



Wisdom for Your Life.

## SCHOOL OF RADIOGRAPHY

Handbook for Student  
Radiologic Technologists



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Student Handbook

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The purpose of this handbook is to provide a guideline of policies and benefits for the Student Radiologic Technologist. The content of this handbook defines the school's expectations of student performance. In order to meet academic and clinical objectives the student technologist will participate in many clinical activities that will require direct patient contact. Therefore, it is likely that the students' action will directly affect the outcome of the patients' health. In order to ensure patient safety and maintain quality patient care, the policies stated in this handbook are designed to indicate specific performance boundaries in which the student must function. The radiology department provides a 1:1 ratio of staff radiographers to students engaged in competency based clinical education. The program provides a 1:1 ratio of Clinical Preceptors to students engaged in competency based clinical education. During classroom instruction, the instructor to student ratio is 1:11. While adequate supervision is maintained through out the program, it is the student's responsibility to realize the boundaries of their own skill set and request additional supervision when needed.

**Our Mission:**

To provide East Tennessee with competent and caring radiography graduates dedicated to excellence in the delivery of health care.

**Program Goals:**

Graduates/Students will demonstrate entry-level clinical competency in diagnostic imaging procedures.

Student Learning Outcomes:

- The student will demonstrate appropriate patient care.
- The student will apply accurate positioning skills.
- The student will practice radiation protection.

Graduates/Students will communicate effectively.

Student Learning Outcomes:

- The student will employ effective oral communication.
- The student will employ effective written communication.

Graduates/Students will possess critical thinking skills.

Student Learning Outcomes:

- The student will demonstrate problem-solving skills.
- The student will adapt standard procedures for non-routine patients.

Graduates/Students will model healthcare professionalism.

Student Learning Outcomes:

- The student will provide confidentiality of patient health information.
- The student will provide a professional healthcare environment.

### **Equal Opportunity Policy**

The School of Radiography is committed to equal educational and employment opportunity practices that conform to both the spirit and letter of the law. The School of Radiography is committed to nondiscrimination on the basis of any protected status. This policy extends to recruitment, selection, training and all other terms and conditions of student status. Complaint procedure should follow the Student Concerns Policy. Students are encouraged to identify any learning disabilities that may affect their ability to be successful in their course of study. In order to provide special classroom accommodations, the student will be required to provide a copy of a current evaluation by a licensed psychologist or learning specialist who has been trained and licensed to evaluate learning disabilities.

### **Technical Standards Policy**

Prerequisite for admission, attending and graduation from The University of Tennessee Medical Center's School of Radiography requires students to manage the following physical demands:

1. Frequent pushing and pulling of radiographic equipment and patients to and from the x-ray table.
2. Frequent lifting and moving objects of up to 50 pounds while performing patient transfers and bedside radiography.
3. Frequent reaching, crouching and standing while wearing lead radiation protection garments.
4. Frequent use of fine motor skills (touch and temperature discrimination) while adjusting the equipment, positioning the patient and monitoring their condition.
5. See, hear and speak in English to a patient at all times during the exam.
6. As a result of caring for and handling of patients in a radiation area, you will frequently be exposed to disease and radiation.

### **Patient Information Policy**

You are expected to treat all patients with respect and dignity. All employees, physicians, students and others associated with the institution are expected to respect patients' rights, especially privacy. No one should access, share or discuss patient information, patient medical record information, and patient billing information or other patient information that does not have a legal and approved reason to do so. Information collected in the medical records of patients is kept confidential unless it is necessary to serve the patient or required by law. In order to assure a patient's right to privacy, specific information about a patient will be released only to persons authorized by law or by the patient's consent.

### **Drug-Free Policy**

The School of Radiography prohibits the unlawful use, manufacture, possession, distribution or dispensing of drugs ("controlled substances" as defined in the Controlled Substances Act, 21 U.S.C. 812), or alcohol on UHS property. Violation of this policy is grounds for corrective action, up to and including immediate discharge. Federal and state laws as well as local ordinances provide additional penalties for such unlawful activities, including fines and imprisonment (21 U.S.C. 841 et seq.; T.C.A. 39-6-401 et seq.).

The School of Radiography is bound to take all appropriate actions against violators, which may include referral for legal prosecution. The unlawful presence of drugs or alcohol at school and/or being under the influence of alcohol or other drugs during the normal school day violates The School of Radiography's Drug-Free Policy.

The program expects students to report to school in a condition to perform their duties in a safe and productive manner. All pre-enrollment and for cause alcohol or other drug screening will be performed at the expense of The School of Radiography.

Final applicants for enrollment will be required to submit to a drug and alcohol screening prior to enrollment. A final applicant is defined as the person chosen to fill a student position contingent upon successful completion of a drug and alcohol screen. A preliminary offer of enrollment must be made and accepted prior to screening. For any applicant, who screens positive for any illegal drug, or who screens positive for alcohol or for any legal drug for which the applicant does not have a valid prescription, the offer of enrollment will be canceled.

Any student who appears to be unfit for school due to suspected influence of alcohol and other drugs may be required to submit to urinalysis, breathalyzer or blood tests. A reasonable suspicion sufficient to screen will be based on a reasonable belief that a student may be under the influence or is using a prohibited drug, or is otherwise in violation of The School of Radiography's Drug-Free Policy. Reasonable suspicion is based on specific, current or continuing physical, behavioral or performance indicators of probable drug use and/or information provided by reliable and credible sources.

### **Workplace Violence Prevention Policy**

The School of Radiography believes all students, employees, visitors, patients, clients, and vendors have a right to an environment free from any type of discrimination including any form of harassment. Acts or threats of physical violence, physical or psychological harassment or coercion will not be tolerated on UHS property. Safety and security are the responsibility of every student. Any student who feels he or she has been a victim of an act in violation of this policy

or feels threatened should immediately report the circumstances to their supervisor. Violation of this policy is considered student misconduct and may lead to disciplinary action up to and including termination from the program and/or appropriate legal action.

Link to the UTMCK Workplace Violence Prevention Policy:

<https://utmck.policytech.com/dotNet/documents/?docid=329&public=true>

### **Attendance Policy**

Class attendance is mandatory. Attendance and School Hours Policies are strictly enforced. Since punctuality and attendance are vital to dependable performance, clinical knowledge and didactic knowledge, records are kept to give future employers accurate information.

### **Leave of Absence Policy**

A leave of absence from school may be granted only due to extreme circumstances, and then at the discretion of the Program Director. Students granted leave of absence would be allowed to make-up the assignments (clinical and didactic) during normal school hours following the graduation ceremonies for the class in which they were admitted.

### **School Hours Policy**

Student experiences during scheduled school hours are directly related to learning objectives. Each student is involved with the program 35 contact hours per week. The student's classroom hours are 8:00 am until 3:30 pm Monday through Friday. Each week the student will spend approximately 17 hours in didactic instruction. The remainder of the school week is spent in clinical assignments. The student will be assigned a two-week rotation in one of the following areas approximately every six months. Clinical hours will vary.

- 1.) University of Tennessee Medical Center **Hospital** with clinical rotation hours from 8:00 am – 3:30 pm.
- 2.) University of Tennessee Medical Center Outpatient Diagnostic Center at **Turkey Creek** (located at The Parkside Plaza at Turkey Creek, 11440 Parkside Dr, Knoxville, TN 37934) with clinical rotation hours from 8:30 am – 4:00 pm.
- 3.) University of Tennessee Medical Center Regional Health Center – **Sevierville** (located at 1130 Middle Creek Rd., Sevierville, TN 37862) with clinical rotation hours of 8:30 am – 4:00 pm.
- 4.) University Regional Health Center (Located at 5779 Creekwood Park Blvd. **Lenoir City**, TN 37772) with clinical rotation hours of 8:00 am – 3:30 pm.
- 5.) A Fluoroscopy/ER rotation with clinical rotation hours of 11:30 am – 7:00 pm. This rotation also includes a Friday & Saturday night with the hours of 3:30pm-11:00pm.

6.) **University Family Physicians** with clinical rotation hours of 8:00 am- 4:00 pm.

7) **University Orthopaedic Surgeons/KOC South** (Located at 1600 Accelerator Way Suite 200, Knoxville, TN 37920).

The student is responsible for clocking-in/out each day at the time clock located in the Radiology Department. If assigned to an off campus clinical rotation, the student will use the time clock located at that facility. When the student is scheduled at the Turkey Creek or the Sevierville site, they will call the clinical coordinators phone and leave a message. This will be time stamped. Any student clocking-in later than the designated time of arrival or clocking-out prior to the designated time of departure will be penalized\*. If the student will be absent or tardy, they must text the clinical coordinator and program director before their designated time of arrival. The student should clock in on their way to their clinical area. Going to your locker, bathroom etc. should be conducted before clocking in, so plan accordingly. If for **any** reason the student is not in their assigned area in uniform by the starting time for their clinical area or classroom, they will be considered tardy. If a student needs to leave the campus for any reason, they must (1) notify the clinical coordinator or program director, (2) notify the technologists they are working with, (3) complete an early-out form, and (4) clock-out. **Under no circumstances should a student clock another student in or out.**

\*If the student clocks-out early without permission or is tardy, the time missed due to this will be deducted from personal leave time and one demerit will be assigned to the student. The combination of four demerits per semester or two per mini term will result in a deduction of points from the final clinical grade. Deductions will be tallied as minus 1 point for each demerit exceeding four per semester or exceeding two per mini term.

### **Personal Leave Policy**

A total of 10 days (70 hours) personal leave during the training period is available to each student to use when ill or unable to be at school. Absenteeism beyond the initial 10 days (70 hours) will be reflected in the student's final clinical average. The student's final clinical grade will be reduced 4-points for each day absent beyond the initial 10 days of personal leave.

Example: If a student missed a total of 77 hours and was tardy 5 times during the fall semester, their clinical grade would be reduced 5 points.

100% Student Initial Clinical Grade = A

- 4 point reduction for full day beyond 70 hours of personal leave

- 1 point reduction for exceeding 4 tardies by 1 tardy

95% Student adjusted Clinical Grade = B



Example: If a student missed a total of 84 hours and was tardy 5 times during the mini term, their clinical grade would be reduced 11 points.

100% Student Initial Clinical Grade = A

- 8 point reduction for 2 full days beyond 70 hours of personal leave
- 3 point reduction for exceeding 2 tardies by 3 tardies

89% Student adjusted Clinical Grade = C

Students are responsible for missed academic notes, labs and/or tests. Tests will be given as scheduled and if the student is not present, a make-up test may be administered at the discretion of the instructor.

The maximum program length is 6.5 semesters. All make-up time must be completed after the graduation ceremony and before a certificate of graduation is issued. Make-up time must be scheduled with the clinical coordinator or program director. Make-up time cannot exceed 10 hours per day or 40 hours per week, and consists only of clocked hours. If it is discovered at any time during training that the student owes in excess of 260 hours (8 weeks x 32.5 hours/ week) the student will be dismissed from the program and must apply to be reaccepted.

The student will be allowed 8 weeks of vacation during the entire training period. Vacation times are predetermined by the Program Director. The following holidays are recognized by the school: New Year's Day, Martin Luther King's Birthday, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. When a holiday falls on a Saturday, it will be observed on the preceding Friday. When a holiday falls on a Sunday, it will be observed on the following Monday.

### **Military Leave Policy**

A student who receives orders to report for training or active duty in the armed services of the State of Tennessee or of the United States will be granted leave of absence of up to 15 days in any one calendar year. The student must provide the Program Director with a copy of the activating orders prior to receiving a military leave of absence. The student is responsible for missed academic notes, labs and/or tests. Test will be given as scheduled and if the student is not present, a make-up test may be administered at the discretion of the instructor.

### **Incllement Weather Policy**

We will only cancel class and clinicals if UT Medical Center is closed. If at any time you decide that you need to leave early, arrive late, or miss the day completely due to difficulties associated with severe weather, we understand and support your decision. However, we require you to notify us of your absence and use your personal time to cover the time missed. At the discretion of the Program

Director or Clinical Coordinator, outlying clinical rotations may be rescheduled due to road or other weather related conditions.

### **Funeral and Bereavement Leave Policy**

A student who is absent during their regularly scheduled school week due to the death of a student's spouse, child, or parent, the student may receive up to 35 hours (5 days) of bereavement leave.

A student who is absent during their regularly scheduled school week due to the death of a brother, sister, in-law, grandparent, grandchild, the student may receive up to 21 hours (3 days) of bereavement leave.

1. All bereavement leave must begin within 24 hours of the death and the leave must be approved by the program director.
2. The student must notify the program director within 24 hours of the death of the relative to be eligible for bereavement leave.
3. The student must provide the program director with verification of the death.
4. Any holiday occurring at this time will be counted as part of the bereavement leave.
5. Missed tests must be completed within five class days once the student returns from bereavement leave.

### **Jury Duty/Subpoena Court Appearances**

When the student is notified with an official summons, subpoena, or notice to the effect that they are having report to court or jury duty the program director needs to be notified immediately. During the time, the student is in court they will be required to present daily proof of service and or court appearance including dates and times of service. The student is responsible for missed academic notes, labs and/or tests. Test will be given as scheduled and if the student is not present, a make-up test may be administered at the discretion of the instructor.

### **Counseling Services**

For all matters other than academic or discipline counseling, students are referred to Chaplin Services for private consultation. The hospital EPA program is also available to students through the HR department.

### **Communicable Disease Policy**

Upon admission to the program, students are required to attend Hospital Orientation, which consists of Infection Control and Blood Borne Pathogens. An annual update is required. The student is required to provide the school with an immunization record demonstrating current vaccination for: MMR, Varicella, Tdap, Hepatitis B and T. B. Skin Test, unless medically contraindicated or if religious beliefs prevent vaccination.

Any student with signs and symptoms of an infection (rhinitis, weeping sores/wounds, eye drainage, and temperature above 100 degrees) may not be allowed entrance to the clinical area or class. Time missed will be deducted from the student's personal time. Students having such illness should report it to the clinical coordinator or program director. If needed, the Occupational Health Services and/or Infection Control Department will be consulted and make the final determination.

All students are required to obtain an annual flu shot unless medically contraindicated or if religious beliefs prevent vaccination. Students that do not intend to get vaccinated must complete an electronic religious/spiritual belief or medical waiver at <https://forms.office.com/r/fP9DXxbzwz> (This is the ONLY source of exemptions) Those that are not vaccinated will be required to wear a mask while at school during the flu season. (Dec.1 – April1) Students will stay home if sick, exhibiting any signs of illness or have a temp 100.0 or greater. The student may not return to school until fever free ( $\leq 100^{\circ}$  F) for a 24-hour period without the use of fever-reducing medications.

Adhering to PPE protocols are of critical importance to prevent the spread of infection:

- Enhanced Droplet Precautions and Enhanced Airborne Precautions require all team members wear full PPE, including an up-to-date, fit-tested N95 mask, eye protection, gown and gloves.
- The door to the patient's room should always remain closed.

### **Graduation Policy**

The student will be eligible for graduation once all course work and clinical requirements have been satisfied. The maximum course length will not exceed 6.5 semesters.

### **Dress Code Policy**

All students must wear steel gray, clean and unwrinkled uniforms with sleeves and conservative necklines. The scrub top may be worn tucked into the scrub pants. If not, it must always extend beyond the top of the scrub pants. A clean, all white, all black, or all gray T-shirt may be worn under scrub shirts. If the T-shirt sleeve is visible, it must extend to the wrist. Hemlines of dresses and skirts must be at or below the knee level. A steel gray scrub jacket may be worn with the uniform. No outerwear including fleece jackets, hoodies, pull overs or sweatshirts are permitted in the classroom or clinical areas. A steel gray scrub jacket or a

surgical scrub jacket is permitted in the classroom and clinical areas. Hose and/or socks must be worn. Shoes may be either professional duty shoes or all leather athletic shoes. In either case, the shoes must be white, black or gray in color. The shoes must be clean, polished, and in good repair. Hair color will be of natural hues.

### **Uniforms:**

In assigned areas other than surgery, the student will wear a clean, non-stained, and pressed, steel gray scrub uniform without gathered or banded legs. All pants must be hemmed to prevent contact with the floor. Green surgical scrubs and lab coats are provided by the hospital and are to be worn only during the surgery rotation. The student is responsible for retrieving and returning scrubs daily. During surgical rotations, or rotations that require the student to change into scrubs, the student will wear a steel gray uniform to and from the hospital. Surgical scrubs and lab coats are never to be worn out of the hospital or taken home.

The students' hair must appear dry, neat, and clean. Long hair will be kept pulled back from the face. If hair falls over shoulders, it must be pulled up. Hair ribbons and decorative hair ornaments will not be permitted. Gray or black hair bands one inch in width or less may be worn. Beards and mustaches must be short, neat, and trimmed. Male students must shave prior to the start of the school day. Male students wishing to grow a beard must sign a shaving waiver. Fingernails must be neat and trimmed on a regular basis. Nail tip length shall be less than 1/4" in length. Only buffed nails are permitted. Clear nail polish is acceptable. No nail applications such as artificial fingernails, fingernail wraps or extenders, appliques, acrylics, gels, shellacs, nail art and other items applied to the nail surface is permitted.

Excessive make-up and jewelry are not permitted with a uniform. No colognes, perfumes, or scented lotions are to be worn. Jewelry is limited to a watch (preferably with a second hand) and one pair of small stud earrings may be worn one earring per ear. A small gold neck chain and only one ring per hand are permitted. No bracelets of any type may be worn. Body art must be covered at all times. Visible body piercing, other than earrings, is not permitted.

### **Radiation Dosimetry Badges and Hospital Identification Policy**

Radiation dosimetry badges and hospital identification shall be worn on the upper left lapel. All monitored students will turn in their monitor from the previous reporting period on the first day of the new quarter and begin wearing the new monitor. Any monitors not returned at this time will be considered late or lost.

Late or Lost Monitors: Since UTMC provides these monitors to individuals who are around radiation, their use is required to ensure a safe environment. Failure to comply with these procedures will be considered a violation of the radiation dosimetry badges and hospital identification policy and will be addressed through Just Culture/corrective action. Radiation monitors must be changed by the fifth of the month. After the fifth, the monitor is considered late. A \$25.00 fee per radiation monitor will be charged for late/lost/damaged radiation monitors and 4 hours will be deducted from the student's personal leave. New students will complete the UTMC E-Learning module titled "Radiation Monitor Awareness Training" within in the first 30 days of school. Dosimetry badges are to be left in the student area near the classroom on the student board, each day before leaving school and never worn out of the hospital. Hospital identification shall be worn during school hours when the student is on hospital grounds. The student will not place stickers, tape and/or markers on any portion of the identification badge.

### **ALARA Policy**

X-ray equipment may only be activated by authorized personnel under the following guidelines:

- Students must not hold image receptors during any radiographic procedure and should not hold patients during any radiographic procedure when an immobilization method is the appropriate standard of care. When a patient must be held in position for radiography, mechanical supporting or restraining devices should be used. If an individual must hold the patient, that individual shall wear appropriate protective devices and shall be positioned so that the primary beam will strike no part of their body. During fluoroscopic examinations, if the hands are placed under the image intensifier, Lead gloves must be worn.
- All students will wear collar badges at all times while in the clinical area. The student will change their badges quarterly. Dosimetry badges are to be left in the student area near the classroom on the student board, each day before leaving school and never worn out of the hospital.
- All students are required to monitor their quarterly exposure report and discuss concerns with a school official or Radiation Safety Officer.
- During each exposure, operators shall stand behind a protective barrier or wear a lead apron. For portable exams, they must stand 6 feet from the beam and wear a lead apron.
- All doors shall be closed during the exposures.
- Only individuals required for the radiographic procedure shall be in the room. During exposures, all individuals shall use appropriate protective devices.
- The primary beam shall be restricted to the area of clinical interest or to the size of the image receptor used.
- When possible, gonadal shielding shall be used on all patients of either sex.

- Gonadal shielding is **NOT** to be used during abdominopelvic radiographic exams.
- Any equipment malfunction, which may affect patient or operator safety, shall be immediately reported to biomedical services for repair.
- The student will have access to the dosimetry report within 30 days of the receipt of the report by the program. If at any time during the training period, a student's radiation monitor receives 500 mRem in a quarter the student will receive a letter of counseling for failure to adhere to the ALARA Policy. The student will then attend remediation in radiation safety prior to re-admittance to the clinical area.
- If at any time during the training period a student's radiation monitor reaches the Annual Effective Dose Limit (5000 mRem), the student will be dismissed from the program for failure to adhere to the ALARA Policy.

### **Pregnancy Policy**

#### OCCUPATIONAL RADIATION LIMITS

The maximum allowed dose to radiation workers is 5000 mRem (50 mSv), per year but only 500 mRem (5 mSv) is allowed to a fetus during the entire 9-month gestation period.

The National Committee on Radiation Protection states that when the limit of 5000 mRem (50 mSv) to the mother is met, the dose to the fetus will normally be less than 500 mRem (5 mSv) in **x-ray imaging**, due to the shielding effects of overlying maternal tissue and the use of lead aprons.

#### RISK

- Radiation dose thresholds for direct embryonic/fetal **tissue effects** including *congenital malformations, miscarriage, mental retardation, and neurobehavioral effects* are all greater than **20,000 mRem** (200 mSv), and even higher for *growth retardation and embryonic death*. This holds for even the most sensitive developmental stages. Threshold effects are all-or-nothing for the **pre-implanted** embryo, meaning none would survive a radiation tissue effect injury.
- The non-threshold phenomenon of **oncogenic risk** to the embryo/fetus is more controversial. An association between in-utero radiation and childhood cancer is likely, however, it is not known whether the radiation caused the cancer or whether a mother needing x-rays had medical problems that already predisposed her unborn child to cancer.
  - The embryo/fetus is no more sensitive to oncogenic effects than a young child is.
  - Embryonic/fetal irradiation of 500 mRem (5 mSv) may cause up to **1** extra case of cancer in 20,000 in that person's lifetime, compared to the natural lifelong cancer incidence of **8200** per 20,000 (NCI 2005).
  - Natural background risks of 3% birth defects, 15% miscarriages, 4% prematurity, 1% mental retardation, and 4% growth retarded babies far exceeds the risk of radiation-induced oncogenesis.

- Should a student discover or suspect that they are pregnant they may inform the school of their pregnancy or may choose not to inform the school. In either case, the student may continue their clinical rotation without interruption. The student also has the OPTION to **declare** or **not declare** the pregnancy to the radiography program. The declared pregnant student will follow the original clinical rotation schedule design. Radiation monitoring measures for the declared pregnant student shall conform to the departmental pregnancy policy. Due to the number and variety of courses in the curriculum, and the importance of maintaining a clinical rotation schedule through the various assigned areas in conjunction with an ongoing didactic program, students enrolled in this program are strongly encouraged NOT to become pregnant during the two years of her schooling.

Any pregnant student can **declare** her pregnancy in writing during a consultation with the school's program director and the radiation safety officer. This will alert the school to take whatever measures necessary to hold her fetal dose to 500 mRem (5 mSv). Government regulations require that the student have the freedom to **not declare** her pregnancy, or to reverse her decision and **undeclare** her pregnancy. Undeclaration must be done in writing at any time after she has declared it. The school must then treat her as though she was not pregnant, and will not be held responsible by regulatory agencies for maintaining the fetus below the 500 mRem (5 mSv) limit. Whatever the choice, the pregnant student is expected to practice ALARA (maintaining radiation exposures as low as reasonably achievable) at all times. A pregnant student should discuss her clinical environment with her personal physician and follow their directions.

#### GUIDELINES FOR A DECLARED PREGNANCY

1. In **x-ray imaging**, procedures with increased radiation levels generally have increased levels of standard protection practice (i.e. no lead apron required when in control booth, lead apron required for portable x-rays, wrap-around lead aprons for fluoroscopy). This standard of protection makes it unlikely that an unborn child could receive more than 500 mRem (5 mSv) in any clinical environment. However, the higher radiation levels in some areas give a potential for exceeding this level if some component of this protection breaks down for any reason.
2. The fetal radiation dose shall be assessed by the use of a separate fetal dosimeter, which is to be worn at belly level under any lead apron that may be used.
3. Should the cumulative fetal radiation dose reach 75% of the 500 mRem limit during her period of pregnancy, she will be interviewed by the radiation safety officer and reeducated in radiation protection.

#### QUIZ

1. The unborn child is allowed to accumulate \_\_\_\_\_ mRem during the entire 9-month gestation period.

2. Receiving 500 mRem (5 mSv) as a fetus may cause up to \_\_\_\_\_ extra case of cancer in 20,000 in that person's lifetime, compared to the natural lifelong cancer incidence of \_\_\_\_\_ per 20,000.
3. Radiation dose thresholds for direct embryonic/fetal **tissue effects** including *congenital malformations, miscarriage, mental retardation, and neurobehavioral effects* are all greater than \_\_\_\_\_ mRem.
4. True or False: I may choose to switch my pregnancy status between declared and undeclared at any time.

### STUDENT DOSE HISTORY

My current radiation monitor number \_\_\_\_\_ is worn at the collar location outside any leadapron during approximately \_\_\_\_\_% of all procedures I am involved in. This monitor shows an absorbed dose of \_\_\_\_\_ mRem for the period \_\_\_\_\_ to \_\_\_\_\_, yielding an average of \_\_\_\_\_ mRem/month entrance dose to any nearby body area not covered by a lead apron.

STUDENT NAME: \_\_\_\_\_ # OF WEEKS PREGNANT: \_\_\_\_\_

Briefed by \_\_\_\_\_ on \_\_\_\_\_  
RSO Signature

Referred by \_\_\_\_\_ on \_\_\_\_\_  
Program Director Signature

\*\*\*\*\*  
**I do not wish to declare my pregnancy**, understanding that the hospital will not be held responsible by government regulatory agencies for maintaining my fetal absorbed dose below 500 mRem (5 mSv).

STUDENT SIGNATURE: \_\_\_\_\_, DATE: \_\_\_\_\_  
\*\*\*\*\*

**I declare my pregnancy**, understanding that my normal activities may be altered to insure my fetal absorbed dose remains below 500 mRem (5 mSv).

STUDENT SIGNATURE: \_\_\_\_\_, DATE: \_\_\_\_\_  
\*\*\*\*\*

I change my pregnancy status to **undeclare**, understanding that the hospital will not be held responsible by government regulatory agencies for maintaining my fetal absorbed dose below 500 mRem (5 mSv).

STUDENT SIGNATURE: \_\_\_\_\_, DATE: \_\_\_\_\_

### MRI Safety for Students

- Prior to being admitted into the MRI suite the student is required to complete the TMS learning module "MRI TMS Safety Module for Level 1 MR Personnel". (MRI TMS Safety Module for Level 1 MR Personnel <https://global.hgncloud.com/utmck/link?id=1419943>)



- All students are required to complete the MRI and NON-MRI Personnel Screening Questionnaire. After completing and before entering the MRI department the questionnaire must be approved by the MRI technologists.
- After approval a screening completion card will be given to the student.
- MRI screening will be repeated annually.
- The complete MRI Safety Policies and Procedures can be referenced on the hospital's insite.( <https://utmck.policytech.com/>)

### **Safety Policy**

Universal (standard) precautions will be used at all times when handling patients, patient specimens, or administering contrast agents. Patients will be identified by name and medical record number prior to the administration of any medication or contrast media. The MSDS is located on Insite. Any equipment malfunction, which may affect patient or operator safety, shall be immediately reported to maintenance for repair. Complaint or identification of unsafe conditions should follow the Student Concerns Policy. Annually, and prior to their MRI clinical rotation, the student will be required to complete an MRI questionnaire along with an e-learning module covering MRI Safety.

### **Housing and Transportation Policy**

The student will be responsible for his or her own housing and transportation. The school does not provide dormitory space or any type of housing referral. Personal cars must be registered with campus security to obtain a parking permit. The student will display their parking permit and park in their assigned parking area.

### **Employment Concurrent with Radiography Training Policy**

Full-time and part-time employment is not encouraged as it has been found to interfere with the student's progress. If such employment is necessary, the Program Director must be notified. School hours will not be altered to fit an employment schedule. If the employment is through The University of Tennessee Medical Center or any other health institution, duties completed as required by the students' employment will not count toward fulfillment of any clinical objective required by The School of Radiography at the medical center.

### **Contact Information Policy**

The student will provide the program with a current phone number and mailing address.

### **Policy on Mandatory Insurance**

Enrolled students are required to carry a health insurance plan. Enrolled students are required to carry “occurrence based” student professional liability insurance with coverage of \$1,000,000 each claim and up to \$3,000,000 annual aggregate.

### **Financial Assistance**

The School of Radiography at the University of Tennessee Medical Center is a non-participant in Title IV government guaranteed funds. Students may obtain loans from local credit unions, banks, or other lending agencies. The student has the sole responsibility for securing financial aid. The UT Radiography program at the medical center cannot provide loans to individuals in the program and is not responsible for locating loans for students.

Selected incoming students are eligible to apply for the Shirley Melton Antonacci Radiologic Technologist Freshman Scholarship. A committee made up of educators, the scholarship provider and a radiology administrative representative awards the scholarship. For matters that are personal in nature, students are referred to Chaplin Services for private counseling.

### **Expenses and Refund Policy**

#### **Total Cost for Two-Year Program Effective 9/1/2022**

<b>Fee*</b>	<b>Amount</b>	<b>Payable By</b>
Program Application fee	\$50	Payable when submitting application.
Deposit fee to reserve a place in class	\$500	Payable upon acceptance in program.
Remaining program tuition fee (\$4,625/year, less \$500 deposit)	\$9,800	Payable first day of class.
Textbook/eBook fee	\$4,720	Payable first day of class.
Facility and Technology fee	\$900	Payable first day of class.
<b>Total:</b>	<b>\$15,970</b>	

**\* All fees are nonrefundable.**

Students are responsible for uniforms, meals, housing, and transportation.

In addition, students are encouraged to join and participate in professional societies, such as the American Society of Radiologic Technologists that require minimal annual student dues.

Students must provide the program director with proof of occurrence-based student professional liability insurance, with liability coverage of \$1,000,000 each claim and \$3,000,000 annual aggregate. The cost for this insurance is \$35-\$45 dollars. The student may also incur additional expenses in order to bring their immunization record up to date. For a list of required immunizations, see the Communicable Disease Policy.

### **Breaks and Lunch Policy**

The student will be allowed forty-five minutes for lunch. The designated times for lunch are 11:45am – 12:30pm. The school day will not be shortened by taking no lunch. If the student is unable to go to lunch during this time frame due to patient care, please inform the technologists that you are working with when you do go to lunch.

### **Patient Identification Policy**

The student will be responsible for correct patient identification. The patient's name and medical record number on their wrist or ankle band will be verified with their requisition before every examination. Any patient not wearing a hospital identification band shall not be radiographed. All images must be correctly identified with the patient's name, medical record number, date of exam and a legible right or left marker. Students will not borrow or share right and left initial markers.

### **Academic and Clinical Records Policy**

The student must maintain at least a 2.0 in both the didactic and clinical phases for each grading period. All required courses must be passed on the first attempt. Failure to meet either of the above criteria may result in dismissal from the program. Student may request to review their grades at anytime during the course. Transcripts are kept and furnished to the student at the end of each semester/mini-term. Outstanding student achievement is acknowledged during each graduation ceremony. The grading scale is course specific and can be found on each course syllabus.

### **Classroom Policy**

**Plagiarism, cheating, and other forms of academic dishonesty including by electronic means are prohibited.** Students guilty of academic misconduct, either directly or indirectly, through participation or assistance, are immediately responsible to the instructor of the class. The instructor has the authority to

assign an appropriate grade, including an “F” or “zero” for the examination and/or an “F” for the course.

**Professionalism:** Students are expected to maintain a professional attitude during class. At a minimum this requires being on time for class, paying attention to the lecture, and not gathering up books and notes until the lecture is complete, and the instructor has dismissed the class.

**Students must leave all personal items in your locker.** This includes purses, wallets, backpacks, cell phones and electronic watches. Cell phones and electronic watches are not allowed in the classroom. You may have a computer and a calculator. The classroom sometimes might be warm or cold, dress in appropriate layers. A steel gray jacket may be worn. Keep in mind that you cannot wear outerwear in the classroom. No coats, gray fleece jackets or any type of outerwear.

Food is not permitted in the classroom.

Please let family and friends know that if they need to get in touch with you **urgently during class hours**, they can call the numbers below.

Classroom phone number: 865-305-9675 / 865-305-7408

Main Radiology number: 865-305-9066

Radiology Work Hall: 865-305-9656 / 865-305-7233

Linda’s Cell number: 865-235-8542

Gabbi’s cell number: 865-437-6829

Library phone number: 865-305-9527

### **Readmission Policy**

To be considered for readmission, the student must establish proof of unusual circumstances beyond his or her control, which led to poor academic performance. The Medical Director and Program Director will evaluate the request on an individual basis. Should the student be readmitted it will be upon the terms and conditions deemed appropriate. Readmission is not guaranteed.

### **Transfer Student Policy**

The program does not accept transfer students.

### **Married Student Policy**

Students married before entering the program or after becoming a student will not be offered special consideration in scheduling or assignments and are expected to participate in all aspects of the program.

### **Textbooks and Materials Policy**

Students will be required to purchase only those books that will be used in the course curriculum. Textbooks are ordered by the program for the student. The cost is included in the total tuition. Changes in textbooks will not be made after the course has begun except when necessary.

### **Reimbursement Policy**

Students are expected to reimburse the program for any damages or financial charges incurred while in attendance.

### **Student Concerns Policy**

The School of Radiography provides due process for all student concerns. The following steps shall be followed.

1. Discussion with the Program Director within 5 school days of the occurrence.
2. The Program Director will respond to the student within 5 school days.
3. If not resolved, the student will submit a letter stating the concern within 5 school days to the Program Director, Department of Radiology Administrator and the Medical Director who will respond within 5 school days.
4. If not resolved, the final appeal would be made to a representative(s) of the Human Resources Department who will respond within 5 school days. If in any of the above steps legal counsel is present, they will remain silent during the proceedings.

### **Student Representative Policy**

The class will elect a student representative to sit on The School of Radiography Advisory Committee. Their responsibility will be to attend advisory meetings and bring concerns of the student body to committee's attention.

### **JRCERT Standards Compliance Policy**

It is the desire of The School of Radiography to maintain JRCERT Standards at all times. If, however, the student discovers areas of non-compliance the following steps shall be taken:

1. Discussion with the Program Director within 5 school days of the occurrence.
2. The Program Director will respond to the student within 5 school days.
3. If not resolved, the student will submit a letter stating the concern within 5 school days to the Program Director, Department of Radiology Administrator and the Medical Director who will respond within 5 school days.
4. If not resolved, the student will submit a letter stating the problem to the JRCERT.

The Joint Review Committee on Education in Radiologic Technology  
20 North Wacker Drive, Suite 2850  
Chicago, Illinois 60606-3182  
312-704-5300  
[www.jrcert.org](http://www.jrcert.org)  
[mail@jrcert.org](mailto:mail@jrcert.org)

### **Professional Society Policy**

The student is expected to actively participate in the Radiological Societies. The American Society of Radiologic Technology. This includes becoming a member. Yearly dues for students are minimal. There are many good resources for the student.

### **Clinical Evaluation Policy**

Upon completion of a procedures unit, the student is expected to transfer the cognitive information presented in the classroom to functional information to be used in the clinical setting. A laboratory demonstration is used to facilitate this transfer of information. Following the laboratory demonstration, the student will be expected to complete a minimum number of patient exams under direct supervision of a registered technologist. \*The minimum number will be specified further in this policy. After completing the examination on the patient, the student will present a Routine Patient Exam Sheet to the technologists. The technologist will verify the student's participation and make comments and suggestions as necessary. After the didactic test and the minimum number of patient exams have been satisfied, the student will then be able to challenge the final competency. It is the student's responsibility to gain sufficient clinical experience in those procedures presented in lab. The required minimum number of patient exams may be exceeded if the student feels he or she needs additional experience. Extensive performance of actual patient exams is encouraged and will facilitate a successful completion of the final competency evaluation. Successful completion is defined as a passing score of 89% or higher on any clinical competency evaluation. The number of phantom/simulation competencies may never exceed the number of successfully completed patient competencies. Only one student may perform a competency exam per patient. The student may perform multiple competency exams on a single patient. If the patient has multiple exams and the student is performing a competency exam, the student must complete the entire exam for that patient with the technologists present. Students must demonstrate competency following the departmental routine projections. Each term the student cannot perform greater than 50% of their competency examinations with the same technologist. If the student completes a competency exam on a patient with multiple exams, that student should go ahead and complete all exams on that patient.

### **Remediation policy**

The clinical competency evaluations ensure that a student demonstrate competency at a point in time. However, this does not guarantee the student retains the competency over time. Students that appear to have lost clinical competency will require remediation and redemonstrate competency.

The methods employed for clinical remediation will be at the discretion of the program director in consultation with clinical coordinator and preceptors. If remediation is indicated, the student will be informed in writing and provided with documentation of progress. Clinical rotations will be altered to allow additional time within the area where the procedure is commonly performed. As a result of the time spent in clinical remediation, the student will give up equal time in the student choice rotation. If the student exhausts all time set aside for student choice rotation, the training period may be extended. The decision to extend the training period up to eight weeks is at the discretion of the program director. The maximum program length is 6.5 semesters. Once a student has completed remediation, they must re-challenge the competency exam and pass. Only then will a student resume their normal clinical rotation.

As a general guide, clinical remediation will require the student to revisit the material presented in procedures lab as well as notes taken during lecture. Demonstration of competency may consist of written tests, image critique, and competency evaluations.

#### **Minimum Patient Exam Requirements:**

The following chart describes the minimum required preparation exams necessary to challenge the final competency exam as well as those exams that the student will demonstrate final competency.

As per the ARRT, the Geriatric Patient is described as: (At Least 65 Years Old and Physically or Cognitively Impaired as a Result of Aging)

School of Radiography at The University of Tennessee Medical Center  
Student Handbook

<b>Exam</b>	<b># Practice Exams</b>	<b>Can be Simulated</b>	<b>Required Projections the Student Must Demonstrate</b>
Chest, routine	2	N	PA & Lat.
Chest, decubitus	1	Y	Decubitus
Chest, > 64 years	1	N	AP/PA
Chest, < 7 years	1	N	AP/PA & (Lat. if ordered)
Chest, wheelchair or stretcher	1	N	AP
Ribs	1	N	AP & Posterior Obl.
Sternum	1	Y	Anterior Obl. & Lat.
Finger or Thumb	1	N	AP or PA, Obl. & Lat.
Hand	1	N	PA, Obl. & Lat.
Wrist	1	N	PA, Stecher, Obl. & Lat.
Forearm	1	N	AP & Lat.
Elbow	1	N	AP, Obl. & Lat.
Humerus	1	N	AP & Lat.
Shoulder	1	N	AP, Grashey, Axillary or Y-projection
Shoulder, trauma axillary	1	N	AP, Grashey & Axillary
Upper extremity, >64 years	1	N	AP or PA & Lat.
Upper extremity, trauma	1	N	AP or PA & Lat.
Foot	1	N	AP, Obl. & Lat.
Calcaneous	1	N	Plantodorsal & Lat.
Ankle	1	N	AP, Obl. & Lat.
Tib-Fib	1	N	AP & Lat.
Knee	1	N	AP, Obl. & Lat.
Patella	1	Y	PA, Lat. & Sunrise or Merchant
Femur	1	N	AP & Lat.
Lower extremity, trauma	1	N	AP or PA & Lat.
Lower extremity, >64 years	1	N	AP or PA & Lat.
Scapula	1	N	AP & Y-projection
Clavicle	1	N	AP & AP Axial
Facial bones	1	N	Caldwell, Waters, SMV, Blow out & Lat.
Nasal bones	1	Y	Waters, R & L Lat.
Paranasal sinuses	1	N	Caldwell, Waters, SMV & Lat.
Skull	1	N	Waters, Lat.
Mandible or Panorex	1	N	PA, Townes, Bilat. Obl. or Panorex
Cervical spine	1	N	AP, Odontoid, Obl. & Lat. w/ Flex. Ex.
Cervical spine, trauma	1	N	AP, X – Table Lat.
Thoracic spine	1	N	AP, Lat. & Swimmers
Lumbosacral spine	1	N	AP, AP spot, Lat. & Lat. Spot
Sacrum and/or Coccyx	1	N	AP & Lat.
SI Joints	1	N	AP & Both Obl.
Pelvis	1	N	AP
Hip	1	N	AP Pelvis, AP & Frog Lat. affected hip
Hip, trauma (ER)	1	N	AP Pelvis, AP Hip, X – Table Lat.
Hip, trauma (Par)	1	N	AP Pelvis (low), X-Table Lat.
Abdomen, supine & upright	2	N	AP Supine & AP Upright
Abdomen, decubitus	1	Y	Left Lat. Decub
Esophagus	1	Y	AP, RAO, LAO & Lat.
UGI	2	Y	AP, R. Lat., RAO, RAO Esop., PA
Small bowel series	1	N	PA or AP
Portable chest	2	N	AP
Portable abdomen	2	N	AP
Portable orthopedics	2	N	AP or PA & Lat.
C-Arm, Surg. Ortho. w/ > 1 Proj.	5	N	Ortho C-Arm w/ Sterile Field & >1 Proj.
CPR	1	Y	-
Vital signs & medical equipment	1	Y	-
Venipuncture	4	N	-
Patient transfer	1	Y	-
Sterile technique	1	N	-



### **Competency Repeat Policy**

The student is expected to successfully complete the final clinical competency evaluation with a maximum of three (3) attempts. Failure to obtain a passing score within the three attempts will result in a letter of counseling due to failure to progress and may result in disciplinary action. The maximum allowed number of repeat attempts during the entire training period is five (5). Failure of a competency that would lead to a sixth repeat attempt will result in the student dismissal from the School of Radiography due to failure to progress.

### **Competency Quantity Requirement Policy**

The student will have successfully completed the following minimum number of final competencies by the end of the term indicated to ensure continuity between procedures covered in class and the timely completion of clinical competencies.

<b>Term</b>	<b>Minimum # of comps passed per term.</b>	<b>Minimum # of <u>non-simulated</u> comps per term.</b>	<b>Maximum # of <u>simulated</u> comps per term.</b>
Jr. 1st Mini Term	2	2	0
Jr. Fall Semester	9	8	1
Jr. Spring Semester	11	7	4
Jr. 2nd Mini Term	4	4	0
Sr. 3rd Mini Term	4	4	0
Sr. Fall Semester	11	7	4
Sr. Spring Semester	15	14	1
Sr. 4th Mini Term	Portfolio		
<b>Totals</b>	<b>56</b>	<b>46</b>	<b>10</b>

Each student must successfully complete 56 final competencies and one portfolio during the two-year training period. The above criteria will ensure that the student will not receive an incomplete on their clinical grade report and that they are functioning at an acceptable minimum level. This is only the minimum requirement per term. The student will not be penalized for doing more than the minimum number of final competencies per term. For example, if fourteen competencies were successfully completed during the Jr. Spring Semester, the grade on the first seven non-simulated and the first four simulated would be applied to the clinical grade. The remaining three competencies would be carried forward to the Jr. 2<sup>nd</sup> Mini Term to help satisfy the four required during that term. This would mean the student would then need to complete at least one more competency during the Jr. 2<sup>nd</sup> Mini Term. The portfolio is a collection of the student's best images from Senior Spring semester and 4<sup>th</sup> Mini Term. It must be accomplished under indirect supervision without intervention from fellow students or supervising technologists. The portfolio is due on the date listed in the

syllabus, inside the fourth mini term. The portfolio must include one exam from each of the following: chest, upper extremity, lower extremity, spine and abdomen. One exam in the portfolio must be accomplished utilizing the portable. Failure to successfully complete the required minimum number of final competencies will result in a record of conference and disciplinary action up to and including termination from the school.

Failure to complete the required number of competencies per term will result in the student receiving an Incomplete for that term. The deficiency can be made up in the following term, in addition to meeting the new requirements, however the student can only receive one Incomplete per academic year. More than one Incomplete in the same academic year shows a failure to progress and will result in disciplinary action, up to and including dismissal from the program.

### **Clinical Grading Policy**

Clinical grade will be derived from a weighted average using the following weights: 20% Technologist Evaluation of Student Performance and 80% Competency Evaluations. Clinical competencies that result in failing scores will be averaged into the clinical grade. Following remediation and additional practice the competency must be re-challenged (See Competency Repeat Policy). The student must ultimately demonstrate competency on the exam, however the original score will be recorded for grading purposes. The clinical preceptor will complete a Technologist Evaluation of Student Performance on each student at the end of every clinical rotation. The Student Performance Evaluation must be completed and signed by the supervising technologist and the student. In order to receive credit for a Student Performance Evaluation, the form and the activity log from the clinical rotation must be delivered to the student evaluation box by the last day of the clinical rotation. Student evaluation boxes are located in the central corridor and outside the radiography classroom.

### **Clinical Performance Policy**

The student must:

1. Meet and demonstrate proficiency in the performance of the posted room objectives.
2. Perform, under the direct supervision of a registered technologist, all exams in the student's assigned area. \*Direct supervision – Student supervision by a qualified practitioner, who reviews the procedure in relation to the student's achievement, evaluates the condition of the patient in relation to the student's knowledge, is present during the procedure, and reviews and approves the procedure. A qualified radiographer is present during student performance of a repeat of any unsatisfactory radiographs. This requires that a registered technologist evaluate the request, be present in the room with the student, provide assistance if necessary and evaluate the finished radiograph.
3. Perform, under the indirect supervision of a registered technologist, all exams in the student's assigned area that a final competency exam has

- been passed. \*Indirect supervision – Supervision by a qualified practitioner immediately available to assist students regardless of the level of student achievement. Immediately available is interpreted as the physical presence of a qualified practitioner adjacent to the room or location where a radiographic procedure is being performed. This availability applies to all areas where ionizing radiation equipment is in use. This requires that a registered technologist evaluate the request, be present in the immediate area for assistance and evaluate the finished radiograph.
4. Obtain direct supervision for **any** repeat radiographic exposure. A student's failure to comply with the repeat policy will result in a record of conference and disciplinary action up to and including termination from the program.
  5. Precisely follow the instructions and the directions of the staff.
  6. Ask for clarification of any directions given to them if they do not understand.
  7. Take the initiative in obtaining information necessary to perform in the clinical area.
  8. Inform the supervising technologist of where they are going if they leave their assigned area.
  9. Maintain patient confidentiality both at and away from school.
  10. Correctly identify the requested exam, image and patient.
  11. Correctly route finished images and patients to their proper destination.
  12. Ensure patient safety through prevention and observation.
  13. Ensure their assigned area is cleaned and stocked.
  14. Ensure items utilized during an exposure are not left in the exam room.
  15. Use a manual technique for all exams except chest, skull, abdomen and pelvis.
  16. While in all clinical areas the student will have their school issued markers and a technique book that fits into your pocket.
  17. A technique book may only contain Part, Projection, cm part thickness, mA, time, kVp, SID and departmental routine (SOP). It can NOT contain degrees of obliquity, degrees of central ray angulation or patient identifiable information.
  18. Competencies can only be completed during clinical educational hours.

### **Course Descriptions & Grading Policy**

**The following courses have a grading scale of A = 100 – 90, B = 89 – 80, C = 79 – 70, D = 69 – 60, and F ≤ 59.**

#### **Radiographic Physics I**

This course will present the student with the fundamental physics of radiation science. Lecture topics will include the mechanics of x-ray production, interaction and the effects upon the patient and image receptor.

**The clinical courses have a grading scale of A = 100 – 97, B = 96 – 93, C = 92 – 89, F ≤ 88.**

**Clinical I**

This course will provide the student with the opportunity to gain entry-level competency in the field of radiologic technology by observing and participating in the production of radiographs. During this course, the student will demonstrate competency and increase their proficiency in applied radiography. This course will provide introduction into the various modalities of radiology.

**Clinical II**

This course will provide the student with the opportunity to gain entry-level competency in the field of radiologic technology by observing and participating in the production of radiographs. During this course, the student will demonstrate competency and increase proficiency in applied radiography. The student will rotate on a two-week schedule in reception, transport, P.A.C.S and routine diagnostic imaging.

**Clinical III**

This course will provide the student with the opportunity to gain entry-level competency in the field of radiologic technology by observing and participating in the production of radiographs. During this course, the student will demonstrate competency and increase proficiency in applied radiography. Rotations in fluoroscopy will allow the student the opportunity to participate in Alimentary examinations correlating with didactic instruction.

**Clinical IV**

This course will provide the student with the opportunity to gain entry-level competency in the field of radiologic technology by observing and participating in the production of radiographs. During this course, the student will demonstrate competency and increase proficiency in applied radiography. The student will also demonstrate increasing technical ability through simulations on phantom models and production of quality radiographs.

**Clinical V**

This course will provide the student with the opportunity to gain entry-level competency in the field of radiologic technology by observing and participating in the production of radiographs. During this course, the student will demonstrate competency and increase proficiency in applied radiography. Additional rotations of specialized fields of radiology such as Computed Tomography and Interventional Radiology are introduced in this course. The student will be instructed in the basic concepts of producing quality radiographs.

**Clinical VI**

This course will provide the student with the opportunity to gain entry-level competency in the field of radiologic technology by observing and participating in the production of radiographs. During this course, the student will demonstrate competency and increase proficiency in applied radiography. Additional rotations through specialized fields of radiology such as Ultrasound, Nuclear Medicine, and Radiation Therapy are introduced during this course.

### **Clinical VII**

This course will provide the student with the opportunity to gain entry-level competency in the field of radiologic technology by observing and participating in the production of radiographs. During this course, the student will demonstrate competency and increase proficiency in applied radiography. This course also allows the student three specialty rotations of their choice to develop and identify individual interests.

### **Clinical VIII**

This course will provide the student with the opportunity to gain entry-level competency in the field of radiologic technology by observing and participating in the production of radiographs. During this course, the student will demonstrate increased proficiency in applied radiography. The student will also demonstrate performance under pressure, patient rapport, interpersonal relationships, and professional ethics.

**The following courses have a grading scale of A = 100 – 93, B = 92 – 85, C= 84 – 77, D = 76 – 69, F ≤ 68.**

### **Imaging Equipment I**

This course will introduce the student to the various types of equipment used in the production of diagnostic images. The components of both permanent and mobile radiographic equipment will be presented to the student. The equipment used in testing for quality control will also be discussed.

### **Introduction to Computers I**

This introductory course will present the student with historical information relating to the use of computers in medicine. Upon completion of the course, the student will be able to demonstrate knowledge of computer applications used in Radiology.

### **Introduction to Radiography I**

This course will present the student with introductory knowledge in the field of radiology pertaining to the history, radiation protection and general positioning terminology.

### **Math Review I**

This course will review the basic math concepts used in the field of radiology. The course topics will include how to add, subtract, multiply, and divide decimals, fractions and exponents. Conversion factors and basic algebra will be presented.

### **Medical Ethics I**

This course will provide the student with the framework of the responsibilities of a radiologic technologist regarding ethical and professional conduct, cultural diversity, as well as medical/ legal aspects of the profession.

### **Pathology I**

This course will introduce the student to the pathological processes that radiographers are most likely to encounter. Lecture topics will include the mechanism of the disease as well as how the disease will affect the imaging modality decision. Discussion of radiographs will demonstrate the effect disease has on the technical quality.

### **Patient Care I**

This course will introduce the student to the clinical environment and how the various areas of the hospital interrelate.

### **Patient Care II**

This course will provide the student with the information needed to recognize general and specific needs of the radiographic patient and demonstrate how to respond with appropriate patient care. The student will learn to obtain the patients vital signs and provide life support in emergencies.

### **Patient Care III**

This course will provide the student with the information needed to recognize general and specific needs of the radiographic patient and demonstrate how to respond with appropriate patient care. The student will learn to administer IV's, Oxygen and take a patient history prior to contrast administration.

### **Patient Care IV**

This course will provide the student with the information needed to recognize general and specific needs of the radiographic patient and demonstrate how to respond with appropriate patient care.

### **Patient Care Review I**

This course will review the concepts presented during Patient Care. The objective is to encourage the student to begin review and selection of the most important ideas and concepts presented during the prior Patient Care courses. Subject specific testing will be used to gauge student performance.

### **Procedures Review I**

This course will review the previous Procedures courses. It will review every body part discussed in earlier semesters and will discuss positioning and optimal radiographic qualities.

### **Radiobiology I**

This course presents the student with the mechanism of damage that occurs when biologic tissue is exposed to radiation. Following a review of basic human biology, both early and late effects of radiation will be discussed. Radiation protection guidelines will also be discussed.

### **Radiobiology Review I**

This course will review the concepts presented during Radiobiology. The objective is to encourage the student to begin review and of the most important ideas and concepts presented during the prior courses. Subject specific testing will be used to gauge student performance.

### **Radiographic Critique I, II, III, IV, V, VI, VII, and VIII**

Radiographic Critique course will demonstrate how to evaluate the diagnostic value of a finished radiograph. The purpose of this course is to enable the student to recognize the attributes of an optimum quality radiograph and bridge the gap between patient positioning and the anatomy demonstrated on the finished radiograph. This involves critique of the individual student's radiographs by other students and the instructor as well as presentation of examples of optimum and poor diagnostic quality. These images are to be obtained during the student's clinical educational hours.

### **Radiographic Exposure I**

This course will introduce the student to the theory behind appropriate technique selection. Various principles of radiographic exposure will be presented with correlated classroom lecture and exposure experimentation. This course will focus on the nature of radiation, image formation and photographic properties of an image.

### **Radiographic Exposure II**

This course will introduce the student to the theory behind appropriate technique selection. Various principles of radiographic exposure will be presented with correlated classroom lecture and exposure experimentation. This course will focus on image quality, scatter control, image receptors and processing.

### **Radiographic Exposure III**

This course will allow the student the opportunity to investigate various principles of radiographic exposure. The student will develop an experimentation research paper detailing the principle of radiographic exposure.

### **Radiographic Exposure Review I**

This course will review the concepts presented during Radiographic Exposure. The objective is to encourage the student to begin review and selection of the most important ideas and concepts presented during the prior Exposure courses. Subject specific testing will be used to gauge student performance.

### **Radiographic Procedures I**

This course will provide the student with the ability to distinguish between optimal and sub-optimal radiographs of human anatomy. Introductory instruction in correct terminology describing anatomy and positioning will be provided. Lab demonstrations will correlate didactic with clinical education. The course will focus on studies of the thoracic viscera and digestive system.

### **Radiographic Procedures II**

This course will provide the student with the ability to distinguish between optimal and sub-optimal radiographs of human anatomy. Lab demonstrations will correlate didactic with clinical education. This course will allow the student to gain comprehension over upper limb and shoulder girdle, lower limb, upper femora and pelvis, and vertebral column.

### **Radiographic Procedures III**

This course will provide the student with the ability to distinguish between optimal and sub-optimal radiographs of human anatomy. Lab demonstrations will correlate didactic with clinical education. The student will gain knowledge and comprehension of the alimentary digestive system, mouth and salivary glands, anterior portion of the neck, skull, and I.V. punctures. In class, illustrations and demonstrations will prepare students for clinical participation in like exams.

### **Radiographic Procedures IV**

This course will provide the student with the ability to distinguish between optimal and sub-optimal radiographs of human anatomy. Lab demonstrations will correlate didactic with clinical education. The course will focus on the Circulatory and Central Nervous systems, and computed tomography with cross sectional anatomy.

### **Radiographic Physics Review I**

This course will review the concepts presented during Radiographic Physics. The objective is to encourage the student to begin review and selection of the most important ideas and concepts presented during the prior Physics course. Subject specific testing will be used to gauge student performance.

### **Registry Review I**

This course will prepare the student to take tests similar to the American Registry of Radiologic Technologists.

### **Review of Procedures / Patient Care I**

This course provides the student with the opportunity to review previously covered material in Procedures and Patient Care.

## **Professional Conduct Policy**

The student will display professional conduct at all times. The following rules are mandatory and will be enforced.

1. The student shall not willfully or unknowingly, whether at or away from school, exhibit any conduct that discredits the reputation of or hinders the normal business of The University of Tennessee Medical Center or The University of Tennessee Medical Center's School of Radiography.
2. The student will not eat, drink, or chew gum in patient or clinical areas. Use of tobacco is prohibited on campus.
3. The student will remain in the assigned area at all times unless duty requires their absence.
4. The student will not discuss any patient's history, personal information, or inappropriate topics in a patient area.
5. All conversation will be kept to a minimal volume (just above a whisper).
6. The student will not question the supervising technologist in the presence of a patient.
7. The student will observe Universal Precautions at all times.
8. The student will not study in the assigned area unless **all** clinical objectives are met.
9. The student will check the student bulletin board each morning and periodically throughout the day. A bulletin board in the classroom area is specifically designated for student information. Schedules and clinical rotations will be posted as well as any other important information. E-mail accounts are provided for students. It is the responsibility of the student to check their email at least twice a week.
10. The student will not bring books/ or electronic devices to their assigned clinical area.
11. The student will not falsify school records.
12. The student will not cheat.
13. The student will not sleep while on campus.
14. The student will not be sitting in the clinical area.



15. Cell phones are not permitted on your person. Cell phones may be placed in the student's locker. Department of radiology contact numbers will be provided. If anyone reports to a school official that a student possessed a cell phone in a clinical area and the student cannot prove otherwise, the student will at a minimum be suspended for a period of three days. The time missed will be deducted from the student's personal time. Depending upon what the student was doing with the cell phone, the student may be dismissed from the School of Radiography.
16. The student will not willfully or negligently destroy or deface UHS property.
17. Since the clinical area is governed by University Health Systems, all UHS Policies will be enforced. A copy of these policies can be obtained via any networked UHS computer via the intranet (Insite).

### **Performance Improvement/ Corrective Action Policy**

The following is a general guide to performance improvement, however, multiple, or diverse offenses may be combined and considered together when determining the seriousness of the corrective action to be taken. An event that would call to question a student's character, both on and off campus, will be managed as a third offense. A sentinel event that entails an unexpected occurrence involving death or serious physical or psychological injury, or the risk thereof will be managed as a third offense.

First offense	Written warning with documentation.
Second offense	Written warning with or without suspension or probation.
Third offense	Written warning with suspension, probation or dismissal from The School of Radiography.
Dismissal	If unsatisfactory performance is not corrected or reoccurs, the student will be dismissed. The Program Director, Administrative Director of Radiology and the Head of Human Resources or designee will be contacted in advance of any student's dismissal to review all materials regarding the dismissal and other appropriate documents. If the student needs to be removed from the program before all documents are reviewed, then the student will be suspended subject to dismissal pending further investigation. The student will be notified of the suspension both verbally and in writing. A school official will accompany a dismissed student during the separation process. Before penalties are enforced, the Program Director and the Administrative Director of Radiology, in consultation with Human Resources, will consider the nature of the offense and the previous corrective actions. A student desiring to appeal a suspension or dismissal may do so by following the provisions of the Student Concerns Policy.

### **Policy Change Policy**

Since our sponsoring bodies are dynamic and may at any time place new demands or restriction upon the program, the school reserves the right to institute new or change existing policy. Such policy change may be directed by but not limited to The Joint Review Committee on Education in Radiologic Technology, The University of Tennessee Medical Center, The Department of Radiology or The School of Radiography. When policy is changed, the student will be required to sign a copy of the change attesting to receipt of and agreeing to abide by the new policy.

### **Contingency Plan**

If an unplanned catastrophic event occurs, school faculty will consult with the administration of the University of Tennessee Medical Center Hospital, to determine the best path to maintain program integrity. Every effort will be afforded to minimize interruptions to program operations to ensure student learning is maintained.

To mitigate the loss of education, faculty will use a variety of methods to replace the current education methods.

Didactic education will be delivered through Microsoft teams and or zoom or if necessary, through the United States Postal Service.

Clinical education will be replaced with schedule alterations and/or assignments, simulated clinical experiences, and/or virtual demonstrations.

Once clinical restrictions have been lifted, students will be responsible for completing all or a portion of missed clinical assignments to satisfy graduation requirements and certification board requirements. This may require an extension beyond the scheduled program completion date.

## **CRITERIA FOR COMPETENCY EVALUATION**

### **General**

#### **1. Interpretation of requisition**

The student was able to:

- Identify the procedure, history, patient's name, MR #, and mode of travel.

#### **2. Facilities Readiness**

The student was able to:

- Have radiographic table and other equipment clean and ready.
- Have the room stocked with supplies.
- Have the equipment turned on and cassettes and other accessories ready.

#### **3. Equipment Use**

The student was able to:

- Safely operate radiographic equipment.
- Properly use the tube and table locks and controls.

#### **4. Technique Book Available**

The student was able to:

- Demonstrate the use of their technique book.

#### **5. Two patient identifiers were checked.**

The student was able to:

- Check the patients name and date of birth and/or medical record number.

### **Performance**

#### **6. Patient care and handling.**

The student was able to:

- Locate the correct patient and assist to the radiographic room.
- Have the patient gowned properly and keep them covered for privacy.
- Explain the examination to the patient in a calm manner so they can understand.
- Give proper moving and breathing instructions.
- Inquire about the possibility of pregnancy in female patients.
- Follow up the exam by accurately routing of the images and completing the exam in the computer.

#### **7. Correct radiographic positioning and centering.**

The student was able to:

- Place the patient correctly on the table and assist them to the required position.
- Place the image receptor and body part in the correct relationship.
- Correctly angulate and center the central ray.

- Properly place the right or left marker and identify the radiograph with the patient's information.
  - Perform each projection in a maximum of 5 minutes.
- 8. Correct accessory selection and use.**  
The student was able to:
- Selects appropriate accessories based on patient needs.
  - Use immobilization devices, sandbags, sponges, and grids as needed.
  - Fill syringes with the correct contrast media or other solutions using aseptic technique.
- 9. Correct technical factor selection.**  
The student was able to:
- Select proper technical factors.
  - Adjust the exposure factors for body habitus, pathology, and motion.
  - Adapt exposure factors for changes in SID, grid ratio, and collimation.
- 10. General radiation protection.**  
The student was able to:
- Cone or collimate to the part.
  - Use gonadal shields only where applicable.
  - Wear their dosimetry badge.
  - Wear a lead apron and gloves as appropriate.
  - Keep the exposure room door closed.

## **Image**

- 11. Correct Centering and alignment.**  
The image demonstrates:
- Correct centering and alignment.
  - Correct SID and central ray angulation.
- 12. Correct exposure and detail.**  
The image demonstrates:
- Appropriate detail.
  - Correct image receptor, cassette holder, grid, etc. were used.
  - No motion, grid lines or artifacts.
- 13. Correct position and rotation of the part.**  
The image demonstrates:
- The body part in proper position and rotation.
- 14. Correct patient identification and markers.**  
The image demonstrates:
- Right or left markers properly placed.
  - Time and/or position markers correctly placed.
  - Patient information, name, medical records number, etc. clearly visible.

**15. Evidence of radiation protection.**

The image demonstrates:

- Cone or collimation limits visible.
- Gonadal shield visible (where applicable).
- NO REPEATS

**16. Correct identification of anatomy.**

The student was able to:

- Correctly identify anatomical structures and relate an in-depth knowledge of the physiology of these structures.

The evaluator should provide supervision of each image and prevent a repeat where applicable. The evaluator should score the performance section based upon the student's performance within the exposure room. The evaluator should score the image section based upon the image. The performance and image sections should be scored independently. However, if the evaluator corrects some performance error that would have led to a repeat, general radiation protection and evidence of radiation protection should be scored as "0" for the image in question.

School of Radiography at The University of Tennessee Medical Center  
Student Handbook

I have read and understand the contents of The University of Tennessee Medical Center at Knoxville, School of Radiography Handbook for Student Radiologic Technologists and agree to abide by its policies. Any violation of the policies/rules/regulations contained within this handbook or found on the UHS web site are grounds for disciplinary actions up to and including termination from the School of Radiography.

I have received the 2021 JRCERT Standards. I understand I can completely review them on the JRCERT website:

[https://www.jrcert.org/sites/jrcert2/uploads/documents/2021\\_Standards/5\\_13\\_21\\_Update/2021\\_Standards\\_Radiography\\_05\\_18\\_21.pdf](https://www.jrcert.org/sites/jrcert2/uploads/documents/2021_Standards/5_13_21_Update/2021_Standards_Radiography_05_18_21.pdf)

Student Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Program Official Signature: \_\_\_\_\_ Date: \_\_\_\_\_