School of Health Sciences

Radiography Program

Policies, Practices, and Procedures Handbook

TCC - Metro Campus
909 S. Boston Ave
Tulsa, OK

Revised June 2023

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RADIOGRAPHY PROGRAM

POLICIES AND PROCEDURES HANDBOOK

INTRODUCTION

This handbook has been developed to aid Students, Faculty, Clinical Preceptors and Radiographers involved with the Tulsa Community College (TCC) Radiography Program. It should be used as a guide for all students during their Radiography training. Policies, rules, rights, and responsibilities are established in this handbook.

The students are also governed by the policies as stated in the TCC Student Handbook (Student Handbook | Tulsa Community College (tulsacc.edu), Policies of the School of Health Sciences (SOHS) School of Health Sciences | Tulsa Community College (tulsacc.edu), the policies, and procedures of the clinical education center where they are assigned, and the Code of Ethics established by the American Registry of Radiologic Technologists (ARRT) Ethics Information - ARRT.

The TCC Radiography Program faculty developed this Student Handbook on January 1,1983 in compliance with the essentials of the Joint Review Committee on Education in Radiologic Technology (JRCERT), and it is updated yearly to reflect current practice and compliance with the JRCERT Standards for a Program in Radiologic Technology. The Radiography Program faculty reserve the right to make policy and procedure changes when necessary.

The TCC Radiography Program welcomes recommendations for changes from all communities of interest.

The Radiography Program follows student policies given in the TCC Student Handbook and the SOHS Policies and Practices unless otherwise listed in this book.

PROGRAM MISSION STATEMENT

The mission of the Radiography Program at Tulsa Community College is to provide an accredited two-year associate degree program that will prepare graduates for a career in the field of diagnostic medical imaging.

Program Learning Outcomes (PLO)

Goal #1 Program graduates will pass the registry exam for Radiography administered by the American Registry of Radiologic Technologists (ARRT)

Goal #2 Program graduates will become successfully employed in medical imaging.

Goal #3 Program graduates will possess the level of knowledge necessary for professional growth.

Student Learning Outcomes (SLO)

Goal #1 Program graduates will be clinically competent.

Students will:

- Position patients for exam
- Deliver appropriate patient care
- Operate radiographic equipment
- Employ radiation protection practices
- Understand radiation exposure guidelines

Goal #2 Program graduates will demonstrate critical thinking/problem solving skills.

Students will:

- Evaluate radiographic images
- Select exposure factors
- Perform non-routine exams

Goal #3 Program graduates will demonstrate critical thinking/problem solving skills.

Students will:

- Understand the function of professional organizations
- Demonstrate professional behaviors
- Make ethical decisions
- Support the efforts of the Radiologic Community

Goal #4 Graduates will demonstrate effective communication skills.

Students will:

- Communicate with patients
- Present an oral report
- Make a presentation
- Use professional terminology

TCC RADIOGRAPHY PROGRAM ORGANIZATIONAL CHART

- President / CEO
  - Chief Academic Officer
    - Associate Vice Presidents
      - Dean of Health Sciences
        - Radiography Program Director/Faculty
          - Hospital Clinical Preceptors
            - Staff Technologist
              - Radiography Students

CLINICAL EDUCATION CENTERS

- Claremore Indian Hospital
- Hillcrest Claremore Hospital
- Hillcrest South Hospital
- OSU Medical Center
- Council Oaks Hospital
- Saint Francis Warren Clinic facilities
- Saint Francis Hospital
- Saint Francis South
- Saint John Medical Center

SELECTION OF CLINICAL EDUCATION CENTER

Clinical selection and rotations will be assigned based on the student's skill level and the required competencies for each clinical course. The students will be assigned to clinical sites to allow for equitable clinical experiences across the curriculum and to provide students the opportunities to successfully fulfill their clinical objectives, competencies, and goals. Students will attend the same clinical site throughout their junior fall and spring semesters. Beginning in the summer of their senior year, students will rotate to other clinical sites, randomly chosen by SOHS administrators.

STUDENT RELATIVES

Students may attend a clinical site in which his/her relative works, however they may not be under the direct supervision of their relative nor can their relative sign the student's competencies. Students that marry radiology personnel will be transferred to another Clinical Education Center as soon as an opening becomes available. Student's children **WILL NOT** be permitted to attend any radiography classes or clinical.

CURRICULUM

The Radiography Program is a two-year (six-semester) program consisting of 48 credit hours of Radiography courses (didactic and clinical) and 22 hours of related general education courses. Lecture and clinical courses run concurrently throughout the two years. Upon completion of the program, graduates receive an Associate in Applied Science (AAS) degree and are eligible to apply for examination by the American Registry of Radiologic Technologists (ARRT) in Radiography (R).

Each assigned day for clinical education classes will consist of a complete eight-hour shift in the assigned clinical education center.

Descriptions of courses in the Radiography curriculum may be found in the TCC catalog or website Program: Radiography (X-ray) AAS - Tulsa Community College - Acalog ACMS™ (tulsacc.edu). The arrangement of classes and clinical education during the six semesters is as follows:

Recommended Courses:

BIOL 1314	Essentials of Anatomy & Physiology	4 Credit hours
MATH 1473	Quantitative Reasoning	3 Credit hours
	or Higher-Level Math	
ALDH 1323	Medical Terminology	3 Credit hours

First Year – Summer Semester		Credit Hours
RADT 1212	Introduction to Radiography	2
RADT 1211	Introduction to Radiography Lab	1
	Total Hours:	**3**

First Year – Fall Semester		Credit Hours
RADT 1313	Radiographic Anatomy & Pos. I	3
RADT 1372	Radiographic Technique	2
RADT 1324	Radiographic Clinical Education I	4
ENGL 1113	Composition I	3
	Total Hours:	**12**

First Year – Spring Semester		Credit Hours
RADT 1333	Radiographic Anatomy & Pos. II	3
RADT 1382	Advanced Radiographic Technique	2
RADT 1344*	Radiographic Clinical Education II	4
ENGL 1213	Composition II	3
or	ENGL 2333 - Tech/Professional Writing	
or	ENGL 2343 - Business Communications	
	Total Hours:	**12**

Second Year – Summer Semester		Credit Hours
RADT 2301	Radiographic Seminar	1
RADT 2312*	Radiographic Clinical Education III	2
	Total Hours:	**3**

Second Year – Fall Semester		Credit Hours
RADT 2343	Radiographic Biology & Pathology	3
RADT 2336*	Radiographic Clinical Education IV	6
RADT 2383	Radiographic Physics	3
HIST 1483	US History 1492-Civil War Era	3
or	HIST 1493 - US History Civil War Era-Present	
	Total Hours:	**15**

Second Year – Spring Semester		Credit Hours
RADT 2323	Radiographic Special Procedures	3
RADT 2356*	Radiographic Clinical Education V	6
POLS 1113	American Federal Government	3
	Total Hours:	**12**

**** RADT 1344, 2312, 2336, 2356 require a two week 1:00pm-9:00pm rotation each semester.***

TECHNICAL & PROFESSIONAL STANDARDS

A student entering the radiography program at Tulsa Community College should be aware of the following performance requirements necessary to fulfill the job requirements of a registered medical radiographer ARRT (R).

EDUCATION: Must be a graduate of an educational program in radiography which has been accredited by a mechanism acceptable to the American Registry of Radiologic Technologist. Tulsa Community College is accredited by the Oklahoma State Regents for Higher Education, the Higher Learning Commission (HLC) plus specific programmatic accreditation by the Joint Review Committee on Education in Radiologic Technology (JRCERT).

SKILLS: Radiography graduates of Tulsa Community College will be expected to exhibit cognitive, technical and interpersonal skills and demonstrate the following competencies as adopted by the Tulsa Community College Radiography Advisory Committee.

- A physical form is required to be uploaded into the appropriate section of Surscan prior to clinical rotations begin.

The graduate will be able to:

1. Exhibit a proficiency in routine procedures of a radiology department and maintain proper patient records and patient confidentiality in accordance with HIPAA regulations.
2. Operate automatic developing equipment and digital imaging equipment, process radiographs and maintain quality control of automatic processing and digital imaging equipment.
3. Demonstrate a professional appearance of themselves and their radiology department and demonstrate an ethical relationship with all personnel.
4. Select and operate the proper equipment and accessories to provide the patient with the best possible radiographic examination.
5. Scientifically select the proper technical factors to produce the highest quality radiographs with the lowest possible radiation exposure to the patient.
6. Transport and position patients for all routine radiographic procedures; including portables, surgery and selected special procedures; while maintaining the highest standard of radiation protection.
7. Administer or assist a physician in administering contrast media and other common medications used in radiography.
8. Assist in medical emergency situations, as necessary.

9. Practice proper sterile techniques and isolation procedures to prevent contamination and promote disease control for the patients and all other personnel.
10. Perform in all areas of the radiology department with full responsibility in the performance of all routine and selected special procedures.
11. Assist in the instruction and evaluation of future radiographers.
12. Assume responsibility for other duties as delegated by their supervisor or physicians.
13. Demonstrate a basic knowledge of advanced imaging modalities.
14. Demonstrate college level reading and writing skills.
15. Understand and be able to apply knowledge of the history of the United States.
16. Understand and be able to apply knowledge of the study of American Federal Government.
17. Apply critical thinking skills to human relation problems with special emphasis on group dynamics, interpersonal communications and decision making.
18. Demonstrate general knowledge of anatomy and physiology of the human body and how it relates to radiography.
19. Possess an understanding and demonstrate proper usage of Standard and Isolation Precautions when dealing with blood borne pathogens.

PHYSICAL / MENTAL WORKING CONDITIONS

Radiography graduates should possess the following physical and mental capabilities to adequately perform in this occupation:

Frequently Required Work Activities:

- Standing
- Walking
- Lifting
- Carrying
- Pushing / Pulling
- Balancing
- Squatting / Crouching
- Stooping/Bending

Continuously Required Work Activities:

- Reaching
- Handling / Feeling
- Talking
- Hearing
- Seeing

Occasionally Required Work Activities:

- Sitting
- Climbing
- Crawling

Continuously Required Mental Demands:

- Judgement
- Imagination
- Memory
- Creativity
- Initiative
- Patience
- Alertness
- Precision
- Analytical Ability
- Problem Solving
- Concentration
- Communication with People

Hand Activities:

- Grasping / Turning
- Fine Manipulation
- Grasping

Strength Rating:

On the job a Radiographer must be able to lift / assist

- Up to 20 pounds (Light) Continuously
- 21 to 50 pounds (Medium) Frequently
- 50 to 100+ pounds (Heavy) Frequently

ADMISSION GUIDELINES

The following guidelines have been adopted to be used in the selection of students to the Radiography Program.

I. Students must meet all of the following criteria before admission will be considered:

1. Must be a high school graduate or equivalent (G.E.D).
2. Application to the college and the program must be submitted by the February 1 deadline.
3. Must have a minimum cumulative GPA of 2.0 or better.
4. Top ranking applicants attend orientation meeting and submit video interview to be considered.
5. Must attend a mandatory Bootcamp for the program on date assigned (TBD).

II. Selection will be made according to the following criteria:

1. Overall Grade Point Average. NOTE: If a student has less than 12 college hours, then an average of high school and college GPA will be used.
2. ACT Scores are required. There is no minimum required ACT score for this program.
3. Applicants must successfully complete a national background check, physical form and negative drug screen.

III. Applicants will be ranked according to the following formula:

1. Overall college GPA >2.0 points will be awarded accordingly with a max value of 20 Points (37.7 % of calculation)
2. ACT composite score 1-36 for a maximum value of 10 points (18.9% of calculation).
3. ACT Science score 1-36 for a maximum point value of 20 points (37.7% of calculation)
4. Applicants with a medical certification or degree will receive an additional point for each level of achievement. Healthcare certification 1-point Associate 2-points, Bachelor's or higher 3-points.
5. Video interview submission required, a 25-point rubric will be used to evaluate each submission. Some applicants may be asked to attend an additional in-person interview once points are tallied for a final selection to be made.

Students with the highest ranking will be selected first. Since the Radiography program has limited enrollment based on the number of clinical spots available per year, only the top-ranking applicants will be selected.

Students with a grade point average (GPA) of less than a 2.0 and/or on academic probation **WILL NOT** be considered for admission to the program until GPA is raised or academic probation is discontinued.

NOTE: *Admission to the Radiography program, or any TCC Health Sciences Program, is contingent upon students completing and passing a national background check with sex offender and fraud registry check and passing a drug screen prior to beginning the program. Students will also be required to submit current CPR certification for American Heart BLS Healthcare Provider, a physical form, and immunization records to satisfy clinical contract requirements. Please refer to the School of Health Sciences Policies* School of Health Sciences | Tulsa Community College (tulsacc.edu)

ACADEMIC PROGRESSION POLICIES

A. Academic Probation

- A cumulative grade point average of 2.0 (C) or higher on all academic work must be maintained. At the end of any academic term in which a student's cumulative grade point average falls below 2.0, the student will be placed on Academic Probation Transfer to TCC | TCC: Tulsa Community College (tulsacc.edu) .
- When a radiography student is placed on academic probation, the student has one semester to obtain satisfactory academic standing to continue in the radiography program. A radiography student on academic probation for the second continuous semester must withdraw from the program.
- The student can apply for re-admission the following year, and must meet the application criteria.

B. Incomplete Grades

- Incomplete ("I") grades may be assigned by faculty as outlined in the Tulsa Community College catalog. A grade of "I" in a radiography course must be changed to a grade of C or better for the student to progress to the next radiography course.
- In the event a student receives an “I” grade in the last semester of the Radiography Program, the student has six-months to complete the final courses with a “C” or better.

C. Criteria for Completion of the Radiography Program

- A student must complete all Radiography courses within a period of three years after being accepted into the Radiography program. This allows for repetition of only one semester of radiography courses.
- If a student withdraws from or fails a Radiography course re-admission to the program the following year is not guaranteed and is dependent on clinical placement availability. If no clinical spot is available, the student cannot be re-admitted to the program. In this event, the student can re-apply for admission to the program the following year and will be ranked according to the criteria previously outlined.
- If there are clinical site placements available, those students wishing to be considered for re-admission will be placed on a waiting list and the ranking criteria for the waiting list is as follows:
    - No incidents of unprofessional conduct.
    - Successful completion of the aforementioned radiography courses.
    - Ranking for re-admission will be based on the GPA for all completed radiography courses.
- If a re-admitted student, who previously failed a radiography course, fails again the student will not be eligible for re-admission to the program for a period of no less than 2 years, and must complete the admission requirements. The student will be ranked according to the criteria previously outlined.
- If a student has been formally requested to be removed from a clinical education center, an attempt will be made to locate another site. If no other site can be secured they must withdraw from the program. Any student requested removed from two clinical sites must withdraw from the program and will not be re-admitted to the program.
- Students may be ADMINISTRATIVELY WITHDRAWN FROM THE PROGRAM BY THE PROGRAM DIRECTOR at any time due to a student's unethical or unprofessional conduct, uncleanness, use of profanity, poor attendance, violation of clinical education center or Tulsa Community College policies, falsifying records, HIPAA violations etc.

GRADING POLICY

The following grading scale is used in all RADT courses*:

93 - 100% = A

85 - 92% = B

75 - 84% = C

Below 75% = F

Students must receive a minimum grade of C in any RADT course to continue in the program.

- Students must accrue 75% of the total points possible on exam scores alone before other scores are included in the final average. Earning less than 75% of the total possible exam points results in failure of the course. Earning less than 75% of the total possible points for the semester will also result in failure of the course.

*RADT course grading scale is implemented to ensure the national registry score can be achieved based on a 75% passing score to achieve registered technologist status.

- Clinical grades will be based on competencies, assessments, unassisted procedures, attendance, mid-term and final exams. **STUDENTS MUST PASS MID-TERM AND FINAL CLINICAL EXAMS IN ORDER TO CONTINUE IN THE PROGRAM.** If a clinical exam is failed the failing grade will be the grade recorded, and students are given one chance to re-take the exam to achieve a passing score. If a passing score cannot be achieved, the student must withdraw or will be administratively withdrawn from the program.

Required competencies will be stated in the syllabus each semester according to the objectives listed.

The final clinical evaluation grades each semester will be an average of the TCC faculty member, clinical preceptor, and registered technologist's assessments.

Anyone with less than 75% average at Mid-term will be placed on program probation for the rest of the semester. Program probation will be used to inform student of the possibility of failing the course. If performance cannot be improved, the student should withdraw from the course.

VACATIONS, HOLIDAYS & PERSONAL DAYS

Student vacation periods and holidays coincide with those identified on the TCC Academic Calendar Academic Calendar | TCC: Tulsa Community College (tulsacc.edu) . Students will be allowed six (6) personal days during clinical education throughout the two-year program.

WEATHER POLICY

During hazardous weather conditions which result in the closing of Tulsa Community College, Radiography students are not required to attend class or clinical for that day.

Students should not jeopardize their safety at any time due to hazardous weather conditions. If hazardous weather conditions occur, students must make the decision as to whether attendance at class or clinical would put them in jeopardy.

PHONES & OTHER ELECTRONIC DEVICES

Students should show respect for faculty and other students by turning off cell phones or other electronic devices during classroom, laboratory, and clinical activities. Digital or tape voice recorders may be used to record lectures, but must be stated to faculty prior. Laptop or notebook computers may be used to take notes during class. **Personal laptops and notebooks are not allowed at the clinical education site.**

CELL PHONES ARE NOT ALLOWED IN THE EXAM AREAS AT CLINICAL. If a cell phone or other electronic device is brought to clinical it must remain in the student's car or in the student's locker if one is provided by the clinical site. Cell phone calls or text messages made or received during clinical time must be of an emergency nature and must be completed in as little time as possible, in a location away from any exam areas. A student bringing a phone, or other electronic device, into the work area at clinical will be asked to leave the clinical site and contact their instructor before returning to clinical. They will receive no credit for clinical time missed.

SOCIAL NETWORKING

Students should be aware of the public availability of information present on social networking sites and other electronic devices. Any information which violates patient privacy laws or discloses information about a patient or clinical education center is strictly prohibited and may lead to counseling and/or dismissal of a student from the Radiography program. Due to the broad nature of the interpretation of HIPAA laws, great discretion should be used when posting anything about your student experiences to a website. A violation of HIPAA laws can lead to civil or possibly criminal litigation.

ACADEMIC & CLINICAL PERFORMANCE COUNSELING POLICY

The three major counseling areas are behavioral, academic, and clinical performance.

An instructor defines counseling as an interaction resulting from a student's observed behaviors, academic, or clinical performance. A counseling conference provides an opportunity for the student and instructor to mutually discuss the area of concern in private, and either party, at any time, may initiate a counseling conference.

A record of the conference will be provided at the time of the conference in which documentation of the performance expectations will be specified, and the counseling record will become a part of the student's permanent file.

GUIDELINES FOR COUNSELING RECORD

1. Any evaluation of the student's academic or clinical performance which requires specific elaboration will be documented and witnessed by a third party.
2. The counseling record will describe the less than satisfactory performance.
3. The observed student performance (incident) will be described objectively.

4. The time, place and factors influencing the student's performance will be included.
5. The instructor will specify recommendations to assist the student in improving performance.
6. The instructor and student will both sign and date the counseling record whenever possible.
7. If a student refuses to sign the counseling record, the signature of the witness will be obtained to validate the conference between the instructor and the student.
8. The original counseling record will be placed in the student's permanent file.

See APPENDIX A – Radiography Program Counseling Form

ACCIDENTS

All accidents in clinical involving patients, hospital personnel, students, or damage to equipment must be reported immediately to the Clinical Preceptor and TCC Faculty, or the technologist to whom you are assigned. All incidents should be documented on a Radiography Program Incident Report Form and, if necessary, an incident report form of the clinical education center. Incident reports will be filed in the student's permanent file.

Incidents on campus must be reported to the Program Director or security personnel and will be handled as covered in the Tulsa Community College handbook.

See APPENDIX B – Incident Report Form

STANDARD / UNIVERSAL PRECAUTIONS

Since medical history and examination cannot reliably identify all patients infected with HIV, MRSA, Hepatitis or other blood borne pathogens, standard precautions should be consistently used for all patients. This approach, previously recommended by CDC and referred to as "universal, or standard, precautions" should be used in the care of all patients, especially including those in emergency care settings in which the risk of blood exposure is increased and the infection status of the patient is usually unknown.

- All health care workers must routinely use appropriate barrier precautions to prevent skin and mucous membrane exposure when contact with blood or other body fluids of any patient is anticipated.
- Gloves must be worn for touching blood and body fluids, mucous membranes or non-intact skin of all patients.
- Gloves must be worn for handling items or surfaces soiled with blood or body fluids.

- Gloves must be worn for performing venipuncture and other vascular access procedures.
- Gloves should be available in all patient rooms, exam rooms, on crash carts, and should be carried in pockets of health-care workers.
- Gloves must be changed, and hands washed after contact with each patient.
- Mask and protective eyewear or face shields should be worn during procedures that are likely to generate droplets of blood or other body fluids to prevent exposure of mucous membranes of the mouth, nose, and eyes.
- Gowns or aprons must be worn during procedures that are likely to generate splashes of blood or other body fluids.

Comment: Routine patient care not involving contact with blood or other body fluids, mucous membranes, or non-intact skin does not require the use of gowns or aprons, however clinical policy should be followed. Routine careful hand washing is required before and after any patient contact.

Examples of procedures requiring "mask and protective eyewear or face shields" are certain dental procedures, major operative procedures, endoscopy, and suctioning of the oral cavity or a tracheostomy which is likely to produce splashes.

I. Hand and other skin surfaces must be washed immediately and thoroughly if contaminated with blood or other body fluids. Hands should be washed immediately after gloves are removed.

Comment: Use of these barrier methods in no way eliminates the need for appropriate hand-washing before and after patient contact.

II. All health-care workers must take precautions to prevent injuries caused by needles, scalpels, and other sharp instruments or devices during disposal of used needles; and when handling sharp instruments after procedures.
    1. To prevent needle stick injuries, needles must not be recapped, purposely bent or broken by hand, removed from disposable syringes, or otherwise manipulated by hand.

    2. After they are used, disposable syringes and needles, scalpel blades, and other sharp items must be placed in puncture-resistant containers for disposal; the puncture- resistant containers must be located as close as practical to the use area. Large bore reusable needles must be placed in a puncture-resistant container for transport to the reprocessing area.

III. To minimize the risk during emergency mouth-to-mouth resuscitation, mouthpieces, resuscitation bags, or other ventilation devices must be available for use in areas in which the need for resuscitation is possible.

IV. Health-care workers who have exudative lesions or weeping dermatitis should refrain from all direct patient care and from handling patient-care equipment until the condition resolves.

V. Pregnant health-care workers are not known to be at greater risk of contracting blood borne infections than health-care workers who are not pregnant; however, if a health-care worker develops a blood borne infection during pregnancy, the infant is a risk of infection resulting from perinatal transmission. Because of this risk, pregnant health-care workers should be especially familiar with and strictly adhere to precautions to minimize the risk of blood borne pathogen transmission.

Comment: There is no data suggesting an increased risk of other infections (herpes simplex, cryptosporidiosis, or others) from HIV-infected patients to health-care workers. Careful adherence to these precautions should adequately protect all health care workers, including those women who are pregnant or of child-bearing age.

VI. Invasive Procedures:
For this document, an invasive procedure is defined as:

1. Surgical entry into tissues, cavities or organs or repair of major traumatic injuries in an operating or delivery room, emergency department, or outpatient setting, including both physicians' and dentists' offices.

2. Cardiac catheterization and angiographic procedures;

3. A vaginal or caesarean delivery or other invasive obstetric procedure during which bleeding may occur.

4. The manipulation, cutting, or removal of any oral or perioral tissues, including tooth structure, during which bleeding occurs or the potential for bleeding exists.

Standard (blood and body fluid) precautions combined with the following shall be the minimum precautions for all such invasive procedures.

1. All health care workers who participate in invasive procedures must routinely use appropriate barrier precautions to prevent skin and mucous membrane contact with blood and other body fluids of all patients.

    a. Gloves and surgical masks must be worn for all invasive procedures.

    b. Protective eyewear of faces shields must be worn for procedures that commonly result in generation of droplets, splashing/spraying of blood or other body fluids or the generation of bone chips.

c. Gowns or aprons (made of material that provide an effective barrier) must be worn during invasive procedures likely to result in splashing of blood or other body fluids.

2. If glove is torn or a needle stick or other injury occurs, the glove must be removed, and a new glove donned as promptly as patient safety permits.

VII. Patient or Specimen Labeling:

Implementation of universal blood and body fluid precautions for all patients eliminates the need for use of the isolation category of "Blood and Body Fluid Precautions" previously recommended by CDC for patients known or suspected to be infected with blood borne pathogens. Isolation precautions, (e.g., respiratory) should be used as necessary if associated conditions, such as tuberculosis, are diagnosed or suspected.

Likewise, implementation of universal blood and body fluid precautions for all patients eliminates the need for warning labels on specimens, since blood and other body fluids from all patients should be considered infective.

HAZARD EXPOSURE INFORMATION

As a SOHS student, you will be participating in laboratory and clinical settings, which may put you at risk of exposure to environmental and physical hazards. These hazards include, but are not limited to, needle sticks, inhalation of microorganisms, and contact with infected body fluids. In the laboratory and clinical setting, you will learn how to minimize this risk using universal precautions and other infection control measures. It is the responsibility of every SOHS student to further protect themselves by maintaining safe practices and providing their own health care insurance. The college recommends that you be vaccinated against Hepatitis B prior to enrollment in the SOHS program you have chosen. Please read the following information regarding this disease and the vaccine. If you choose not to receive the Hepatitis B vaccine, a signed waiver will be required prior to admission.

Note: Many of the clinics and hospital require Tulsa Community College students to have the Hepatitis B vaccination before they can participate in the clinical settings. Therefore, the vaccinations may be a prerequisite to entering the program.

TULSA COMMUNITY COLLEGE ASSUMES NO RESPONSIBILITY for any expenses you may incur associated with personal insurance premiums, Hepatitis B vaccinations, personal protective equipment, or other medical expenses related to testing associated with your exposure to environmental or physical hazards in conjunction with your being a student of one of its Allied Health programs.

INSURANCE

Liability (Malpractice) insurance is required due to the direct patient contact. This is purchased by the student through the College in a group policy at the time of entrance into the program.

As stated in the contractual agreements with the Clinical Education Centers, if necessary, TCC SOHS students will be furnished emergency care and treatment by the institution until the individual can be transferred to the care of a personal physician. Such care provided to the SOHS programs students is to be charged to the student as determined by the Clinical Education Center.

Students are encouraged to carry their own personal medical insurance.

RADIOGRAPHY UNIFORM REQUIREMENTS

Students may wear any brand of scrubs they choose and must be navy blue.

A Tulsa Community College logo and Radiography student will be embroidered on the left front pocket area of uniforms or lab jackets and must always be visible during clinical education.

Students will ALWAYS wear a college issued ID badge and assigned dosimeter while at clinical.

1. Uniforms will conform to the requirements of Tulsa Community College. This code will be strictly enforced.
2. Neatness, clean shoes and good grooming are an essential consideration in proper uniform. Good personal hygiene is always expected.
3. The dress code must be met in entirety or student may be sent home.
4. Uniform shoes or athletic shoes that are clean and in good condition are acceptable footwear for clinical.
5. Sweaters or fleece jackets are not permitted.
6. Minimal jewelry may be worn.
7. Long hair and/or unusual hairdos may have to be tied back or changed to satisfy clinical education center standards.
8. Heavy perfume or cologne is not permitted.
9. Beards or mustaches are at the discretion of the clinical education center.
10. Visible body piercing, and/or visible tattoos *may not* be permitted by the clinical center. Students with piercings and/or tattoos *may be* required to remove or cover them during clinical.

11. White or navy-blue lab jackets are permitted. Lab jackets are normally long sleeve and waist length and must have the TCC embroidered logo.
12. Radiation badges are ordered, and records are maintained by Tulsa Community college. Replacement for a lost or damaged badge must be reported to faculty immediately.
13. When students are not engaged in a Tulsa Community College clinical activity at the clinical site they may not represent themselves as Tulsa Community College radiology students by wearing any identifiable part of the radiography student uniform.

MONITORING PERSONNEL RADIATION

All students will wear an assigned dosimeter during all clinical education and all on-campus laboratories.

Dosimeters will be ordered by the college and will be cared for by the student throughout their retention in the program. Students will be asked to present their dosimeter quarterly. If a student leaves the program for any reason their dosimeter and TCC student badge must be returned to the school administrator or instructor.

A quarterly radiation report is posted for students to review. The radiation report is available for discussion with the Radiation Safety Officer or Clinical Coordinator anytime the student has a question. A report indicating the threshold dose of 300 mrem in a one-month period is immediately discussed with the student by the Radiation Safety Officer. The cause of the exposure will be investigated, and appropriate action is taken to correct the situation.

Rules to be observed while wearing the film badges are:

1. Badges shall be worn in the neck or chest area facing the radiation source.
2. Badge shall be worn outside of protective apron.
3. Badge should not be placed on or near TV sets or heat producing appliance.
4. Badge should not be left in sun or in automobile.
5. Badge should not be allowed to get wet.
6. Badges are not to be worn while the student is working as an employee at clinical center.
7. Badges are not to be worn when receiving personal imaging services.

- Students must understand basic radiation safety practices prior to assignment to clinical settings.
- Students **must not** hold image receptors during any radiographic procedure.

- Students **must not** hold patients during any radiographic procedure when an immobilization method is the appropriate standard of care.
- As students' progress in the program they must become increasingly proficient in the application of radiation safety practices.

PREGNANCY POLICY

Radiation protection is an important aspect of Radiologic Technology.

In the event a female student becomes pregnant, it is recommended (not required) that she notify the Program Director immediately in writing. A counseling session will be arranged to instruct the student of the regulations for this condition.

The Program Director, Clinical Preceptor, and Clinical instructor will discuss the proper procedure to follow during time spent in clinical to avoid excessive radiation. The student will be permitted to continue clinical training with acknowledgment of the hazards involved.

A form is signed signifying the student has received adequate instruction of radiation safety and discussed all aspects of continuing in the program.

At the time faculty is informed of pregnancy, a second badge will be ordered to be worn at waist level inside apron. The original badge will be worn on the collar as defined above.

Any missed time in class or clinicals due to pregnancy will be handled in coordination with the TCC Title IX Coordinator. Students will schedule a time to meet with the Program Director to develop a plan for any missed time due to pregnancy.

To comply fully with the Joint Review Committee on Education in Radiologic Technology Standards for an Accredited Educational Program in Radiologic Sciences for Standard 5.1.

1. All female students will have the option of whether to inform program official of their pregnancy.

2. If the student chooses to voluntarily inform program officials of her pregnancy, it must be in writing.

3. In the absence of this voluntary, written disclosure, a student cannot be considered pregnant.

4. If the student declares pregnancy in writing, the student may continue in the program. The student may continue clinical training without modification.

5. The program may offer clinical component options such as clinical reassignments and/or leave of absence in compliance with Title IX regulations.

6. The student has the option of withdrawing their declaration of pregnancy with written notification to program officials.

See APPENDIX C – Pregnancy and Clinical Rotation Exposure to Radiation

CONDUCT

Students will be subject to hospital policies as outlined in employee handbooks. Any question as to interpretation of policies should be referred to the clinical preceptor of that Clinical Education Center. Refer to the organizational structure for this information.

Students may not come to class or participate in clinical/fieldwork/ practicum or program activities impaired by alcohol or drugs, including marijuana. Your role as a student in the Radiography Program is considered a "safety-sensitive position."

Faculty will review any non-professional conduct and disciplinary action will be taken as explained in the Tulsa Community College Student Handbook. This can be found in section SH.11 Student Code of Conduct. Student Handbook | TCC: Tulsa Community College (tulsacc.edu)

The Department of Radiology of a clinical site reserves the right to terminate any student's clinical training when professional and/or ethical conduct is not compatible with the accepted standards of the Clinical Education Center.

PROFESSIONAL BEHAVIOR

A professional attitude must always be maintained. Treat patients with kindness, empathy and courtesy. Always preserve the privacy and safety of the patient. It is important to keep in mind the care and welfare of the patient is the first obligation of all health care workers.

General Rules of Conduct:

1. Introduce yourself to patient. Wear name tag at all times for identification to patient and hospital personnel.
2. Close door for privacy and cover patient during stay in radiography room.
3. In accordance with HIPAA regulations, never discuss patient's history or information on a chart with anyone other than the supervisor or Radiologist.
4. Do not make idle conversation within patient's hearing.

   Eating, drinking and smoking will take place only in areas designated for such during clinical hours. ***NOTE: Smoking is prohibited on hospital campuses.***

5. The R.T. of assigned room or the supervisor of the area will designate lunch and break times. Students should not be in break area at other times without permission.
6. Students should not chew gum or consume food in the presence of a patient.
7. Students are not permitted to receive or make personal telephone calls unless an emergency.
8. Students are not permitted to receive visitors without permission of clinical instructor.
9. Strong or profane language is not permitted under any circumstances.
10. Students are not permitted in the department any time other than during clinical.

SUPERVISION OF CLINICAL ACTIVITIES

The designated clinical preceptor of the Clinical Education Center is the primary supervisor for students during clinical training activities. The clinical preceptor and the faculty of Tulsa Community College will schedule student's activities to meet the clinical objectives each semester.

Direct Supervision: Direct supervision assures patient safety and proper educational practices. The JRCERT defines direct supervision as student supervision by a qualified radiographer 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 physically present during the conduct of the procedure.
- Reviews and approves the procedure and/or image.

Students must be directly supervised until competency is achieved, the student may be indirectly supervised based on the following guidelines.

Indirect Supervision: Indirect supervision promotes patient safety and proper educational practices. The JRCERT defines indirect supervision as that supervision provided by a qualified radiographer: immediately available to assist students regardless of the level of student achievement. "Immediately available" is interpreted as the physical presence of a qualified radiographer 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 on patients.

General Policies of Supervision:

1. A student radiographer MAY NOT begin an exam without the appropriate level of supervision.

2. A student radiographer MAY NOT repeat an exam or image without direct supervision available.
3. A student radiographer MAY NOT do portable or surgical radiography without the appropriate level of supervision.
4. Any student performing an imaging procedure without the appropriate level of supervision will be counseled, and any repeated violations will result in dismissal from the Radiography program.
5. A student radiographer cannot be assigned to work as the sole responsible individual under any circumstances.
6. During clinical hours, the R.T. of the student's assigned area oversees the student's activities, and no student is to be out of assigned area without the R.T.'s knowledge and permission, and permission of the clinical preceptor.
7. Students must report to assigned rooms at 7:00am (or applicable starting time) to prepare room for the day's work, and students are expected to participate in all activities taking place in assigned room or area. This may be by observation, assisting, or unassisted performance of exams.
8. Room assignments and rotations will be developed by TCC faculty and clinical preceptor each semester. This schedule will be posted in the department within the first week of the semester.
9. Room assignments and rotations should not be changed without the permission of the clinical preceptor. Students are responsible to report to the clinical preceptor or Program Director any schedule changes that result in excessive time missed in scheduled areas.

STUDENT CLINICAL AREA RESPONSIBILITIES

Responsibilities of all students while in their assigned clinical area:

1. Students are expected to clean and restock supplies of assigned room or any room used by student during the day.
2. Students may be requested to watch patients and to help patients change clothing.
3. Students may be requested to escort or transport a patient to or from the department.
4. Students may be requested to do documentation on patients or assist with department office.
5. Students may be requested to assist in quality control activities.
6. Students may be asked to participate in any function of the Department of Radiology to promote smooth operation of activities.

7. Students should never perform any Radiographic exam without the proper level of supervision.
8. Students may not take doctor's orders. A Registered Technologist must verify any doctor's orders given to a student.
9. TCC recognizes the importance of students learning on the job. Senior students who have student tech jobs **may leave no earlier than** 3p to go to their job-site.

CLINICAL ATTENDANCE & PUNCTUALITY

Students are expected to attend all clinical days. It is the **STUDENT'S** responsibility to notify their clinical instructor **and** clinical preceptor, prior to the start of a clinical day, if they are going to be absent or late. Failure to call in on a clinical day will result in additional points deducted from your clinical grade.

No scheduled appointments are to be made during clinical hours.

Students must clock in and out utilizing the Trajecsys program allowing for location services to be enabled every time they clock in or out. Failure to clock in or out or allowing location services will be considered as an absence.

Students may not clock in and out for another student. Clocking in or out for another student is considered falsification of records which will subject both students to dismissal from the program.

Students are NOT permitted to work as a hospital employee during required clinical and/or class hours. Students cannot receive any compensation (pay) for clinical hours required by the Radiography program.

Students "not on duty" are NOT permitted in the department without permission of the clinical instructor and/or department supervisor.

Clinical Hours: *(30 min. lunch unless otherwise noted)*		
Semester 2 & 3	7:00 AM - 3:30 PM	T Th
Semester 4	7:00 AM - 3:30 PM	M W F
Semester 5 & 6	7:00 AM - 3:30 PM	M W F
Night Rotation: - 2 weeks/semester		
Semester 3	1:00 PM - 9:00 PM	T TH
Semester 4	1:00 PM - 9:00 PM	M W F
Semester 5 & 6	1:00 PM - 9:00 PM	M W F

Hillcrest Claremore Hospital 7:30-4:00 pm

CLINICAL ATTENDANCE POLICY

1. Students will receive 15 points per day for attendance.

2. The total number of attendance points is based on the total number of clinical days required for the semester.

3. Students arriving on time or within 5 minutes of the starting time will receive 15 points for that day.

4. Students arriving more than 5 minutes late but less than 1 hour late, or leave less than 1 hour early, will receive 5 points for that day.

5. Students arriving more than 1 hour late but less than 4 hours late, or leave more than 1 hour early but less than 4 hours early, will receive no points for that day.

6. Students that are absent that have called in will have an additional 15 points deducted from their points for a total of 30 points lost for that day.

7. Students that are absent that have not called in will have an additional 30 points deducted from their points for a total of 45 points lost for that day.

8. Students attending clinical in improper uniform may have 5 points deducted from that day's attendance points or may be sent home and lose all points for that day.

9. Failure of the course will result if 75% of the semesters requirements, as stated in the course syllabus, cannot be completed in the time attended.

10. Any missed time is a missed opportunity; NO clinical hours can be made up to fulfill requirements, unless accommodations under Title IX apply.

CLINICAL MID-TERM AND FINAL EXAMS MUST BE PASSED IN ORDER TO CONTINUE IN THE PROGRAM.

Students that fail the mid-term or final exam will be given one opportunity to repeat the exam as described above in the grading policy .

CLINICAL RECORDS

Students are required to keep a current record on Trajecys of all examinations done during clinical experience.

EXAM RECORDS:

1. **ALL** exams should be marked - Observed, assisted or performed

2. **A REGISTERED RADIOGRAPHER must approve all unassisted examinations and competencies in Trajecys.**

3. ALL examinations **MUST** include date, and type of exam. Students should keep track of competency Accession number separately for review with clinical instructor upon site visit.

4. ALL exams observed, assisted or performed **should** be logged in Trajecys.

5. ALL logs will be periodically checked by the faculty during each semester.

6. **Any falsification of any records will result in dismissal from the Radiography program. No Exceptions.**

STUDENT PROCEDURE NOTEBOOK:

1. A mini Bontrager (spiral bound) will be acquired upon entry into the program. (Sold in Tulsa Community College Bookstore).

2. Student will carry and utilize this book at clinical every clinical day.

CLINICAL EVALUATIONS

The student will be evaluated utilizing a mid-term evaluation and a final evaluation in Trajecsys during each semester as stated in the syllabus.

The grade of final evaluations completed for an evaluation period is averaged with the other evaluations to determine an overall evaluation grade which is calculated to 100 points or 100%.

The evaluation is discussed with the student and becomes part of the clinical grade for that semester.

At the end of the fall semester of the junior and senior year, students will evaluate the Clinical Education Center.

See APPENDIX D – Radiography Clinical Evaluation

COMPETENCY EVALUATIONS

The purpose of the clinical competency is to evaluate the actual performing of skills after classroom theory, laboratory simulation and clinical practice have been accomplished.

To measure the student's ability to perform at a satisfactory level of competency, the American Society of Radiologic Technologists (ASRT) has established a method of evaluation, which has been accepted by the Joint Review Committee on Education in Radiologic Technology. This method has been revised to meet the needs of this program.

The goal is to graduate competent Radiographers for prospective employers. To assure adequate clinical participation, the student must have successfully performed competencies in specific categories related to RADT courses for each semester.

Competencies **MAY NOT BE PERFORMED** until after the student completes classroom theory, laboratory simulation and the classroom exam has successfully been completed. After these requirements are met, the student will be allowed to attempt a competency. The student will participate by observation, assisted and performance of exams in the clinical education center at the same time.

The competency form, and criteria, will be explained to the student in the first semester of clinical training. Before a competency may be attempted the student must have performed the examination unassisted two times under DIRECT supervision. The competency evaluation may be initiated by the student, TCC faculty, or the clinical instructor. Successful completion of the competency indicates student's proficiency for that examination.

The competency evaluation may be completed by Tulsa Community College faculty, clinical preceptors or an R.T. designated by the clinical preceptor to serve as an evaluator. Once a student has successfully passed a competency on any one examination, they must continue to work on completing all of the mandatory and 15 elective competencies from other examinations on the competency list. The student is required to achieve a minimum grade of 85% on any competency or the competency is failed.

Any competency under 85% will not count toward the required competencies for the semester or program completion. If a competency is failed, students must demonstrate competency in the lab with an instructor prior to being allowed to repeat competency. A failed competency should be recorded in Trajecys for record keeping and evaluation of student progress.

All competency exams will be performed according to the clinical site's routine projections and positions for that exam. Fluoroscopic and surgical competencies will be performed according to the clinical site's routine for the exam.

Students will be given a competency checklist, which is a list of ARRT mandatory and elective exams required for graduation. In addition to the 6 General Patient Care competencies, students must demonstrate competency in all 37 of the mandatory Radiologic Procedures, and at least 15 of the 35 elective Radiologic Procedures. One elective procedure from the head section, and 2 elective imaging procedures from the fluoroscopy studies section, one of which must be either an Upper GI or a Barium Enema.

CLINICAL COMPETENCY SEQUENCE

Area:	Activity:
Classroom	Theory
Laboratory	Demonstration and practice
Classroom Examination	Classroom exam completed
Clinical Participation	Observe, assist and perform
Category Competencies	Upon successful completion of Competency, students may perform an exam without direct supervision, but always indirect supervision.
Final Competency	Upon successful completion of the Final Competency, students will perform without direct supervision, but always indirect supervision.

LABORATORY:

Competency evaluations are introduced in the laboratory setting. This will enhance the student's comprehension of the multitude of sub-topics that encompass each major area of the evaluation sheet.

Laboratory competency does not and should not enter into the Category and Final Competency Evaluation system.

CLASSROOM EXAMINATION:

Competencies **MAY NOT BE PERFORMED** until after the student completes classroom theory, laboratory simulation and the classroom exam has successfully been completed.

CLINICAL PARTICIPATION:

Clinical participation consists of the observation, assistance and performance phase of clinical education. The student is perfecting and expanding clinical performance.

Student performance will be evaluated by a required number of unassisted examinations, competencies a mid-term evaluation, and the final evaluation sheet.

In the event a student refuses to do an exam or report to a certain area (i.e. surgery, fluoroscopy or specialty areas), ***or*** *if a student refuses to perform an exam stating to the technologist, they have already comped on an exam, the student may be asked to clock out for the day, losing that day's attendance points. The clinical preceptor should be advised at this juncture and the student is expected to reach out to their clinical instructor upon leaving the clinical site.*

Professionalism:

TCC students are expected to exhibit professionalism in all areas. The programs desire is to graduate students that demonstrate professional behavior in the radiology field and beyond.

CATEGORY COMPETENCIES:

Once the student has successfully completed the laboratory and clinical participation aspects of the required objectives, the student is eligible to request one of several category competencies available.

FINAL COMPETENCY:

Completion of required competencies for graduation. If competency examinations are unavailable, additional clinical hours may be required. Simulations will be considered as a last resort.

COMPETENCY CATEGORIES

Category 1 (Chest & Abdomen)	
Chest, routine	Upper airway (soft tissue neck)
Chest, pediatric 6 or under	Abdomen, supine (KUB)
Chest AP, wheelchair or stretcher	Abdomen, upright (two views)
Chest, lateral decubitus	Abdomen, lateral decubitus (two views)
Chest, Geriatric 65 or older	Abdomen, Pediatric 6 or under
Category 2 (Upper Extremity)	
Finger or thumb	Trauma Shoulder
Hand	Trauma Upper Extremity (Non-Shoulder) *
Wrist	Clavicle
Forearm	Scapula
Elbow	AC Joints
Humerus	Upper or lower Extremity Pediatric 6 or under
Shoulder	Upper or lower Extremity Geriatric 65 or older
Category 3 (Lower Extremity)	
Toes	Femur
Foot	Hip
Ankle	Trauma Hip (x-table lateral) *
Os Calcis	Pelvis
Tibia-Fibula	Trauma Lower Extremity
Knee	Lower or upper Extremity Pediatric 6 or under
Patella	Lower or upper Extremity Geriatric 65 or older
Category 4 (Thorax, Spine)	
Cervical spine	Scoliosis Series
Thoracic Spine	Sacroiliac joints
Lumbar Spine	Ribs
AP & Cross-Table lateral spine	Sternum
Sacrum & or Coccyx	
Category 5 (Head Studies)	
Skull	Orbits
Paranasal sinuses	Mandible

Facial bones	Temporomandibular Joints
Nasal bones	
Category 6 (Contrast Studies)	
Esophagus (not dysphagiagram, swallowing dysfunction study)	Cystogram or Cystourethrography
Upper G.I. Series	Myelogram
Small Bowel Series	Arthrogram
Contrast enema (BE)	Hysterosalpingogram
ERCP	
Category 7 (Mobile Studies/Portables)	
Chest Portable	Upper or lower extremity
Abdomen	Mobile study pediatric 6 or under
Category 8 (Mobil C-Arm Studies)	
C-Arm Manipulation	Surgical C-Arm

** Trauma is considered a serious injury or shock to the body. Modifications may include variations in positioning, minimal movement of the body part, etc.*

REQUIRED COMPETENCIES BY SEMESTER

RADT 1324 2 competencies from Category 1 (chest and abdomen) 1 competency from each of Categories 2 & 3, and 4 from Categories 1 – 3. (8 total) Limit of 12 total.

RADT 1344 1 competency from Categories 4 & 5. And 7 or 8 from Categories 1 – 5. (10 total) Limit of 14 total.

RADT 2312 1 competency from Categories 6 & 7. And 6 or 7 from Categories 1 – 8 (8 total) Limit of 12 total. A category 8 competency C-Arm must be completed by the end of the fall semester.

RADT 2336 1 competency from Category 8 if not done in the summer. And 9 from Categories 1 – 8 (10 total) *No Max* number of competencies.

RADT 2356 All mandatory and elective competencies needed for checklist completion

See APPENDIX E – Radiography Clinical Competency

CLINICAL COMPETENCY CRITERIA

PERFORMANCE EVALUATION OF STUDENT BY REGISTERED TECHNOLOGIST

I. ROOM PREPARATION
Student was able to:

1. Evaluate requisition and identify procedure(s) to perform.
2. Recall and pronounce the patient's name and dob.
3. Identify and assess the mode of patient transportation to the clinical area.
4. Provide a clean and orderly exam room.
5. Prepare the exam table with clean linens and patient gown.
6. Find and prepare all necessary equipment and supplies to perform exam.
7. Make preliminary settings to control panel for exam to be performed.
8. Prepare tube/fluoroscopy equipment for exam.

II. PATIENT/STUDENT RELATIONSHIP
Student was able to:

1. Find and identify the correct patient.
2. Assist the patient to the radiographic room.
3. Give proper instructions to patient to prepare for exam.
4. Assist the patient, if necessary, with clothing and gown.
5. Communicate with patient in a professional manner.
6. Give proper instructions to patient during the exam.
7. Follow proper universal precautions or isolation procedure.

III. POSITIONING SKILLS
Student was able to:

1. Position the patient correctly on the table.
2. Align and center anatomy to be demonstrated to IR.
3. Center central ray to anatomy or IR.
4. Place patient in the correct position (i.e. oblique, lateral, decubitus, etc.)
5. Correctly angle the central ray if necessary.
6. Prevent unnecessary anatomy from showing on the image.

IV. EQUIPMENT MANIPULATION

Student was able to:

1. Turn the X-ray tube to the correct orientation, utilize tube locks
2. Move the bucky tray, or detectors, and lock in position
3. Insert and remove cassettes, if applicable, from bucky tray or spot film device.
4. Use a technique chart and select technical factors at control panel.
5. Measure the patient if necessary.
6. Utilize any positioning aids or special equipment necessary for the exam.
7. Identify the image with anatomic markers and any other necessary markers.
8. Fill syringes using sterile technique, if applicable.
9. Select correct IR size.
10. Adapt equipment use to any unique circumstance that arises during exam.

V. EFFICIENCY OF PROCEDURE

Student was able to:

1. Perform procedure in an orderly manner.
2. Complete procedure in a normal amount of time.
3. Organize actions for efficiency.

IMAGE EVALUATION BY STUDENT WITH REGISTERED TECHNOLOGIST

I. ANATOMICAL PARTS

1. Evaluate image for correct anatomy to be shown.
2. Determine if anatomy is shown in proper perspective.
3. Determine if motion is present.
4. Student should be able to decide if image needs repeating.

II. PROPER ALIGNMENT

1. Determine if part, film, and tube were centered correctly
2. Evaluate image for correct patient positioning.
3. Evaluate image for any distortion due to incorrect alignment.
4. Student should be able to decide if image needs repeating.

III. TECHNIQUE MANIPULATION

1. Use a technique chart and select the proper technical factors.
2. Compensate for pathology, if necessary.
3. Modify technique to achieve a better result.
4. Student should be able to decide if image needs repeating.

IV. FILM IDENTIFICATION

1. Determine if all required film markers are visible.
2. Evaluate image for all vital patient identification.
3. Correct or modify image to include necessary ID.

V. RADIATION PROTECTION

1. Collimation is visible.
2. No repeats.
3. All appropriate shielding was used, where applicable.
4. Central ray is collimated to anatomy of interest.
5. ALARA was practiced during throughout the exam

See APPENDIX F – Clinical Competency Checklist

EARLY CLINICAL RELEASE

Students who demonstrate **outstanding performance** during the Radiography program are eligible to complete the final semester of clinical training at the end of the eighth week of the spring semester if the following conditions are met:

1. No less than a final grade of A in all previous **clinical classes**, and no less than a final grade of B in all didactic classes of the Radiography program.
2. No failed clinical mid-term or final exams during the program.
3. No excessive absences for clinical days. Excessive may be defined as 4 or more absences per clinical semester.
4. Ethical issues: Refusal to perform an exam when asked by a technologist is considered an ethical issue. Students are serving the patients best interest in the clinical scenario and are expected to participate in any exams offered to them. This may be cause for exemption from the early clinical release process.
5. Any student who receives less than an 85% on a clinical evaluation, in any clinical semester will be exempt from the early out process.
6. Student must have completed at least 50 unassisted exams by the end of the eighth week of the last semester.
7. Completion of all mandatory and elective competencies needed for graduation.
8. Extenuating circumstances may be taken into consideration at the faculty's discretion.

Eligible students need to complete the clinical mid-term exam on Monday of the 9th week of the semester, and a final clinical evaluation will be completed for the student to review at that time.

Early completion of clinical training is optional, but any student who qualifies for early release and decides not to take advantage of the opportunity will be graded for the semester according to the criteria outlined in the RADT 2356 syllabus.

Students who complete clinical early are ***required to attend all didactic classes*** and class activities until graduation.

TCC Grievance Policy and Procedures

The Radiography Program follows all Tulsa Community College Grievance Policies and Procedures which can be found here: Report a Concern | Tulsa Community College (tulsacc.edu) and in the Student Handbook which can be found here : Student Handbook

- Any student concerns or complaints should be reported via "Report It" which can be found under the Report a Concern link above or in the link provided in the student's myTCC account.
- From "Report It" complaints are sent to the appropriate specialist for consideration and review.
- All attempts will be made to address and/or resolve student concerns and complaints.

JRCERT STANDARDS

Standards for an Accredited Educational Program in Radiography.
A complete explanation of the standards can be found at: JRCERT Standards - JRCERT

Standard One: Accountability, Fair Practices, and Public Information
The sponsoring institution and program promote accountability and fair practices in relation to students, faculty, and the public. Policies and procedures of the sponsoring institution and program must support the rights of students and faculty, be well-defined, written, and readily available.

Standard Two: Institutional Commitment and Resources
The sponsoring institution demonstrates a sound financial commitment to the program by assuring sufficient academic, fiscal, personnel, and physical resources to achieve the program's mission.

Standard Three: Faculty and Staff
The sponsoring institution provides the program adequate and qualified faculty that enable the program to meet its mission and promote student learning.

Standard Four: Curriculum and Academic Practices
The program's curriculum and academic practices prepare students for professional practice.

Standard Five: Health and Safety
The sponsoring institution and program have policies and procedures that promote the health, safety, and optimal use of radiation for students, patients, and the public.

Standard Six: Programmatic Effectiveness and Assessment: Using Data for Sustained Improvement

The extent of a program's effectiveness is linked to the ability to meet its mission, goals, and student learning outcomes. A systematic, ongoing assessment process provides credible evidence that enables analysis and critical discussions to foster ongoing program improvement.

NON-COMPLIANCE WITH JRCERT STANDARD(S) RESOLUTION PLAN

The Student should first follow the College's and the SOHS due process to its final appeal at https://www.tulsacc.edu/student-resources/report-concern. If the individual is unable to resolve the complaint with program/institution officials or believes that the concerns have not been properly addressed, he or she may submit allegations of non-compliance to the JRCERT:

Chief Executive Officer
Joint Review Committee on Education in Radiologic Technology
20 North Wacker Drive, Suite 2850
Chicago, IL 60606-3182
Ph: (312) 704-5300
Fax: (312) 704-5304
e-mail: mail@jrcert.org

APPENDIX A

Tulsa Community College

SCHOOL OF HEALTH SCIENCES

RADIOGRAPHY PROGRAM COUNSELING FORM

RADIOGRAPHY COUNSELING FORM

Student's Name:

Instructor: Class:

Date of Incident:

INSTRUCTOR'S COMMENTS:

ACTION PLAN:

_____

Instructor Signature

_____

Date and Time

STUDENT'S COMMENTS:

_____

_____

_____

_____

_____

Student's Signature

_____

Date and Time

_____

Witness Signature

APPENDIX B

Tulsa Community College
SCHOOL OF HEALTH SCIENCES
RADIOGRAPHY PROGRAM INCIDENT REPORT FORM

Student Name: _____**TCCID#:**_____

Incident Date: _____ Incident Time: _____

Location of Incident:_____

Date Incident Reported: _____

Incident Witness: _____

OBJECT/SUBSTANCE (IF ANY) CAUSING INJURY OR ILLNESS:

_____

CLEARLY DESCRIBE WHAT STUDENT WAS DOING AND HOW INCIDENT OCCURRED:

_____

_____

_____

_____

WHAT ACTION OR OMISSION AND/OR WHAT CONDITIONS CAUSED INCIDENT:

_____

_____

_____

WHAT ACTION WAS TAKEN AS A RESULT OF THE INCIDENT:

_____

_____

Instructor: _____ Date: _____

APPENDIX C

Tulsa Community College

SCHOOL OF HEALTH SCIENCES

PREGNANCY AND CLINICAL EXPOSURE TO RADIATION

Student Name: _____ **TCCID#:**_____

You should know excessive exposure of your fetus to radiation may have a deleterious effect on your child. The two predominate effects of fetal irradiation are birth defects (principally small brain size and/or mental retardation) and an increase in the risk of getting childhood cancers.

The chance of either of these effects occurring is dependent upon the total dose received and the rate at which it is received. Large single exposures are more likely to have an effect than small exposures or exposures spread out over a longer time.

Single exposures of 5-10 rems to the fetus have been shown to produce in some children a small but measurable decrease in the size of the head (brain size). For this reason, the National Council on Radiation Protection and Measurements recommends that the fetus be exposed to no more than 500 m/rems of radiation during the term of the pregnancy. This is considered an acceptable level of exposure since it is a factor of 10 less than the lowest exposure known to have an effect and would be protracted exposure rather than a single exposure. A child exposed to radiation before birth may have a higher chance of getting one of the rare childhood cancers. The available data concerning this are confusing and contradictory. For an exposure of 500 mrems some investigators feel there will be no increased risk of childhood cancer while others feel that there could be a 50% increase in risk.

At Tulsa Community College we want to keep everybody's (including a fetus) exposure as low as possible, in many cases significantly below 500 mrems per year. For pregnant students working in diagnostic radiology, fetal exposure will only be about 2% of maternal film badge readings due to the absorption of radiation by the lead apron and the mother's body.

Your film badge exposure for the past _____months has been _____mrems for an

average of _____m/rems per month. Based upon this history and assuming you wear

a leaded apron anytime you might be exposed to radiation we would estimate your fetus'

exposure will be _____mrems for 9 months.

I, _____, have discussed the above information with my Clinical Coordinator and the Radiation Safety Officer. I understand all the information I have been given. I agree to wear a leaded apron at any time that I might be exposed to radiation and further understand that I will be terminated or put on a leave of absence if I fail to do so.

Student Signature:

_____Date:_____

Clinical Coordinator: _____ Date: _____

Radiation Safety Officer: _____ Date: _____

APPENDIX D

SCHOOL OF HEALTH SCIENCES

Radiography Clinical Evaluation- Trajecys

STUDENT:	DATE:	to:	GRADE:
CLINICAL EDUCATION CENTER:			PARTIAL DAYS:
UNASSISTEDS:	COMPETENCIES:	ABSENCES:	PERSONAL DAYS:

	3	3.5	4	4.5	5
Patient Care	No Communication Indifferent to patient needs.	Minimal communication Requires assistance meeting patient needs	Acceptable communication. Attends to basic patient needs.	Communicates well. Usually attentive and compassionate to patient needs	Superior communication, attention & compassion to patient
Quantity / Initiative	Unacceptable amount of assigned work completed for student at this level.	Insufficient amount of assigned work expected of a student at this Level.	Performs assigned work expected of a Student at this level	Performs more work and additional tasks than most Students at this level.	Superior productivity for a student. Consistently does additional tasks
Organizational Skills	Confused. Requires constant Supervision.	Occasional disorder. Requires close supervision.	Basically, prepared for A student at this Level.	Good. Work flows smoothly. Needs Minimal Supervision.	Superior . Coordinates tasks efficiently. Supervision available when needed.
Quality of Work	Unacceptable performance. Skills must be improved to acceptable level.	Frequent errors. Work must often be corrected. Needs improvement.	Satisfactory performance for a student at this level.	Good performance for a student at this level. Rarely makes mistakes.	Superior performance for a student at this level. Consistently accurate results.
Ability to Follow Directions	Instructions must be repeated frequently.	Hesitant to respond to instructions.	Follows directions in an acceptable manner.	Able to follow all directions with little difficulty.	Minimal explanation needed to complete new procedures or tasks accurately.
Self Confidence	Consistently unwilling to participate.	Lacks self-confidence. Hesitant to participate.	Normal amount of self-confidence. Usually participates with assistance.	Self-assured. Sometimes asks for assistance.	Superior self-reliance in their ability to perform tasks with minimal supervision.
Cooperation Team Participation	Unacceptable. Needs constant prodding to participate.	Passive attitude toward work and fellow workers. Needs improvement.	Acceptable attitude towards work and fellow workers	Very good. Works well with a variety of people.	Excellent rapport. Willingly assists with all department tasks.
Attitude Toward Criticism	Rejects, and becomes defensive of all criticism.	Slightly defensive. Does not view criticism in a positive or constructive manner.	Accepts, but does not always utilize criticism.	Accepts and responds to criticism. Utilizes it frequently to improve performance	Accepts and responds to criticism in positive manner. Uses it to Improve performance.
Professional Appearance	Uniform and/or grooming is unacceptable.	Frequently not in uniform or well groomed. Needs improvement.	Occasionally not in uniform or well groomed.	Usually in proper uniform, and well groomed.	Always in proper uniform, and well groomed.
Current Progress	Inadequate development of skills.	Retention and application of skills needs improvement.	Satisfactory retention and application of skills.	Usually retains and applies skills well.	Superior retention and application of skills.

Evaluator Comments:

_____

_____

Evaluator Signature: _____ Date: _____

Student Comments_____

Student Signature: _____ Date: _____

APPENDIX E

RADIOGRAPHY CLINICAL COMPETENCY -TRAJECSYS

TULSA COMMUNITY COLLEGE

Radiography Clinical Competency

A#_____

Class exam completion date: _____

Student: _____Date:_____

Evaluator Signature: _____Print Name_____

Type of Examination: _____ Percentage: _____

Degree of Patient Difficulty: Average ___ Moderate ___ Extreme ___

Unassisted Dates: 1. _____ 2._____

POSITION/PROJECTION ⇒	***A.***				***B.***				***C.***			
TECHNIQUE SET FOR EACH PROJECTION ⇨	**kVp**	**mAs**	**Grid**	**Notes**	**kVp**	**mAs**	**Grid**	**Notes**	**kVp**	**mAs**	**Grid**	**Notes**
PERFORMANCE EVALUATION OF STUDENT BY REGISTERED TECHNOLOGIST												
	A.				***B.***				***C.***			
RATING ⇒	**0**	**1**	**2**	**3**	**0**	**1**	**2**	**3**	**0**	**1**	**2**	**3**
1. Room Preparation												
2. Patient/Student Relationship												
3. Positioning Skills												
4. Equipment Manipulation												
5. Efficiency of Procedure												
IMAGE EVALUATION BY STUDENT WITH REGISTERED TECHNOLOGIST												
	A.				***B.***				***C.***			
6. Anatomical Part(s)												
7. Proper Alignment												
8. Technique Manipulation												
9. Film Identification												
10. Radiation Protection												
TOTAL												

COMMENTS: Please list comments by number and view. **Example: 2-A, 7-B, 4-C**

_____

_____

Competency Grading

The Competency Evaluation has been designed for student technologist evaluation by a registered technologist. Each competency exam requires a separate competency evaluation form. Performance and image evaluation standards are on the back of the form.

0 = Unacceptable **1 =** Requires major improvement **2 =** Requires minor improvement **3 =** Acceptable

NOTE: All completed competency forms must be turned in to Tulsa Community College

Revised 8/17/2021

CLINICAL COMPETENCY CRITERIA

PERFORMANCE EVALUATION OF STUDENT BY REGISTERED TECHNOLOGIST

- **ROOM PREPARATION**

  Student was able to:

  1. Evaluate requisition and identify procedure(s) to perform.
  2. Recall and pronounce the patient's name and age.
  3. Identify the mode of patient transportation to the clinical area.
  4. Provide a clean and orderly exam room.
  5. Prepare the exam table with clean linens and patient gown.
  6. Find and prepare all necessary equipment and supplies to perform exam.
  7. Make preliminary settings to control panel for exam to be performed.
  8. Prepare tube/fluoroscopy equipment for exam.

- **PATIENT/STUDENT RELATIONSHIP**

  Student was able to:

  1. Find and identify the correct patient.
  2. Assist the patient to the radiographic room.
  3. Give proper instructions to patient to prepare for exam.
  4. Assist the patient, if necessary, with clothing and gown.
  5. Communicate with patient in a professional manner.
  6. Give proper instructions to patient during the exam.
  7. Follow proper universal precautions or isolation procedure.

- **POSITIONING SKILLS**

  Student was able to:

  1. Position the patient correctly on the table.
  2. Align and center anatomy to be demonstrated to IR.
  3. Center central ray to anatomy or IR.
  4. Place patient in the correct position (i.e. oblique, lateral, decubitus, etc.)
  5. Correctly angle the central ray if necessary.
  6. Prevent unnecessary anatomy from showing on the image.

- **EQUIPMENT MANIPULATION**

  Student was able to:

  1. Turn the X-ray tube to the correct orientation, utilize tube locks
  2. Move the bucky tray, or detectors, and lock in position
  3. Insert and remove cassettes, if applicable, from bucky tray or spot film device.
  4. Use a technique chart and select technical factors at control panel.
  5. Measure the patient if necessary.
  6. Utilize any positioning aids or special equipment necessary for the exam.
  7. Identify the image with anatomic markers and any other necessary markers.
  8. Fill syringes using sterile technique, if applicable.
  9. Select correct IR size.
  10. Adapt equipment use to any unique circumstance that arises during exam.

- **EFFICIENCY OF PROCEDURE**

  Student was able to:

  1. Perform procedure in an orderly manner.
  2. Complete procedure in a normal amount of time.
  3. Organize actions for efficiency.

IMAGE EVALUATION BY STUDENT WITH REGISTERED TECHNOLOGIST

- **ANATOMICAL PARTS**

  1. Evaluate image for correct anatomy to be shown.
  2. Determine if anatomy is shown in proper perspective.

3. Determine if motion is present.
4. Student should be able to decide if image needs repeating.

- **PROPER ALIGNMENT**
  1. Determine if part, film, and tube were centered correctly
  2. Evaluate image for correct patient positioning.
  3. Evaluate image for any distortion due to incorrect alignment.
  4. Student should be able to decide if image needs repeating.
- **TECHNIQUE MANIPULATION**
  1. Use a technique chart and select the proper technical factors.
  2. Compensate for pathology, if necessary.
  3. Modify technique to achieve a better result.
  4. Student should be able to decide if image needs repeating.
- **FILM IDENTIFICATION**
  1. Determine if all required film markers are visible.
  2. Evaluate image for all vital patient identification.
  3. Correct or modify image to include necessary ID.
- **RADIATION PROTECTION**
  1. Collimation is visible.
  2. No repeats.
  3. All appropriate shielding was used.
  4. Central ray is collimated to anatomy of interest.
  5. ALARA was practiced during the exam
  6. Student followed the cardinal principles of radiation protection: time, distance, and shielding.

APPENDIX F
CLINICAL COMPETENCY CHECKLIST- Trajecys

Student:

RADIOLOGIC PROCEDURE **(M) MANDATORY** **(E) ELECTIVE**

Chest & Thorax		**Unassisted #1 Date:**	**Unassisted #2 Date:**	**Comp Date:**
Chest Routine	**M**			
Chest AP (wheelchair or stretcher)	**M**			
Ribs	**M**			
Chest Lat. Decubitus	**E**			
Sternum	**E**			
Upper Airway(soft tissue neck)	**E**			
Sternoclavicular Joints	**E**			
Upper Extremity				
Thumb or Finger	**M**			
Hand	**M**			
Wrist	**M**			
Forearm	**M**			
Elbow	**M**			
Humerus	**M**			
Shoulder	**M**			
Trauma Shoulder * (AP plus Scapular Y, Transthoracic or Axillary)	**M**			
Trauma Upper Ext. * (non-shoulder)	**M**			
Clavicle	**M**			
Scapula	**E**			
AC Joints	**E**			
Lower Extremity				
Tibia-Fibula	**M**			
Foot	**M**			
Ankle	**M**			
Knee	**M**			
Femur	**M**			
Trauma Lower Ext. *	**M**			
Patella	**E**			
Calcaneus (Os Calcis)	**E**			
Toes	**E**			
* Trauma requires modifications in positioning due to injury with monitoring of the patient's condition				
Head				
Skull	**E**			
Paranasal Sinuses	**E**			
Facial Bones	**E**			
Orbits	**E**			
Nasal Bones	**E**			
Mandible	**E**			
Temporomandibular jts.	**E**			

SPINE &PELVIS		Unassisted #1 Date:	Unassisted #2 Date:	Comp Date:
Cervical Spine	M			
Thoracic Spine	M			
Lumbar Spine	M			
Cross Table (horizontal beam) Lat. Spine (patient recumbent)	M			
Pelvis	M			
Hip	M			
Cross Table (horizontal beam) Lat. Hip (patient recumbent)	M			
Sacrum and/or Coccyx	E			
Scoliosis Series	E			
Sacroiliac Joints	E			
Abdomen				
Abdomen Supine (KUB)	M			
Abdomen Upright	M			
Abdomen Decubitus	E			
Intravenous Urography	E			
Fluoroscopy Studies				
Upper GI Series	E			
Contrast Enema- BE	E			
Small Bowel Series	E			
Esophagus (NOT a swallowing dysfunction study)	E			
Cystography or Cystourethrography	E			
ERCP	E			
Myelography	E			
Arthrography	E			
Hysterosalpingography	E			
Mobile C-Arm Studies				
C-Arm Manipulation (Requiring Manipulation to obtain more than one projection)	M			
Surgical C-Arm (Requiring Manipulation around a sterile field)	M			
Mobile Studies				
Chest	M			
Abdomen	M			
Upper or Lower Extremity	M			
Pediatrics (age 6 or less)				
Chest (routine)	M			
Upper or Lower Extremity	E			
Abdomen	E			
Mobile Study	E			
Geriatrics (Age 65 or older physically or cognitively impaired as a result of aging)				
Chest (routine)	M			
Upper or Lower Extremity	M			
Hip or Spine	M			

General Patient Care

	Date Completed	Verified By
CPR Certified		
Vital Signs – Blood Pressure		
Vital Signs – Temperature		
Vital Signs – Pulse		
Vital Signs – Respiration		
Vital Signs – Pulse Oximetry		
Sterile and Medical Aseptic Technique		
Venipuncture		
Transfer of Patient		
Care of Patient Medical Equipment **(e.g., oxygen tank, IV tubing, etc.)**		

*Trauma is considered a serious injury or shock to the body. Modifications may include variations in positioning, minimal movement of the body part, etc.

Competency Requirements

- Candidates must demonstrate competence in all six (10) General Patient Care activities.
- Candidates must demonstrate competence in all 37 procedures identified as mandatory (M) Radiologic Procedures.
- Candidates must demonstrate competence in 15 of the 34 procedures identified as elective (E) Radiologic Procedures. One elective procedure must come from the head section and either Upper GI or Contrast Enema, plus one other elective, from the fluoroscopy section.

Institutional protocol will determine the positions or projections used for each procedure