEAM TO THE APPROPRIATE SIZE. **
16. MARK THE IMAGE WITH THE APPROPRIATE LEAD MARKER. **
17. USE PROTECTIVE LEAD SHIELDING. **
18. IMMOBILIZE THE PATIENT IF NEEDED.
    (PROVIDE LEAD APRONS AND LEAD GLOVES, IF NECESSARY, FOR EVERYONE ASSISTING)
19. GIVE PROPER BREATHING INSTRUCTIONS TO PATIENT.
20. TAKE EXPOSURE, WHILE WATCHING PATIENT THROUGH LEAD WINDOW.
21. REPEAT STEPS 13 THROUGH 20 FOR EACH NEEDED EXPOSURE.
22. PATIENTS ARE NOT TO BE LEFT UNATTENDED IN ROOM WITHOUT IMMOBILIZATION.
    (PATIENTS RECEIVING CONTRAST **CANNOT** BE LEFT ALONE IN RADIOGRAPHIC ROOM.)
23. CRITIQUE RADIOGRAPHIC IMAGES WITH A TECHNOLOGIST. (ALL REPEATS ARE PERFORMED WITH A TECHNOLOGIST USING DIRECT SUPERVISION)
24. COMPLETE ALL DOCUMENTATION AS REQUIRED BY FACILITY.
25. PROVIDE ASSISTANCE IF NECESSARY, TO DRESS AND CLEAN ALL PATIENTS FOLLOWING EXAM.
26. ASSIST PATIENT FROM TABLE TO WHEEL CHAIR, STRETCHER OR WALKING POSITION.
27. OPEN DOOR FOR PATIENT.
28. FOLLOW PROTOCOL FOR DISMISSAL.
29. STRAIGHTEN ROOM, CHANGE LINEN AND CLEAN TABLE ROOM WITH DISINFECTANT.
30. WASH YOUR HANDS

- Students are encouraged to gain clinical knowledge while working as part of a healthcare team. However, when obtaining Staff, Category or Final Competencies the one student attempting competency(ies) shall perform all procedures/projections associated with the patient. Those procedures/projections that are exempt are those yet to be introduced in the classroom and lab settings. Students may include these projections as observed/assisted studies.

ASSIGNED CLINICAL ROTATION AREA OBJECTIVES

GENERAL CLINICAL ROTATION

In order to better prepare yourself to function adequately in all assignment areas, you should be able to:

1. Evaluate any image with regard to technical quality.

2. Evaluate any image to determine if the anatomical structures are properly visualized. (ie: Oblique cervical - intervertebral visualized).

3. Label the anatomical parts of any radiographic image.

4. Determine what corrections should be made on any poor radiograph image with regard to technique or positioning.

GENERAL CLINICAL ORIENTATION OBJECTIVES

1. Name the location of the crash cart(s).

2. Describe the policy for fire drill and Dr. Stork, Dr. Red, and Code 2.

3. List all supervisors in designated clinic areas.

4. Describe the correct protocol for accepting and dismissing patients.

5. Describe the protocol for administering oxygen and suction in a diagnostic x-ray room.

CLINICAL ROTATION
ROUTINE DIAGNOSTIC ROOMS

In order to better prepare yourself to function adequately in this assignment, you should be able to:

1. Describe the equipment, how to set it up, and how to operate it.

2. Label the controls and give specific function of each control.

3. Perform and list routine procedures done in this area.

4. List the protective measures to be taken in this area.

   A. Electrical protection
   B. Radiation protection

5. List any equipment limitations.

6. Describe the general care and precautions given to the following:

   A. Brakes and locks
   B. Cables
   C. Tube stands and tracts

7. Describe the tube. The description will include:

   A. Focal spot size
   B. Filtration

CLINICAL ROTATION

FLUOROSCOPY

In order to better prepare yourself to function adequately in this assignment, you should be able to:

1. Describe the equipment, how to set it up, and how to operate it.
   Example: video recorder, and digital imaging.

2. Give the proper patient preparation procedure for the following:

   A. GI
   B. BE
   C. Ba Swallow

4. List the routine projections for the following: (List imaging receptor size used, position of patient, position of imaging plate, direction and location of central ray and the structures shown on each position.)

   A. BE with air
   B. GI
   C. BE
   D. Esophagram
   E. T-tube cholangiogram/small bowel
   F. Myelogram/Lumbar Puncture

5. Describe set-up for the above exams including all materials needed including contrast media.

6. Name the location of the fluoro tube and image intensifier/flat panel.

7. Name the fluoro MA and KVP (settings).

8. Name the input phosphor size and brightness gain of image intensifier (if appropriate for room).

9. Operate fluoroscopy equipment.

CLINICAL ROTATION
MOBILE/PORTABLES

In order to better prepare yourself to function adequately in this assignment, you should be able to:

1. Draw the control panel(s) and label the controls on the portable machine(s).

2. Define the purpose or function of each control.

3. List the general rules for doing portable radiography.

4. List the portable techniques for average patients for exams on a chest, KUB and femur.

5. List the procedure for doing portables in:

    A. The nursery*
    B. All Intensive care units
    C. Recovery room or ER
    D. Pediatrics*
    E. OR

6. List the safety rules for doing portable radiography and radiation protection.

7. Explain the special precautions to take when patients have the following:

    A. Chest tube
    B. Gastric tube
    C. Catheters
    D. IV fluids

8. Describe how to handle and discuss what problems you might encounter with the following patients:

    A. Cardiac patients
    B. Patient receiving oxygen
    C. Patient in an orthopedic bed frame
    D. Patient on a cir-electric bed
    E. Patient on a respirator
    F. Patient in traction
    G. Patient in isolation
    H. Patient with tongs in skull

*Responsible for these areas if available in the clinic.

CLINICAL ROTATION FOR SENIORS
EVENINGS

The purpose of this rotation is to allow you to gain confidence in performing Trauma and routine exams with minimal supervision.
At the end of this assignment, you should be able to do the following:

1. Discuss how you would handle a patient who is suffering from:

    A. Epileptic seizure
    B. Shock
    C. Respiratory arrest
    D. Cardiac arrest
    E. Hemorrhage (external)

2. Describe in detail how to perform upper and lower trauma examinations.

3. *Perform any routine (Category Competency Completed) with confidence and with indirect supervision.

4. *Perform routine portable radiography with direct supervision.

CLINICAL ROTATION FOR JUNIORS
EVENINGS

The purpose of this rotation is to allow you to gain confidence in performing routine exams with minimal supervision.
At the end of this assignment, you should be able to do the following:

1. Demonstrate the following:

    A. Oxygen administration
    B. Suction
    C. Location of Crash Cart

2. Describe in detail how to perform chest, abdomen, upper and lower examinations.

3. *Perform any routine series (Category Competency Completed) with confidence and with indirect supervision.

4. *Perform routine portable radiography with direct supervision.

CLINICAL ROTATION: SURGERY

1. _____ Orient to Clinical Area
2. _____Explain the principles of medical and surgical asepsis.
3. _____List the general rules for performing surgical radiography.
4. _____Describe the procedure for performing the following:
    - A. Hip pinning
    - B. Extremities
        1. Open reduction
        2. Closed reduction
    - C. Laminectomy
5. _____ Describe the procedure for setting up and operating the C-Arm.
6. _____List proper methods of radiation protection utilized in surgical procedures.
7. _____Describe atrium/ventricle line placement for pacemaker procedure.
8. _____Describe the procedure for leaving and returning to the OR.

CLINICAL ROTATION: INTERVENTIONAL RADIOLOGY SUITE

CLINICAL OBJECTIVES:

_____1. Orient to Clinical Area

_____2. Locate physician's order and make sure consent form is signed.

_____3. Place monitoring devices on patient.

_____4. Participate in exam timeout prior to exam.

_____5. Assist technologist setting up tray/table.

_____6. Assist in loading injector, if applicable

_____7. Given the opportunity, scrub and assist technologist during exam.

_____8. Locate crash cart and identify the major drugs used for reactions.

_____9. Locate patient's pulse/2 areas.

_____10. Demonstrate sterile/ medical aseptic technique

_____11. Safely transfer patient

_____12. Demonstrate obtaining blood pressure

_____13. Demonstrate obtaining respiration

_____14. Demonstrate obtaining patient temperature

_____15. Demonstrate use of pulse oximetry

_____16. Demonstrate knowledge of safety / use of medical equipment (O2 tubing, tanks, IV lines, etc)

_____17. On a separate sheet of paper, provide a list of procedures observed/assisted during rotation. Include date, name of procedure, last 4 digits of accession number

*** This is a mandatory rotation and must be completed. Any missed time will be made up as assigned by the clinical coordinator.

CLINICAL ROTATION: CARDIOVASCULAR INTERVENTIONAL

CLINICAL OBJECTIVES:

_____1. Orient to Clinical Area

_____2. Locate physician's order and make sure consent form is signed.

_____3. Describe and/or Place monitoring devices on patient.

_____4. Participate in exam timeout prior to exam.

_____5. Assist technologist setting up tray/table.

_____6. Assist in loading injector, if applicable

_____7. Given the opportunity, scrub and assist technologist during exam.

_____8. Locate crash cart and identify the major drugs used for reactions.

_____9. Locate patient's pulse/2 areas.

_____10. Demonstrate sterile/ medical aseptic technique

_____11. Safely transfer patient

_____12. Demonstrate knowledge of obtaining and monitoring patient blood pressure

_____13. Demonstrate knowledge of obtaining and monitoring patient respiration

_____14. Demonstrate knowledge of obtaining patient temperature

_____15. Demonstrate knowledge of use of pulse oximetry

_____16. Demonstrate knowledge of safety / use of medical equipment (O2 tubing, tanks, IV lines, etc)

_____17. On a separate sheet of paper, provide a list of procedures observed/assisted during rotation. Include date, name of procedure, last 4 digits of accession number

CLINICAL ROTATION: CT

CLINICAL OBJECTIVES:

1._____Orient to Clinical Area

2. _____ Define computerized tomography.

3._____ List the three (3) main components of a CT system

4._____ What is window width and window level?

5. _____ List the advantages and limitations of the CT unit.

6. _____ List exams performed in CT rotation (on a separate sheet of paper)

7._____ State the protective measures to be used in CT for:

A_____ Staff

B_____ Patient

8. _____ Perform CT scan of the head with supervision

9. _____ List the steps for administering contrast in CT

10. _____ Remains in assigned area and is actively involved.

11. _____On a separate sheet of paper, provide a list of procedures observed/assisted during rotation. Include date, name of procedure, last 4 digits of accession number.

*** This is a mandatory rotation and must be completed. Any missed time will be made up as assigned by the clinical coordinator.

ADDITIONAL ROTATIONAL AREAS

These areas will include:

A. Nuclear Medicine
B. Radiation Therapy
C. Ultrasound
D. MRI

Students May be allowed to rotate through these additional areas provided the following conditions are met:

1. All competencies are completed
2. Student does not have excessive absences in clinical rotations
3. Scheduling must permit these rotations

Approval for these rotations will be determined by the Clinical Coordinator.

CLINICAL ROTATION: ULTRASONOGRAPHY

In order to better prepare yourself to function adequately in this assignment, you should be able to:

1. Describe the equipment.

2. Explain the basic principle of Ultrasound.

3. Describe the most common procedures (briefly) performed in this department and the structures seen in each procedure.

4. Explain briefly what information can be obtained about the fetus.

5. List the advantages of ultrasound studies on obstetrical patients as compared to radiographic studies.

CLINICAL ROTATION: NUCLEAR MEDICINE

In order to better prepare yourself to function adequately in this assignment, you should be able to:

1. List the types of instrumentation used in Nuclear Medicine and the procedures they are used for.

2. Tell briefly how each of the following exams are done to include each projection taken and anatomical structures demonstrated in each projection.

   A. Liver Scan
   B. Spleen Scan
   C. Brain Scan
   D. Bone Scan
   E. Thyroid Uptake
   F. Heart Scan (Thallium)

3. List each radionuclide used in the above scans.

4. Name the half-life and energies of the following common pharmaceuticals:

   A. TC 99m
   B. I131
   C. Gallium 67
   D. Xenon

5. Describe the survey meter that is most used in Nuclear Medicine and its purpose.

6. Explain the purpose of Nuclear Medicine.

7. Explain the radiation protection precautions.

CLINICAL ROTATION: MRI

In order to better prepare yourself to function adequately in this assignment, you should be able to:

1. Define MRI.

2. Compare the three types of MRI system magnets with regard to the following six features:

   A. Field strength
   B. Power usage
   C. Fringe fields
   D. Cooling system
   E. Initial cost
   F. Operating cost

3. State the purpose for and describe the operation of the following MRI systems components:

   A. Gradient coils
   B. RF coils
   C. Electronic support systems
   D. Computer

4. Explain why a higher magnetic field strength in MRI may result in better resolution.

5. State several differences between computed tomography and magnetic resonance imaging.

6. Discuss the principle of transmission and reception of radio waves using antennas.

7. Compare the MRI signal obtained from tissue having a long T_1 to that from tissue having a short T_2 when a partial saturation sequence is applied.

8. Explain the influence of T_2 upon the MRI signal obtained when a spin echo pulse sequence is applied.

Mammography

Students do not have clinical rotation through mammography.

Revised: 1-01-2022

CLINICAL COGNITIVE OBJECTIVES

Given a radiograph, the student will perform the following according to BONTRAGER'S TEXTBOOK OF RADIOGRAPHIC POSITIONING AND RELATED ANATOMY 10th Edition, or as listed:

1. Identify all the radiographic positions (eg, topographic landmarks, body positions, path of central ray, positioning aids, respiration)
2. Identify Anatomy (eg, including physiology, basic pathology, related medical terminology)
3. Procedure adaptation (eg, body habitus, body mass index, trauma, pathology, age, limited mobility)
4. Evaluation of displayed anatomical structures (eg, patient positioning, tube-part-image receptor alignment).
    1. Head, Spine, and Pelvis Procedures
        - a. Head
            - i. Skull
            - ii. Facial bones
            - iii. Mandible
            - iv. TMJ joints
            - v. Nasal bones
            - vi. Orbits
            - vii. Paranasal sinuses
        - b. Spine and Pelvis
            - i. Cervical spine
            - ii. Thoracic spine
            - iii. Scoliosis series
            - iv. Lumbar spine
            - v. Sacrum and coccyx
            - vi. Myelography
            - vii. Sacroiliac joints
            - viii. Pelvis and hip
    2. Thorax and Abdomen Procedures
        - a. Thorax
            - i. Chest
            - ii. Ribs
            - iii. Sternum
            - iv. Soft tissue neck
            - v. Sternoclavicular joints
        - b. Abdomen and GI studies
            - i. Abdomen
            - ii. Esophagus
            - iii. Swallowing dysfunction study
            - iv. Upper GI series, single or double contrast
            - v. Small bowel series
            - vi. Contrast enema, single or double contrast
            - vii. Surgical cholangiography
            - viii. ERCP
        - c. GU studies
            - i. Cystography
            - ii. Cystourethrography
            - iii. Intravenous urography
            - iv. Retrograde urography
            - v. hysterosalpingography
    3. Extremity Procedures

a. Upper Extremities
    i. Fingers
    ii. Hand
    iii. Wrist
    iv. Forearm
    v. Elbow
    vi. Humerus
    vii. Shoulder
    viii. Scapula
    ix. Clavicle
    x. Acromioclavicular joints
b. Lower Extremities
    i. Toes
    ii. Foot
    iii. Calcaneus
    iv. Ankle
    v. Tibia/fibula
    vi. Knee/patella
    vii. Femur
    viii. Long bone measurement
c. Other
    i. Bone age
    ii. Bone survey (metastatic, non-accidental trauma)
    iii. Arthrography

Radiographic Positions and Projections

A. Head

1. Skull
    a. AP axial (Towne)
    b. Lateral
    c. PA axial (Caldwell)
    d. PA
    e. Submentovertex (full basal)
    f. trauma cross table (horizontal beam) later
    g. trauma AP axial (reverse Caldwell)
    h. Trauma AP
    i. trauma AP axial Towne
2. Facial Bones
    a. lateral
    b. Parietoacanthial (Waters)
    c. PA axial (Caldwell)
    d. Modified Parietoacanthial (modified Waters)
3. Mandible
    a. axiolateral oblique
    b. PA
    c. AP axial (Towne)
    d. PA axial
    e. PA (modified Waters)
    f. Submentovertex (full basal)
4. Temporomandibular Joints
    a. Axiolateral oblique (modified Law)
    b. Axiolateral (modified Schuller)
    c. AP axial (modified Towne)
5. Nasal Bones

a. Parietoacanthial (Waters)
b. Lateral
c. PA axial (Caldwell)

6. Orbits
   a. Parietoacanthial (Waters)
   b. Lateral
   c. PA axial (Caldwell)
   d. Modified Parietoacanthial (modified Waters)
7. Paranasal Sinuses
   a. Lateral, horizontal beam
   b. PA axial (Caldwell), horizontal beam
   c. Parietoacanthial (Waters0, horizontal beam
   d. Submentovertex (full basal), horizontal beam

B. Spine and Pelvis

1. Cervical Spine
   a. AP axial
   b. AP open mouth
   c. lateral
   d. cross-table (horizontal beam) lateral
   e. PA axial obliques
   f. AP axial obliques
   g. lateral swimmers
   h. lateral flexion and extension
   i. AP dens (Fuchs)
2. Thoracic Spine
   a. AP
   b. lateral, breathing
   c. lateral, expiration
3. Scoliosis Series
   a. AP or PA
   b. Lateral
4. Lumbar Spine
   a. AP
   b. PA
   c. Lateral
   d. L5-S1 lateral spot
   e. posterior oblique
   f. anterior oblique
   g. AP axial L5-S1
   h. AP right and left bending
   i. lateral flexion and extension
5. Sacrum and Coccyx
   a. AP axial sacrum
   b. AP axial coccyx
   c. lateral sacrum and coccyx, combined
   d. lateral sacrum or coccyx, separate
6. Myelography
7. Sacroiliac Joints
   a. AP axial
   b. posterior oblique
   c. anterior oblique
8. Pelvis and Hip
   a. AP hip only
   b. cross-table (horizontal beam) lateral hip
   c. unilateral frog leg, non-trauma

d. axiolateral inferosuperior, trauma (Clements-Nakayama)
e. AP pelvis
f. AP pelvis, bilateral frog leg
g. AP pelvis, axial anterior pelvic bones (inlet, outlet)
h. posterior oblique pelvis, acetabulum (Judet)

2. Thorax and Abdomen

A. Thorax

1. Chest
   a. PA or AP upright
   b. lateral upright
   c. AP lordotic
   d. AP supine
   e. lateral decubitus
2. Ribs
   a. AP and PA, above and below diaphragm
   b. anterior and posterior obliques
3. Sternum
   a. lateral
   b. RAO
4. Soft Tissue Neck
   a. AP upper airway
   b. lateral upper airway
5. Sternoclavicular joints
   a. PA
   b. LAO and RAO

B. Abdomen and GI Studies

1. Abdomen
   a. AP supine
   b.AP upright
   c. Lateral decubitus
   d.Dorsal decubitus
2. Esophagus
   a.RAO
   b.Left lateral
   c. AP
   d.PA
   e. LAO
3. Swallowing Dysfunction study
4. Upper GI Series (single or double contrast)
   a.AP or PA scout
   b.RAO
   c. PA
   d.Right lateral
   e. LPO
   f. AP
5. Small Bowel Series
   a.PA scout
   b.PA (follow through)
   c. Ileocecal spots
6. Contrast Enema (single or double contrast)
   a.Left lateral rectum
   b.Left lateral decubitus
   c. Right lateral decubitus
   d.LPO and RPO
   e. PA

f. RAO ad LAO
g. AP axial (sigmoid)
h. PA axial (sigmoid)
i. PA or AP post-evacuation

7. Surgical Cholangiography
8. ERCP

C. GU studies

1. Cystography
   a. AP
   b. LPO and RPO
   c. Lateral
   d. AP axial
2. Cystourethrography
   a. AP voiding cystourethrogram female
   b. AP voiding cystourethrogram male
3. Intravenous Urography
   a. AP, scout, and series
   b. RPO and LPO
   c. Post-void
4. Retrograde Urography
   a. AP scout
   b. AP pyelogram
   c. AP ureterogram

3. Extremities

A. Upper Extremities

1. Fingers
   a. PA entire hand
   b. PA finger only
   c. lateral
   d. medial and/or lateral oblique
   e. AP thumb
   f. medial oblique thumb
   g. lateral thumb
2. Hand
   a. PA
   b. Lateral
   c. lateral oblique
3. Wrist
   a. PA
   b. lateral oblique
   c. lateral
   d. PA ulnar deviation
   e. PA axial (Stecher)
   f. tangential carpal canal (Gaynor-Hart)
4. Forearm
   a. AP
   b. lateral
5. Elbow
   a. AP
   b. lateral
   c. lateral oblique
   d. medial oblique
   e. AP partial flexion

f. trauma axial laterals (Coyle)

6. Humerus
    a. AP
    b. lateral
    c. neutral
    d. transthoracic lateral
7. Shoulder
    a. AP internal and external rotation
    b. inferosuperior axial (Lawrence)
    c. posterior oblique (Grashey)
    d. AP neutral
    e. PA oblique (scapular Y)
    f. supraspinatus outlet (Neer)
8. Scapula
    a. AP
    b. lateral
9. Clavicle
    a. AP or PA
    b. AP axial
    c. PA axial
10. Acromioclavicular Joints – AP bilateral with ad without weights

B. Lower Extremities

1. Toes
    a. AP, entire foot
    b. AP or PA axial toe
    c. oblique toe
    d. lateral toe
    e. sesamoids, tangential
2. Foot
    a. AP axial
    b. medial oblique
    c. lateral oblique
    d. lateral
    e. AP axial weight bearing
    f. lateral weight bearing
3. Calcaneus
    a. lateral
    b. Plantodorsal, axial
    c. dorsoplantar, axial
4. Ankle
    a. AP
    b. mortise
    c. lateral
    d. medial oblique
    e. AP stress
    f. AP weight bearing
    g. lateral weight bearing
5. Tibia/Fibula
    a. AP
    b. lateral
6. Knee/Patella

a. AP
b. lateral
c. AP weight bearing
d. lateral oblique
e. medial oblique
f. PA axial-intercondylar fossa (Holmblad)
g. PA axial-intercondylar fossa (Camp Coventry)
h. AP axial intercondylar fossa (Beclere)
i. PA patella
j. tangential (Merchant)
k. tangential (Settegast)

7. Femur
    a. AP
    b. lateral
8. Long Bone Measurement

C. Other

1. Bone Age
2. Bone Survey
3. Arthrography

Complaints Relating to Non-Compliance with JRCERT Standards

Any person who believes the Radiography Program is in non-compliance with any of the JRCERT Standards is requested to take the following actions:

1. Confer with the Program Director to gain information and express the perceived problem. If the complaining party still believes non-compliance exists, ask the director to establish compliance. Should the problem not be resolved, the complaining party should,

2. Confer with the Department Head of Health Science. If the Department Head is unable to resolve the problem the complaining party should then,

3. Confer with the Associate Vice President of Health & Sciences. If the Vice President is unable to solve the problem the complaining party should contact the JRCERT at:

   Joint Review Committee on Education in Radiologic Technology
   20 N. Wacker Drive, Suite 900
   Chicago, IL 60606-2901

   or phone: (312) 704-5300

   or Fax: (312) 704-5304

   or E-Mail JRCERT.org

The program takes every complaint or alleged non-compliance seriously. Each complaint will be thoroughly investigated and should the complaint be found valid, the program is dedicated to speedy resolution of the problem. In addition, it is the policy of the program to work closely and professionally with the JRCERT to resolve any reported non-compliance allegation.

All program courses require a grade of "C" or better.

- Any course with one of the following prefixes may not be attempted more than twice: AHS, BIO, MAT, RAD.
- A student who fails three or more required courses will be dismissed from the program and will not be eligible to re-enter the program.
- A student may be dismissed at any time during the semester if he/she is unsafe and/or unethical in the clinical area.
- Students unsuccessful in the Radiology Technology Program for the course/clinical failure may petition to re-enter the program the following year in the semester from which they failed. This will be allowed only if the student's GPA is a 2.0 or greater, and there is space available in the curriculum.
- A student who has a cumulative GPA of less than 2.0 and/or violates the Radiology Technology Academic Progression Policy cannot petition for re-admission into the Radiology Technology curriculum until after a waiting period of at least one (1) year.
- A student will be allowed to re-enter the Radiologic Technology curriculum one (1) time only. Refer to Radiology Readmission Policy pages 86-87 of clinic handbook
- Grading scale as follows:
  A=93-100
  B=85-92
  C=77-84
  D=70-76
  F=69 and Below

RADIOLOGIC TECHNOLOGY PROGRAM

STUDENT SIGNATURE SHEET

I have read and understand the information found in this Clinical Handbook and College Student Code of Conduct and Student Grievance Manual.

Student Name: _____

Student Signature: _____

Date: _____

Program Director Signature: _____

Date: _____

FLORENCE-DARLINGTON TECHNICAL COLLEGE

INTERNAL STUDENT ACCIDENT REPORTING FORM FOR CLINICAL/FIELD PLACEMENT ACCIDENTAL INJURY/EXPOSURE QUALIFYING STUDENT(S) FOR WORKER'S COMPENSATION COVERAGE

NOTE to FDTC On-Site Supervisor Reporting Accident: Call Barbara Kennedy at 843/661-8322 (or Athena Russell at 661-8264 if Ms. Kennedy is unavailable) immediately upon learning of a student accident in a clinical setting. We will work with you both to gather all necessary reporting data (listed below), then place a conference call to CompEndium for verbal approval before the student receives any treatment or blood tests. If accident occurs "after hours", the on-site Supervisor must call CompEndium (at (877/709-2667) directly if emergency treatment is required. If the injury is of a non-urgent nature, the Student should not seek medical attention until their Supervisor has contacted an FDTC Representative (as noted above) on that same day (or the 1st business day following the accident) to obtain the required pre-approval from CompEndium for all tests/medical treatment .

DATE RECORDED: _____ NAME/# OF RECORDER(S): _____

STUDENT NAME: _____ SS#: _____

HOME ADDRESS: _____

PHONE#: _____ DOB: _____ CURRICULUM: _____

DATE/TIME OF INJURY: _____ SITE OF INJURY: _____
(Please be as specific as possible.)

PLEASE EXPLAIN IN DETAIL BELOW EXACTLY HOW & WHERE THE ACCIDENT OCCURRED, THE SPECIFIC NATURE OF THE STUDENT'S INJURY, ETC. (Per Student/Supervisor/Witnesses, etc.):

_____

_____

_____

_____

(Continue on reverse if more space is required in order to provide all necessary details of this incident.)

Were there any witnesses present at the time of the student's accident? YES _____ NO _____
IF YES, list names/contact phones of each person: _____

Type of Treatment Provided (Before/After Reported/Pre-approved)?: _____

_____

List name of hospital, office & doctor(s) who treated/will be treating student/contact phone number(s):

_____

If emergency, list name/#/relationship of person to be called: _____

Comments by Student/Supervisor/Witnesses/Recorder: _____

_____ _____
Signature/Contact # of Primary FDTC Incident Recorder Date Report Submitted

(Send Original of this Completed/Signed Report, along with any Supporting Documentation (if available) ASAP to: Ms Barbara Kennedy (Personnel Dept., Room 5215) for Appropriate Internal Distribution and Processing of this claim).

CLINICAL EVALUATION FORM

Enter Exam Key and Number of Repeats
Enter Patient Type:
Enter Patient Gender

EXAM PREPARATION AND PATIENT CARE METHODS	**YES**	**NO**	**NI**	**Comments**
1. Prepare room and obtain necessary supplies				
2. Provide clean and orderly work area. Clean/disinfect the room, equipment & work area (pre/post exam).				
3. Assess patient condition , introduce self to patient				
4. Follow safety standards (assist patient to and from exam room, brakes on, siderails up, etc)				
5. Explain exam to patient-age appropriate				
6. Did student question female of child bearing age for possible pregnancy				
7. Inquire and document relevant clinical history				
8. Check for and remove any non-diagnostic material from area of interest				
9. Monitor, Communicate and Assist patient through exam (maintaining modesty)				
10. Follow Standard Precautions (gloves, masks, goggles, handwashing, etc)				
11. Operates imaging equipment efficiently. (tubes, grids, CR & DR consoles, technique selection on control panels)				
12. Exam performed in an orderly and efficient sequence and in an appropriate length of time.				
CRITICAL ERRORS: *Failure to complete either of the below results in failure of competency*				
*Evaluate the request (orders) for exam *			XXXXX	
*Verify correct patient ID *			XXXXX	
*Utilizes radiation protection for all involved persons *			XXXXX	
Points Earned (*must be greater than 85% to achieve competency)* Yes = 1 point No = 0 points NI (needs improvement) = .5 points				

	AP/PA			**LAT**			**OBLI**			**OBLI**			**OTHER**		
POSITIONING/TECHNIQUE SKILLS	YES	NO	NI	YES	NO	NI	YES	NO	NI	YES	NO	NI	YES	NO	NI
1. Correctly positions anatomic area															
2. Direct CR appropriately															
3. Utilize proper SID and/or orients IR (detector, cassette) properly															
4. Properly collimates															
5. Select appropriate technique Mandatory kVp mAs															
6. Make exposure while observing patient															
7. Gives proper breathing instruction															
CRITICAL ERROR															
* Correctly places lead markers on imaging receptor *			XX			XX			XX			XX			XX
Critical Error: Align, tube, part, image receptor			XX			XX			XX			XX			XX

FACULTY IMAGE EVALUATION REVIEW	YES	NO	NI	YES	NO	NI	YES	NO	NI	YES	NO	NI	YES	NO	NI
8. Review of student image: Image free of visible motion and acceptable technical quality															
9. Evaluation of student image: R/L marker used appropriately															
10. Faculty Critique of student image: VOIs included, image orientation, and geom etric distortion															

11. Student can identify anatomical structures for projection.															
12. Student has ability to critique image for proper positioning and central ray.															
13. Student has ability to critique image for pathology as appropriate, if applicable.															
Points Earned (*must be greater than 85% to achieve competency)* Yes = 1 point No = 0 points NI (needs improvement) = .5 points															

Student Signature: Student may add signature and/or comments by attaching a post-submission comment.

Evaluator Comments

_____
_____
_____
_____
_____
_____
_____

Total Score:

This form correlates to the electronic clinical management system, Trajecsys. Any updates will appear in Trajecsys first and updated here upon revision of clinical handbook.

Clinical Affective Evaluation

Date:

Evaluator:

Subject:

Site: Test Site

Appearance

1. PROFESSIONAL APPEARANCE (cleanliness, grooming and proper attire)

1 = Appearance is less than appropriate

3.5 = Minor infractions to dress code; appearance unkempt

4 = Appearance is consistently appropriate; adheres to dress code

5 = Always exceptionally neat and well groomed

Dependability/Reliability

2. ATTENDANCE

1 = Absent repeatedly and/or neglects to inform appropriate personnel

4= Absent but informs appropriate personnel

5 = Never Absent

3. ARRIVES TO WORK PREPARED AND ON TIME

1 = Is frequently or periodically late and unprepared

3.5 = Is occasionally late but notifies appropriate personnel, sometimes unprepared

4 = Arrives on time and prepared

5 = Always arrives early and prepared

4. DEPENDABLE / RELIABLE (completes assignments with minimal direction, trustworthy, credible, responsible)

0 = Unable to evaluate (please enter comment)

1 = Undependable, requires constant supervision, and/or no attention to detail.

3.5 = Somewhat dependable, inconsistent in completing tasks, careless mistakes or actions

4 = Dependable and completes tasks as assigned with minimal direction

5 = Reliable and skillfully completes tasks. Excellent attention to detail

Interpersonal Relations/Communications

5. FUNCTIONS EFFECTIVELY AS A MEMBER OF THE HEALTHCARE TEAM (relating to patients, procedures)

0 = Unable to evaluate (please enter comment)

1 = Not a team worker; does not know when to or rarely consults or share information with team members.

3.5 = Poor team worker; consults and shares information with team members when only encouraged/prompted

4 = Team worker; effectively consults, integrates and shares information with team members

5 = Excellent team worker; always consults, integrates and shares information with team members

6. CONTRIBUTES TO A POSITIVE ENVIRONMENT WITHIN THE DEPARTMENT (likable, friendly, helpful)

0 = Unable to evaluate (please enter comment)

1 =Does not interact with personnel. Unable to get along; moody and or unfriendly, creates friction ,does not always speak with good purpose: Exhibits frivolous behavior or excessively talkative,

3.5 =Seldom interacts with personnel; relates with other personnel when only prompted; fails to maintain level of professional behavior, talkative or too relaxed in professional environment

4 = Consistently friendly, helpful; relates well with personnel the majority of the time

5 = Always friendly, helpful, loyal and always speaks with good purpose

7. ACCEPTS SUPERVISION AND WORKS EFFECTIVELY, (accepts constructive criticism and guidance)

0 = Unable to evaluate due to lack of participation

1 = Does not accept guidance or direction (always has an excuse or someone else's fault; is defensive or argumentative or does not modify behavior,

3.5 = Sometimes accepts guidance or directions; Occasionally improves behavior

4 = Accepts guidance and/or suggestions; shows improvement in behavior

5 = Always seeks constructive feedback; Consistently changes behavior for personal improvement

8. APPROPRIATELY INTERACTS WITH PATIENTS (empathetic, displays patience, non-judgmental, provides instruction and moving assistance as required)

0 = Unable to evaluate (please enter comment)

1 = Does not communicate or interact with patient during procedures; shows no concern or interest in others; unaware of patient's needs, unaware of patient skills needed to obtain images

3.5 = Communicates and interacts with patient ONLY to provide necessary instructions;
Inconsistently displays concern for patient condition; or is inconsistence in attending to the patient's and/or family's needs for comfort or assistance

4 = Consistently shows concern and support of others; usually anticipates and attends to the patient's and family's needs for comfort and assistance needed to a quality exam

5. = Always anticipates and attends to patient's and family's needs for comfort via communication skills. Always demonstrates respect, sensitivity and consideration for others during procedures

9. CONDUCTS HIMSELF / HERSELF IN AN ETHICAL AND PROFESSIONAL MANNER (displays integrity, sincerity and applies discretion)

0 = Unable to evaluate (please enter comment)

1 = Is negligent or inconsiderate of patients or team members dignity or welfare; demonstrates or fails to recognize conflict; provokes conflict,

3.5 = Inconsistently displays concern for dignity and welfare of patients and team members; or needs direction in avoiding conflicts as they arise

4 = Consistently displays concern for dignity and welfare of patients and team members; recognizes conflict and seeks assistance when conflict arises

5. = Always exhibits concern for the dignity and welfare of the patients and team members; prevents conflict; always takes measures to deal with conflict effectively

10. COMMUNICATES EFFECTIVELY WITHIN THE HEALTHCARE SETTING (communicates appropriate information, applies confidentiality, uses appropriate medical terminology)

0 = Unable to evaluate (please enter comment)

1 = Has difficulty or needs prompting in collecting and accurately communicating information; fails to maintain confidentiality.

3.5 = Inconsistently communicates information; inconsistently maintains confidentiality, uses inappropriate terminology

4 = Consistently communicates important information; adheres to confidentiality

5 = Always communicates in a concise manner; relating appropriate and complete information; always cognizant of maintaining confidentiality and takes extra precautions

Quality / Quality of Clinical Performance

11. EFFICIENT PLANNING AND MANAGEMENT OF TIME (prioritizes work, adapts to changing workload, completes assignments on time)

0 = Unable to evaluate (please enter comment)

1 = Rarely or Inconsistently completes tasks and/or wastes time,

3.5 = Requires direction to complete assigned tasks , or needs assistance in prioritizing/organizing work, or works at a slow pace

4 = Completes assigned tasks in an acceptable time frame and in and organized manner and seldom needs direction

5 = Plans ahead; always works efficiently and manages time wisely

12. IS SELF-DIRECTED AND RESPONSIBLE FOR SELF ACTIONS

0 = Unable to evaluate (please enter comment)

1 = Requires constant supervision; does not accept responsibility.

3.5 = Needs frequent supervision for current skill level; seldom accepts responsibility or dodges responsibility

4 = Needs minimal amount of supervision for current skill level; usually accepts responsibility

5 = Is self-directed and manages work responsibly; recognizes mistakes and strives to improve/correct skills

13. CONFIDENT IN ABILITIES, EXERCISES GOOD JUDGMENT AND MAINTAINS COMPOSURE IN STRESSFUL SITUATIONS

0 = Unable to evaluate (please enter comment)

1 = Disregards limitations/professional boundaries, oversteps boundaries and makes inappropriate decisions that are harmful or fails to seek assistance which jeopardizes patient care

3.5= Not always aware of limitations; occasionally seeks assistance when necessary; struggles in stressful situations or makes careless decisions

4 = Respects limitations; recognizes professional boundaries; usually seeks assistance when necessary; usually remains calm in stressful situations

5 = Self-confident; always seeks assistance when appropriate; respects professional boundaries and remains calm in stressful situations

14. CLINICAL PARTICIPATION AND PERFORMANCE OF PROCEDURES

0 = Unable to evaluate (please enter comment)

1 = Displays no interest in participating /performing exams. Follows and/or watches technologist, Not actively engaged in performing procedures

3.5 = Participates but only performs procedures when prompted or when procedure is being performed for a competency.

4 = Usually participates and continues to perform exams to improve proficiency.

5 = Always actively engaged in exams and displays a constant desire to improve clinical performance

15. Equipment operation and manipulation (tube, table, wall stand, grid, CR/DR equipment, x-ray console, cassette, portable, fluoro, ETC)

0 = Unable to evaluate (please enter comment)

1 = Unable to operate equipment effectively. Displays no interest in learning proper equipment utilization.

3.5 = Careless mistakes- Requires more practice or overly confident in equipment operation

4 = Effectively utilizes equipment to obtain images with few mistakes

5 = Consistently produces quality images using equipment without assistance from staff or making careless mistakes.

16. Radiation Protection.

0 = Unable to evaluate due to lack of participation

1. Did not use radiation protection **consistently** when appropriate. Did not inquire about possible pregnancy **consistently** for females of child bearing age (10-60)

5. Always utilized radiation protection when appropriate. Always Inquired about possible pregnancy for females of child bearing age (10-60)

17. **Standard Precautions (PPE - gloves, goggles, handwashing, equipment cleaning pre/ post procedures, rad bags, ect.)**

0 = Unable to evaluate (please enter comment)

1 = Did not comply to standard precautions for clinical site.

3.5= Inconsistently adheres to standard precautions for clinical site-had to be reminded

4. = Usually adheres to standard precautions for clinical site

5. = Always adheres to standard precaution guidelines

18. **Lead markers with Initials**

0 = Unable to evaluate (please enter comment)

1 = Did not use lead markers **ALWAYS** or had to be reminded.

3.5 = Wrong marker used or marker placed outside of the collimated field size and was not visible on the image - requiring annotation

4 = Marker routinely used but occasionally was burned out - but could see faint outline on image

5 = Consistently placed marker appropriately and was visible on image

19. **Technologist assignment** - Clinical engagement (Student should introduce themselves to tech & tell them they are assigned to them- -Lunch at the same time as tech)

0 = Unable to evaluate (please enter comment)

1 = Consistently stood back and displayed no interest in participating.

3.5. = Limited time with student, worked with other techs - but did not keep me updated, always disappeared and/ or stood back and observed

4 = Student usually was close by or communicated and was actively involved - did not require prompting

5. = Student was always busy/ looking for something to do. Student consistently communicated and was actively engaged.

20. Radiology skills and performance (positioning, equipment operation, protocols)

0 = Unable to evaluate (please enter comment)

1 = Student skill level is unacceptable; Does not retains knowledge;

3.5 = Student struggles with performance/ positioning/equipment; Needs improvement

4 = Student on target and competent for current level - retains knowledge of protocols and works on improving performance

5 = Student proficient in all aspects of positioning and performing exams. Demonstrates thorough knowledge of radiology protocols, positioning and equipment operation.

This form correlates to the electronic clinical management system, Trajecsys. Any updates will appear in Trajecsys first and updated here upon revision of clinical handbook.

CLINICAL EVALUATION FORM
SURGICAL ROTATION

Student _____ Semester: _____
Rotation Dates: _____ Final Grade _Pass/Fail __Clinical Site _____

Affective Behaviors	**YES**	**NO**	**NI**	**N/A Comments**
1. Student is able to explain the principles of medical and surgical asepsis				
2. Student can articulate and follow the general rules for performing surgical radiography.				
3. Student can demonstrate the procedure for performing Hip Pinning				
4. Student can demonstrate the procedure for performing Open Reduction extremities				
5. Student can demonstrate the procedure for performing Closed Reduction extremities				
6. Student can demonstrate the procedure for performing Laminectomy				
7. Student participates as a member of the health care team				
8. Student requires minimal assistance when adapting to clinical area and rotation				
9. Student is able to obtain images while maintaining sterile field.				
Evaluator recommendation of student: Pass- student meets entry level expectations Fail- recommended student repeat rotation				

Evaluator _____
Date: _____

Student Signature _____

CLINICAL EVALUATION FORM
MRI ROTATION

Student _____ Semester: _____ Rotation Dates: _____ Final Grade __Pass/Fail_____
Clinical Site _____

Affective Behaviors	**YES**	**NO**	**NI**	**N/A Comments**
1. Student is able to define MRI				
2. Compare the three types of MRI system magnets with regard to the following six features:				
Field strength				
Power usage				
Fringe fields				
Cooling systems				
Initial cost				
Operating cost				
3. State the purpose for and describe the operation of the following MRI system components:				
Gradient coils				
RF coils				
Electronic support systems				
Computer				
4. Explain why a higher magnetic field strength in MRI may result in better resolution.				
5. State several differences between CT and MRI				
6. Discuss the principle of transmission and reception of radio waves using antennas				
7. Compare MRI signal obtained from tissue having a long T1 to that from a tissue having a short T2 when a particle saturation sequence is applied				
8. Explain the influence of T2 upon the MRI signal obtained when a spin echo pulse sequence is applied.				
Evaluator Recommendation: Pass: Student meets entry level knowledge requirements Fail: recommend student repeat rotation				

Evaluator _____
Date: _____
Student Signature _____

CLINICAL EVALUATION FORM
NUCLEAR MEDICINE ROTATION

Student _____ Semester: _____
Rotation Dates: _____ Final Grade __Pass/Fail_____
Clinical Site _____

Affective Behaviors	**YES**	**NO**	**NI**	**N/A Comments**
1. Student is able to list the types of instrumentation used in NM and the procedures in which they are used.				
2. Tell briefly how each of the following exams are done to include each projection taken and anatomical structures demonstrated in each projection, and each radionuclide used:				
Liver Scan				
Spleen Scan				
Brain Scan				
Bone Scan				
Thyroid Scan				
Heart Scan (Thallium)				
3. Name the half-life and energies of the following pharmaceuticals.				
TC 99mS				
I131				
Gallium 67				
Xenon				
4. Describe the survey meter that is most used in NM and its purpose				
5. Explain the purpose of NM				
6. Explain the radiation protection precautions				
Evaluator Recommendation of Student Pass: Student meets entry level knowledge Fail: Recommend student repeat rotation				

Evaluator _____
Date: _____
Student Signature _____

CLINICAL EVALUATION FORM
Special Procedure Suite

Student _____ Rotation Dates _____
Final Grade ___Pass/Fail_____

Modality Knowledge and Application	**YES**	**NO**	**NI**	**Comments**
1. Student is able to locate physician orders and verify consent.				
2. Student assist in placing monitoring devices on patients				
3. Student assist in setting up tray/table				
4. Student assist in loading injector				
5. Student scrubs in and assist technologist, if given the opportunity				
6. Student can locate crash cart				
7. Student can identify the major drugs used for reactions				
8. Student can locate patient pulse in 2 areas				
9. Participates as an active team member of the department.				
10. Student is able describe the types of procedures that are performed.				
*** Any missed time will be made up as assigned by the clinical coordinator.				
Evaluator Recommendation of Student Pass: Student meets entry level knowledge Fail: Recommend student repeat rotation				

Technologist/ Supervisor signature _____
Date: _____

Student Signature _____

CLINICAL EVALUATION FORM
Cardiovascular Interventional

Student _____ Rotation Dates _____
Final Grade ___Pass/Fail_____

Modality Knowledge and Application	**YES**	**NO**	**NI**	**Comments**
1. Student is able to locate physician's order and make sure consent is signed.				
2. Student is able to describe/place monitoring devices on patients.				
3. Student participates in timeout prior to exam				
4. Student assist technologist setting up tray/table.				
5. Student assist in loading injector, if applicable				
6. Student scrubs and assist technologist in exam, if applicable				
7. Student can locate crash cat and identify major drugs used for reactions.				
8. Student can locate patient pulse in 2 areas				
9. Student can demonstrate sterile/medical aseptic technique				
10. Student can safely transfer patient				
11. Student can demonstrate knowledge of obtaining and monitoring blood pressure				
12. Student can demonstrate knowledge of obtaining and monitoring patient respirations.				
13. Student can demonstrate knowledge of obtaining and monitoring temperature.				
14. Student can demonstrate knowledge of obtaining and monitoring pulse oximetry.				
15. Student can demonstrate knowledge of safety/ use of medical equipment (oxygen tubing, tanks, IV lines, etc…)				
Evaluator Recommendation of Student Pass: Student meets entry level knowledge Fail: Recommend student repeat rotation				

Technologist/ Supervisor signature _____
Date: _____

Student Signature _____

CLINICAL EVALUATION FORM
SONOGRAPHY ROTATION

Student _____ Semester: _____
Rotation Dates: _____ Final Grade __Pass/Fail_____
Clinical Site _____

Affective Behaviors	**YES**	**NO**	**NI**	**N/A Comments**
1. Student is able to explain the basic principle of Ultrasound				
2. Student has a basic understanding equipment.				
3. Student can describe the most common scans performed in the department.				
4. Student can explain what type of information can be obtained with an Obstetric scan.				
5. Student can list advantages of ultrasound studies as compared to radiographic imaging				
6. Student can explain types of invasive procedures performed under ultrasound guidance.				
7. Student can briefly explain ultrasound limitations.				
8. Student is able to participate as a member of the health care team.				
9. Student can briefly explain how ultrasound is used in various parts of the health care facility.				
10. Student can describe/demonstrate how to maintain a sterile field while performing procedures.				
Evaluator recommendation of student *Pass: Student meets entry level knowledge* *Fail: Recommend student repeat rotation*				

Evaluator _____ **Date:** **_____**

Student Signature _____

NEW CLINICAL SITE ORIENTATION (for students)

Tech Initials	
_____	1. Where to put your belongings and/or lunch
_____	2. Is there anywhere for additional parking and codes need to know
_____	3. Where are the computers to sign in/out for Trajecsys
_____	4. Where can I find Tech assignments and lunch time expectations
_____	5. Restroom, Breakroom, Cafeteria locations
_____	6. Where are the imaging rooms, equipment, and supplies (if/when needed)
_____	7. What are the specific work flow/protocol expectations
_____	8. What are the emergency procedures (fire, crash cart and code)
_____	9. What to do if a call light comes on (which bathroom will it pertain to)
_____	10. What are your expectations for this clinical site (with tech, supplies, helping)

** If there is a clinical issue: contact your Clinical Instructor (Mrs. Mignemi or Ms. Rueckerl)

** If there is a site issue: First – speak with your Assigned Tech (if unavailable, then next... Second – speak with Clinical Preceptor of that site

STUDENT SIGNATURE: _____ DATE:_____

PRECEPTOR SIGNATURE : _____ DATE:_____

Magnetic Resonance Screening Form for Students

Magnetic resonance (MR) is a medical imaging system in the radiology department that uses a magnetic field and radio waves. This magnetic field could potentially be hazardous to students entering the environment if they have specific metallic, electronic, magnetic, and/or mechanical devices. Because of this, students must be screened to identify any potential hazards of entering the magnetic resonance environment before beginning clinical rotations.

Pregnancy Notice: The declared pregnant student who continues to work in and around the MR environment should not remain within the MR scanner room or Zone IV during actual data acquisition or scanning.

Name: _____ **Date:** _____

	Circle Yes or No	
1. Have you had prior surgery or an operation of any kind?	Yes	No
If yes to question 1, please indicate the date and type of surgery: Date: _____ Surgery Type: _____		
2. Have you had an injury to the eye involving a metallic object (e.g. metallic slivers, foreign body)?	Yes	No
If yes to question 2, please describe: _____ _____		
3. Have you ever been injured by a metallic object or foreign body (e.g., BB, bullet, shrapnel, etc.)?	Yes	No
If yes to question 3, please describe: _____ _____		
Please indicate if you have any of the following:		
Aneurysm clip(s)	Yes	No
Cardiac pacemaker	Yes	No
Implanted cardioverter defibrillator (ICD)	Yes	No
Electronic implant or device	Yes	No
Magnetically-activated implant or device	Yes	No
Neurostimulator system	Yes	No
Spinal cord stimulator	Yes	No
Cochlear implant or implanted hearing aid	Yes	No
Insulin or infusion pump	Yes	No
Implanted drug infusion device	Yes	No
Any type of prosthesis or implant	Yes	No
Artificial or prosthetic limb	Yes	No
Any metallic fragment or foreign body	Yes	No
Any external or internal metallic object	Yes	No
Hearing aid	Yes	No
Other device: _____	Yes	No

I attest that the above information is correct to the best of my knowledge. I have read and understand the entire contents of this form and have had the opportunity to ask questions regarding the information on this form. Should any of this information change, I will inform my program director.

Signature of Person Completing Form: _____ Date ____/____/____

☐ The student has not identified any contraindications to entering MR Zone III or IV.

☐ The student has identified contraindications to entering MR Zones III and IV. The student has been advised not to progress past MR Zone II unless screened by an MR Level II Technologist onsite at each clinical setting.

Form Information Reviewed By: _____ _____ _____

Print name Signature Title

This form is provided by the JRCERT as a resource for programs. Programs are encouraged to personalize the form prior to use.

Remember: The magnet is always on!

RE-ENTRY POLICY for ASSOCIATE DEGREE

RADIOGRAPHY PROGRAM

This policy details the requirements for processing an individual's request for re-entry into the program. Re – entry must take place within one year. Due to course sequencing, after one year has lapsed students will be required re-apply to the program and begin the program from the beginning.

1. Conditions for re-entry into the Radiography Program, Associate Degree:

a. The student who withdrew for personal or medical reasons, or was dismissed due to insufficient academic achievement, but was in good standing and had met all financial obligations to the program and the college may be considered for re-entry into the program. Re-admission to the radiography program will be considered on seat availability and a first come - first serve basis should more than one applicant apply.

*Note: A student who was dismissed due to reasons that include but not limited to; academic misconduct/dishonesty, insubordination, refusal of a clinic site to host the student for clinical rotation, and falsification of records, slander, defamation, libel, etc. is considered not in good standing with the program and will not be eligible for re-admission to the program.

b. Re-admission candidates must have only 0ne (1) "WF, D, or F" in any radiography course. Having failed more than one radiology course will prohibit re-entry to the program.

c. The student has completed at least one successful semester of enrollment in the Radiography Program and maintained the required academic standards of the program. Failure to maintain a "C" or better in the first semester, the student will have to begin the initial application process to the program and all course restrictions and time limits will apply. If approved for re-entry, students will be required to repeat the entire last unsuccessful semester.

d. A minimum GPA of 2.5 is required to be considered for re-admission. Students with a GPA below 2.5 are not eligible for re-admission.

e. Students who have had a break in progression of the program are required to validate their knowledge of Radiologic Technology through a minimum of (2) written knowledge verification examinations including all information up to the course/semester the student is requesting re-entry. Re-admission candidates will be required to score a minimum of 80% on knowledge verification examinations. Failure to achieve a minimum grade of 80% will deem a student ineligible for reentering the program. If unsuccessful and the student has continued interest in entering the program, the student would be required to re-apply to the program from the beginning.

*Note-Course time limits would apply.

2. Re-entry process:

a. The Student must submit a formal, written request for re-entry to the Program Director a minimum of two months prior to the start of the semester the student is requesting to re-enter. The formal written request should include:

- Full name and student ID number

- Courses/Semester/Year for which they are applying

- The reasons for previous withdrawal

- Detailed plan of action outlining changes that will increase the probability of success and program completion.

b. The Program Director evaluates the request and verifies that the student satisfies the conditions for re-entry and schedules knowledge-based verification examinations.
c. The Program Director will inform the student of the decision made by the re-admission committee no later than two weeks prior the start of the semester.

If the request is approved, the student will be required to submit proof of:

- A current, valid Basic Life Support or CPR certification

- Updated Immunization Records

- Recent, valid Urine Drug Screen (UDS) and Criminal Background Check (CBC)

- Proof of individual liability insurance

Revised (5/22)
Reviewed (5/23)

RADIOLOGIC TECHNOLOGY PROGRAM

STUDENT SIGNATURE SHEET

I have read and understand the information found in this Clinical Handbook and College Student Code of Conduct and Student Grievance Manual.

Student Name: _____

Student Signature: _____

Date: _____

Program Director Signature: _____

Date: _____