



**Associate in Applied Science,
RADIOGRAPHY**

**STUDENT HANDBOOK
2022-2023**

Updated 6/30/22

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WELCOME!

Welcome to the Radiography Program at Stanly Community College! You have chosen a very exciting, challenging, and rewarding profession. In your course of study, we hope to provide you with the skill, knowledge, and attitude to deliver quality patient care as a valuable member of the health care team. Working and learning together over the next two years should be an exciting and rewarding experience. We look forward to working with you on your way to success!

The purpose of this handbook is to share information concerning policies, procedures, and requirements to successfully complete this program. Radiography students are expected to abide by all policies outlined in the handbook. Failure to do so may result in disciplinary action and/or dismissal from the program. If you have questions concerning any specific policy or procedure, please contact any member of the Radiography Program faculty.

College and Program Officials:

College President.....Dr. John Enamait
Chief Academic Officer.....Jeff Parsons
Associate Vice President of Health Sciences and Public Services.....Christie Honeycutt
Radiography Program Director.....Tiffany Barbee
Radiography Director of Clinical Education.....Lindsey Hall

Adjunct Clinical/Didactic Faculty:

Trena Honeycutt, RT(R)(ARRT)
Kylie Rollings, RT(R)(ARRT)
Jessica Haynes Velez, RT(R)(ARRT)
Avery Joey Wittman, RT(R)(MR)(CT)(ARRT)

Radiography Program Advisory Committee:

Program advisory committees assist SCC in establishing and maintaining up-to-date educational programs. Changes in business, industry, and government have increased the need for effective communication between education and community. An advisory committee of interested, competent, and concerned citizens is the most productive and effective method for involving the community in education; it is a vital link between the college and the community. Specifically, the Radiography Program Advisory Committee is composed of distinguished members of our clinical affiliates whose charge is to review the program and address any concerns and/or recommend changes.

ARRT Certification Exam:

Upon successful completion of the Radiography Program, students are eligible to apply to take the American Registry of Radiologic Technologists certification exam. Applications are submitted to the ARRT during the last semester of study. Graduation from the Radiography Program does not guarantee that a student will be permitted to sit for the exam; applicants must successfully complete an ethics review conducted by the ARRT. The ARRT provides students three attempts within a three-year time period to complete the certification exam. Fees are associated with this process. For more information, visit www.arrt.org.

Radiography Program Faculty:

Program Director: Tiffany Barbee, M.Ed., R.T.(R)(M)(CT)(ARRT)
Crutchfield Campus, Office 216A
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Email: tbarbee9080@stanly.edu

Director of Clinical Education: Lindsey Hall, R.T.(R)ARRT
Crutchfield Campus, Office 216B
Telephone: (704) 991-0113
Email: lhall9574@stanly.edu

Other Points of Contact:

Associate Vice President of Health Sciences and Public Services: Christie Honeycutt
Telephone: 704-991-0295
Email: choneycutt7476@stanly.edu

Director of Admissions: Heather Burnette
Telephone: 704-991-0215
Email: hburnette9430@stanly.edu

Dean of Financial Aid Management: Petra Fields
Telephone: 704-991-0231
Email: pfields7679@stanly.edu

Success Coach (Allied Health): Melanie Alexander
Telephone: 704-991-0166
Email: malexander0134@stanly.edu

Student Resources Center (Crutchfield Education Center) Coordinator: Debbie Utley
Telephone: 704-991-0320
Email: dutley4203@stanly.edu

Director of Counseling and Special Services: Tracie Carpenter
Telephone: 704-991-0189
Email: tcarpenter6341@stanly.edu

Stanly Community College
Radiography Program Mission Statement

The Radiography program at Stanly Community College provides a quality and diverse education in medical imaging which will prepare graduates to function as entry-level radiographers certified by the American Registry of Radiologic Technologists. This five-semester, competency-based program is designed to provide students with the knowledge and skills necessary to provide quality radiographic care in the use of ionizing radiation to produce images of the human body.

Accreditation

The Radiography Program is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT).

JRCERT Standards

JRCERT standards for accreditation of radiography programs are located on the SCC radiography webpage at www.stanly.edu and on the JRCERT website at www.JRCERT.org. If a student feels the Radiography Program at Stanly Community College is not in compliance with the standards set forth by the JRCERT, the student has the right to pursue allegations of non-compliance. The student should first report the allegations to the appropriate college personnel. If the allegations are not resolved, the student may follow the appropriate procedures for reporting non-compliance to the JRCERT. This procedure is located on the JRCERT website at www.JRCERT.org.

The Joint Review Committee on Education in Radiologic Technology
20 North Wacker Drive, Suite 2850
Chicago, Illinois 60606-3182
312-704-5300
mail@jrcert.org

Radiography Program Philosophy

Our role as educators in Radiography is to prepare students to serve the total needs of the patient while in the Radiology Department. We strive to enrich the student's mind, body, and spirit.

We feel the cognitive objectives are achieved best through a strong academic background. Good affective behavior is effectively learned by integrating classroom instruction with exemplary attitudes of the entire staff. The psychomotor skills, which are the most distinguishing characteristics of a skilled Radiologic Technologist, are best learned through varied and sufficient clinical practice. This natural learning experience incorporates every aspect of technology needed to develop expertise. We also feel that clinical practice by students should not be used as a substitute for qualified technologists performing examinations. Clinical practice properly used as a learning experience requires professional staffing to supervise the student through the following phases:

- 1) Explanation
- 2) Demonstration
- 3) Participation
- 4) Evaluation

We are committed to providing the highest level of radiologic technology education. We are willing to give our best efforts. In return, we expect all students to perform at their peak efficiency.

The Radiography Program is committed to rigid discipline. We are flexible when it proves progressive, but rigidly retain proven principles and practices, in order to produce highly skilled professional technologists.

Our graduate technologists serve as the best gauge of the worth of our philosophy. It is never easy for us to maintain our philosophy through changing social and educational changes. Neither is it easy for students to fulfill the role they play in our philosophy. However, their favorable attitude and successful practice as professional technologists are proof that our thoughts and beliefs are demanding, though prudent. This program offers an education in living as well as learning.

Radiography Program Overview

The Radiography curriculum offers career education for radiographers who specialize in the application of scientific knowledge and theory to use radiation to produce images of the human body. Knowledge and skills for performing these functions are usually achieved through two or more years of academic and clinical preparation.

Acceptance and continuation in this program are contingent upon acceptance by the clinical facility for practicum training. If a student does not appear to be in good physical or mental health, as evidenced by his or her performance or behavior in the clinical practicum, the faculty can request a physical examination and a written report from a physician.

The Radiology Department of Atrium Health-Union, Atrium Health-Stanly, Atrium Health-Anson, and FirstHealth Montgomery Memorial Hospital offer the necessary clinical education. Physician offices and orthopedic clinics are also used as clinical sites for the program. During the two years of training, the program provides approximately 1,200 hours of clinical education. It is planned to include routine and emergency radiographic procedures and may be scheduled during weekdays and weekends on first and evening shifts during both years. The student will also have the opportunity to observe other modalities within the Radiology Department. The Radiography Curriculum at Stanly Community College consists of 40 hours or less each week.

Each student must purchase liability insurance through Stanly Community College when registering for classes for each year of the program.

Upon completion of all required course work, the student will be awarded an Associate in Applied Science Degree in Radiography. Graduates of the Radiography Program are eligible to apply to take the American Registry of Radiologic Technology (Radiography) examination. Graduates may seek employment in a hospital Radiology Department, minor emergency facility, clinic, private office, industry, and college.

**Outcomes Assessment Plan
Stanly Community College – Radiography
August 2022 – July 2023**

Mission Statement: The Radiography program at Stanly Community College provides a quality and diverse education in medical imaging which will prepare graduates to function as entry-level radiographers certified by the American Registry of Radiologic Technologists. This five-semester, competency-based program is designed to provide students with the knowledge and skills necessary to provide quality radiographic care in the use of ionizing radiation to produce images of the human body.

Goal 1: Students will be clinically competent.				
Outcome	Measurement Tool	Benchmark	Timeframe	Responsible Party
Students will position patients.	1. RAD 151: End-of-semester Clinical Evaluation (Positioning Section)	1. Average score ≥ 16 (20 point scale)	1. Semester 1	1. Director of Clinical Education Clinical Instructor Clinical Staff
	2. RAD 251: End-of-semester Clinical Evaluation (Positioning Section)	2. Average score ≥ 16 (20 point scale)	2. Semester 4	2. Director of Clinical Education Clinical Instructor Clinical Staff
Students will select appropriate technical factors.	1. RAD 151: End-of-semester Clinical Evaluation (Technical Factors Section)	1. Average score ≥ 12.5 (15 point scale)	1. Semester 1	1. Director of Clinical Education Clinical Instructor Course Instructor
	2. RAD 121: Exposure Factor Selection Activity	2. Average score of 85% or higher	2. Semester 2	2. Course Instructor
	3. RAD 251: End-of-semester Clinic Evaluation (Technical Factors Section)	3. Average score ≥ 12.5 (15 point scale)	3. Semester 4	3. Director of Clinical Education Clinical Instructor Clinical Staff

Goal 2: Students will demonstrate communication skills.				
Outcome	Measurement Tool	Benchmark	Timeframe	Responsible Party
Students will use effective oral communication skills.	<ol style="list-style-type: none"> 1. RAD 161: End-of-semester Clinical Evaluation (Communication Section) 2. RAD 261 End-of-semester Clinical Evaluation (Communication Section) 3. RAD 271: Pathology Profile Project (Oral Component) 	<ol style="list-style-type: none"> 1. Average score ≥ 12.5 (15 point scale) 2. Average score 12.5 (15 point scale) 3. Average score of 85% or higher 	<ol style="list-style-type: none"> 1. Semester 2 2. Semester 5 3. Semester 5 	<ol style="list-style-type: none"> 1. Director of Clinical Education Clinical Instructor Clinical Staff 2. Director of Clinical Education Clinical Instructor Clinical Staff 3. Course Instructor
Students will practice effective written communication skills.	<ol style="list-style-type: none"> 1. RAD 151: Reflection Paper - "Back to the Basics" Article (Scoring Rubric for Written Assignments) 2. RAD 271: Pathology Profile Project (Scoring Rubric for Written Assignments) 	<ol style="list-style-type: none"> 1. Average score of 85% or higher 2. Average score of 85% or higher 	<ol style="list-style-type: none"> 1. Semester 1 2. Semester 5 	<ol style="list-style-type: none"> 1. Director of Clinical Education 2. Course Instructor
Goal 3: Students will develop critical thinking skills.				
Outcome	Measurement Tool	Benchmark	Timeframe	Responsible Party
Students will be able to modify positioning for non-routine (trauma) patients.	<ol style="list-style-type: none"> 1. RAD 112: Trauma Laboratory Exam 2. Cross-table Hip Competency Exam (Positioning Section) 	<ol style="list-style-type: none"> 1. Average score of 85% or higher 2. Average score ≥ 13 (16 point scale) 	<ol style="list-style-type: none"> 1. Semester 2 2. Semester 2, 3, 4, or 5 	<ol style="list-style-type: none"> 1. Course Instructor 2. Director of Clinical Education Clinical Instructor Clinical Staff

Students will analyze images.	1. RAD 151: Image Critique II Assignment 2. RAD 251: Image Critique II Assignment	1. Average score of 85% or higher 2. Average score of 85% or higher	1. Semester 1 2. Semester 4	1. Director of Clinical Education 2. Director of Clinical Education
Goal 4: Students will model professionalism.				
Outcome	Measurement Tool	Benchmark	Timeframe	Responsible Party
Students will understand professional behaviors.	1. RAD 110: Module 1 Exam, Essay 1 (question 71 on exam) 2. Employer Survey, question #7	1. Average score of 8 (of 10 points) 2. Employers will indicate satisfaction in this area. (scale = satisfied or dissatisfied)	1. Semester 1 2. 12 months after graduation	1. Course Instructor 2. Program Director
Students will understand ethical behaviors.	1. RAD 110: Module 1 Exam, Essay 3 (question 73) 2. RAD 141: Module 1 Exam, Essay 1 (question 51)	1. Average score of 8.0 (of 10 points) 2. Average score of 8.5 (of 10 points)	1. Semester 1 2. Semester 3	1. Course Instructor 2. Course Instructor
Goal 5: Program Effectiveness				
Outcome	Measurement Tool	Benchmark	Timeframe	Responsible Party
Students who enroll in the program will complete the program.	Enrollment and Graduation Report	60% of students will successfully complete the program Entry date: First day of semester	End of Program (May)	Radiography Faculty

Graduates will pass the national registry on the first attempt.	ARRT Examination Pass Rate Reports	75% of students will pass the ARRT national registry on the first attempt (5-year average)	December	Program Director
Graduates will find employment as a radiographer.	Graduate Survey	75% of graduates actively seeking employment will be employed within 12 months	May-June	Program Director
Graduates will be satisfied with quality of their radiography education.	Graduate Survey	All graduates will be satisfied with the quality of their radiography education. Benchmark: 4 of 5	May-June	Program Director
Employers will be satisfied with the performance of the program's graduates.	Employer Survey	All employers will be satisfied with the performance of the program's graduates (scale = satisfied or dissatisfied)	May-June	Program Director

Radiography Curriculum
Provided by the North Carolina Community College System

		Contact Hours (per week)	Credit Hours
<u>Fall Semester (First Year)</u>			
BIO 163	Basic Anatomy and Physiology	6	5
MAT 143	Quantitative Literacy	4	3
RAD 110	Radiography Intro. & Patient Care	5	3
RAD 111	Radiographic Procedures I	6	4
RAD 151	Radiography Clinical Education I	<u>6</u>	<u>2</u>
	Total:	27	17
<u>Spring Semester (First Year)</u>			
CIS 110	Introduction to Computers	4	3
PSY 150	General Psychology	3	3
RAD 112	Radiographic Procedures II	6	4
RAD 121	Image Production I	5	3
RAD 161	Radiography Clinical Education II	<u>15</u>	<u>5</u>
	Total:	33	18
<u>Summer Semester (First Year)</u>			
RAD 122	Image Production II	4	2
RAD 141	Radiation Safety	2	2
RAD 171	Radiography Clinical Education III	<u>9</u>	<u>3</u>
	Total:	15	7
<u>Fall Semester (Second Year)</u>			
ENG 111	Expository Writing	3	3
RAD 211	Radiographic Procedures III	5	3
RAD 231	Image Production III	4	2
RAD 251	Radiography Clinical Education IV	<u>21</u>	<u>7</u>
	Total:	33	15
<u>Spring Semester (Second Year)</u>			
ENG 112	Writing/Research in the Disc.	3	3
or			
ENG 114	Professional Research & Reporting	3	3
RAD 261	Radiography Clinical Education V	21	7
RAD 271	Radiography Capstone	5	3
	Humanities Elective	<u>3</u>	<u>3</u>
	Total:	35	16
Total Program Credit Hours			73

Criteria for Progression:

1. All Radiography courses must be taken and passed in sequence as offered in the curriculum. General education courses may be taken prior to any semester offered upon advisors' approval.

The grading scale for Radiography courses is:

A = 100 – 93	Excellent
B = 92 – 86	Good
C = 85 – 78	Average
F = Below 78	Failing
S = Satisfactory	Passing
U= Unsatisfactory	Failing

Students must earn a 78 or higher on the final exam in all Radiography courses to progress in the program. All students must make a minimum grade of "C" or "S" in all Radiography courses and Radiography-related courses within the Radiography curriculum to progress in the Radiography Program. Students earning less than a "C" in these courses or a grade of "U" in a clinical course will result in automatic dismissal from the program. Students will receive their final grades through WebAdvisor. Access to WebAdvisor is provided at www.stanly.edu.

2. In the event that a student's physical or mental health interferes with the student's academic and/or clinical performance, the Radiography faculty may require the student to submit written verification of current health from an appropriate health care provider (i.e., physician, nurse practitioner, physician assistant, psychiatrists, or psychologist). Upon consultation with the Associate Dean of the Health Services Division and review of professional statement of health submitted by the student, the Associate Dean of Students will render a decision as to whether the student will be allowed to continue in the program. The Associate Dean of Students will notify the student in writing of the decision.
3. In the event that a student's behavior is not consistent with the sound radiography practices and/or safety essential to Radiography, the instructors or the Associate Dean of the Health Services Division has the authority to remove the student immediately. Students so removed will be referred to the Associate Dean of Students for further investigation and/or possible dismissal from the Radiography Program.
4. Students should be aware that clinical affiliates require that students submit an acceptable criminal record check and/or drug screening prior to participation in a clinical component at that site. Students are responsible for paying any costs associated with meeting these clinical site requirements. Progression toward graduation may be jeopardized by any inability to complete the clinical portion of the Radiography Program.

Readmission or Admission in Advance Standing:

(This procedure also applies to applicants transferring from other Radiography programs to SCC's Radiography program.)

Students seeking readmission to Radiography (RAD) program must submit an application for readmission to the SCC Admissions Office and satisfy the program's initial admission requirements. Students will be permitted to reenter the Radiography program no more than once.

Readmission to the Radiography program will be on a space available basis. To qualify for readmission, an applicant must submit a properly completed application for admission no later than 90 days preceding their intended start date. Applicants from other institutions must complete the placement test, NC DAP or Accuplacer, scoring the minimums indicated for admission to the RAD Program. (Applicants who are unable to score the minimums on NC DAP or Accuplacer may complete the general education courses required in the RAD Program and subsequently be considered for admission). Only those students whose GPA in their major is 2.5 or higher at the time of readmission to the RAD Program will be considered for readmission. A student's GPA in their major will include only Radiography and Radiography related courses completed, either successfully or unsuccessfully, up to the point of readmission.

Specifically for students formerly enrolled in the RAD program at SCC and are returning within 2 years:

Students seeking readmission, who were formerly enrolled in the RAD Program at Stanly Community College and wish to reenter within two years after exiting the program, must reenter the semester immediately following their last successful semester. All Radiography and general education courses required in the semesters preceding the intended point of reentry must be satisfactorily completed. Students who do not successfully complete the first semester of the program and are seeking readmission will be competing for acceptance in the fall term along with incoming freshmen.

Students who enter SCC's RAD Program within two years of withdrawing from a RAD Program will be required to: (1) successfully complete a written competency exam for each Radiography course completed prior to withdrawal, and (2) successfully complete selected lab competencies administered by the SCC Radiography department. Students should contact the Radiography Program Director well in advance of re-entering in order to arrange for competency testing. Students only have one attempt to successfully pass the written competency exam and lab competencies. If a student does not successfully pass the written competency exam or lab competency exam on the first attempt, the student is ineligible for return to the program for admission.

Specifically for students formerly enrolled in the RAD program at SCC and are returning after 2 years:

Students who enter SCC's Radiography program after having withdrawn from a Radiography program more than two years earlier will enroll in the first semester of the program.

Specifically for students formerly enrolled in a RAD program at another institution and attempting to enter SCC's RAD program:

Applicants who have completed Radiography courses at institutions other than Stanly Community College must provide the Radiography Program Director with a complete transcript of credits earned at the other institution and a syllabus for each RAD course completed. The Radiography Program Director will review these documents and determine the appropriate beginning point for the applicant. Students wishing to transfer into SCC's RAD program must (1) successfully complete a written competency exam covering all SCC courses the student has received transfer credit for, and (2) successfully complete selected lab competencies administered by the SCC Radiography department. This is in addition to the general admission requirements for the RAD program. Students should contact the Radiography Program Director well in advance of the entering semester to arrange for competency testing. Students only have one attempt to successfully pass the written competency exam and lab competencies. If a student does not successfully pass the exam or lab competencies on the first attempt, the student is ineligible for transfer into the program.

Radiography Program General Policies

Classroom Rules:

Each student is required to have the following items in class and lab: student ID badge, personal radiation badge, iPad device, x-ray markers, a calculator, and a pencil. Students who do not have these items may be issued an unsatisfactory rating.

Course Syllabi:

A detailed course syllabus will be available in Canvas for each course in the Radiography curriculum at the beginning of the respective semester. Students are expected to read and acknowledge the syllabus by signing a receipt.

Honor Code:

It is understood that the material submitted for evaluation in this course will be that of the student submitting it and will be original work. Failure to abide by this policy will result in a zero on the examination or assignment during which the incident occurred and may result in a citation for unprofessional conduct and/or dismissal from the college.

All students are expected to be honest with the faculty or staff in all situations related to clinical and academic activities. Students witnessing any dishonest activity are required to bring it to the attention of a faculty member. Failure to abide by this policy is considered a violation of the Student Code of Conduct and will result in disciplinary action as noted in the SCC catalog.

Internet Usage:

In classes where Internet access is provided, the student may use the Internet for valid, academic purposes only. The student may not use it for open access to other non-academic sites, which are unrelated to the course.

Personal Appointments:

All appointments (medical, etc.) must be scheduled on scheduled days off or after school hours. Appointments should not interfere with classroom or clinical instruction. If, for some reason, a student needs to be excused from class or clinic, the student will be held to the college and program attendance policies.

Radiography Program - Student Grievance Policy:

Students will be supervised, observed, critiqued, and guided in the classroom by SCC faculty or adjunct faculty each semester. A student who has a grievance of any kind should see the following individuals in the given order. The student must discuss his/her grievance with the individual beginning with Level 1. If the result of the discussion is not satisfactory, then the student can proceed to the next level. If the grievance occurs at the clinical site, and the grievance reaches Level 2, the student should contact the Director of Clinical Education. The student must initiate the grievance process within 3 days of the incident.

Level 1: Instructor, supervisor, or preceptor

Level 2: Program Director/Director of Clinical Education

Level 3: Associate Vice President of Health and Public Services

*Beyond Level 3, please refer to the Grievance Policy in the SCC Catalog.

Each conflict will be assessed on an individual basis and individual situation with each student and/or appropriate staff or faculty member. It should be noted that Radiography faculty take a holistic approach to student learning and may enlist the assistance of other faculty when deemed appropriate.

If the grievance pertains to a charge of sexual harassment, then the student may go directly to the Dean of Students rather than to the offending person.

Documentation must occur at all levels, from student to level where resolution occurred. This is to be filed in the Program Director's office. Please refer to the SCC Catalog and www.stanly.edu for additional information. The program's resolution will occur within 7 days of the student's initiation of the grievance process. If the grievance goes beyond Level 3, then the time frame will be as listed in the SCC catalog.

Radiography Student Handbook Statement:

Students are expected to retain a copy of the Radiography Student Handbook, as well as the Health Sciences Student Handbook, for the duration of the program. On the first day of class, students will be asked to sign a statement acknowledging receipt of the handbooks and agreeing to abide by the rules and regulations set forth in the handbooks. Faculty will consistently abide by these policies and expect students to do the same. Any updates to the handbooks will be sent electronically to students through email at the time of the update. Students are further bound to abide by hospital policies/requirements presented during facility orientation and to all SCC policies applicable to the RAD student.

Radiography Testing Policy:

Testing Procedures:

- A. Before each exam, all items will be stored at the front of the classroom except for pencils, clean paper, and a calculator.
- B. During the exam, students will not be allowed to leave the room.
- C. Students should review their exam for completeness before submitting. Once exams are submitted, they will not be re-opened.

Students must be on time for scheduled exams. Students who do not arrive on time will not be given any additional time to complete exams and will be subject to a 5-point deduction from the exam grade. Extenuating circumstances will be evaluated by the instructor.

A student who is unable to attend class for a scheduled exam must notify the instructor **prior** to the scheduled exam time. If a student fails to notify the instructor prior to the exam, a zero will be given to the student for that exam. Failure to take a scheduled course exam on the assigned day at the assigned time will result in a 5-point deduction from the exam grade if approval is granted to make-up the exam. Therefore, the highest possible grade for a make-up exam will be 95. Any course or final exam that has received make-up approval must be made-up within three school days following the initial administration of the exam, including clinical days. It is the student's responsibility to notify the instructor and make arrangements for the make-up exam. Quizzes are not considered scheduled exams and cannot be made up. A zero will be given for any missed quizzes.

The instructor reserves the right to require any student to take a re-test if the instructor has evidence to believe that the student received unauthorized help on an exam, quiz, or assignment.

Exam Reviews:

- Exam reviews will be done after all students have completed each exam.
- Students will not be given copies of their individual exams to keep. All exams must be kept on file for accreditation purposes.
- Students are not allowed to print online exams or quizzes. A zero will be given as the grade for any exam or quiz that is printed.

RE-TEST Policy (RAD 111 Procedures I and RAD 112 Procedures II only):

Grades received on an examination will be the final grade recorded. However, students will not proceed to the next chapter with a failing written exam or lab exam grade. These students are expected to prove competency in that area and will re-take the exam within three school days and earn a passing grade (78 or higher) before proceeding to the next chapter. Students who do not re-take the exam in three school days will be withdrawn from the program. It is the student's responsibility to make arrangements with the instructor to re-take the exam.

A failed exam may be re-taken once (scheduled exam + re-take). Failure to pass the re-take exam will result in the ineligibility to further advance in the program. The maximum number of exams that a student may re-take is two. This can be a combination of one written exam and one lab exam, two written exams, or two lab exams. Students who receive a failing grade on more than two exams (after re-testing) will be ineligible for further advancement in the Radiography Program. Students will not be allowed to re-test on the final exam; this grade is final and will be calculated with all other grades. Students must earn a 78 or higher on the final exam in all Radiography courses to progress in the program.

Recorders: As a courtesy, students should ask the instructor for permission to record class lectures with their own personal recorder. Exam reviews are not to be recorded. No recorders are allowed in any clinical area.

Skills Lab:

Laboratory practice of techniques prior to entering the clinical is extremely important. No student will be allowed to perform any technique in the clinical area without adequate skills lab practice and refinement.

Social Networking/Electronic Communications:

All students and faculty are to practice professional behaviors of confidentiality as well as follow legal and ethical standards of conduct as stated in the SCC Radiography Student Handbook, ARRT Code of Ethics, and the SCC College Catalog. No reference is to be made about clinical sites, patients, clinical staff or Stanly Community College employees at any time on any social networking site. Failure to abide by this policy will result in disciplinary action which may include dismissal from the Radiography program.

Student Performance Evaluations (completed on campus with program faculty):

During semesters two, three, four, and five, students meet with the Program Director and Director of Clinical Education (DCE) at mid-semester (formative measure) and end-of-semester (summative measure) to evaluate academic, behavioral, and clinical progress in the program. (During the first semester, students do not begin clinical rotations until the second eight-weeks of the semester and therefore only meet with the Program Director and DCE for the end-of-semester evaluation.) All RAD course grades, clinical competencies, and clinical evaluations are reviewed, and behavioral advisement is also provided during these evaluation meetings.

Tutoring:

Students desiring tutoring in any course should communicate directly with the instructor or Radiography faculty member. Arrangements for specific Radiography tutoring can be made by the faculty on an appointment basis. General education and science department tutoring may be arranged through the Student Development office (704-991-0226) at no cost to the student.

Use of Paper Copier:

Radiography students may use the Resource Center for printing. Students must print their class materials before the start of class.

Visitors:

Only students registered for a specific class are allowed to attend that class session. Visitors are not allowed in any clinical area.

Radiography Program Clinical Policies

Clinical rotations have been developed to provide students with interrelated educational experiences in striving for the following goals: development of radiographic skills, improvement of patient care skills, enhancement of critical thinking skills, evolvment of a professional attitude, and preparation for the national registry exam. Each student must realize that clinical training is a privilege provided by the clinical agency.

ARRT Requirements:

Each student is provided a copy of the American Registry of Radiologic Technologists (ARRT) Didactic and Clinical Competency Requirements for Radiography in the appendix of the Radiography Student Handbook. Students are responsible for printing this list and taking to assigned clinical rotations for reference throughout the program. Visit the ARRT website at www.arrt.org for additional information.

Case Study Presentations (Pathology Project):

During the second year of the Radiography Program, the student will prepare a pathology profile. The student will orally present their case study to a small panel composed of a combination of Radiography instructors, classmates, and technologists. The members of the panel will be determined by the Director of Clinical Education and will also be based upon availability of interested parties. The panel will evaluate presentations in which the student must achieve a minimum average score of 78 to be considered satisfactory. Scoring less than 78 will result in an unsatisfactory grade for this course requirement.

Cell Phone Usage:

Students are not permitted to use cell phones during clinical education. All cell phones must be put away and out of sight during scheduled clinical hours. (Students may only use cell phones during lunch.) Use of cell phones during clinical education will result in an unsatisfactory rating.

In the event of a potential emergency, students may give the clinical site telephone number to family members, childcare organizations, etc.

Clinical Assignment Schedules:

Clinical assignment schedules will be provided to the student prior to the beginning of each semester. Students are assigned to their clinical sites via a random lottery. Each student is assigned to a hospital or imaging facility on a rotational basis. The Director of Clinical Education (DCE) makes the clinical assignment schedules and rotates the students to various sites based upon the availability of space at the clinical affiliates of the program to ensure all students have equal opportunity to learn different equipment and procedures.

Each student must complete his/her assignment as defined by the DCE. The student's home/work address or personal schedule cannot be taken into consideration when scheduling clinical rotations. Students may not request a change of assignment. Students may not make changes to the clinical assignment schedules. Students should not volunteer for additional rotations or for special observations without the consent of the DCE. Students should not represent themselves as a SCC Radiography student while they are functioning in roles outside of school and clinical assignments (i.e., visitors, employees). Any student violating these rules is subject to dismissal from the Radiography Program.

Clinical Affiliate Locations:

The following list is subject to change at the discretion of the SCC and affiliate faculty. Mileage is an approximation from SCC's Crutchfield campus in Locust.

Clinical Site	Address	Approximate Distance from SCC – Crutchfield Campus
Albemarle Orthopedic Specialists (Alb Ortho)	105 Yadkin Street, Suite 101 Albemarle, NC	18 miles – 24 minutes
Cabarrus Family Medicine - Concord (CFM- Concord)	270 Copperfield Blvd NE #201 Concord, NC	19 miles – 26 minutes
Cabarrus Family Medicine - Harrisburg (CFM-Harr)	4315 Physicians Blvd, Suite 101 Harrisburg, NC 28075	15 miles – 23 minutes
Cabarrus Family Medicine - Mt. Pleasant (CFM- MTP)	8560 Cook Street Mt. Pleasant, NC	14 miles – 21 minutes
Cabarrus Family Medicine - Poplar Tent (CFM- PT)	5641 Poplar Tent Road Concord, NC	21 miles – 31 minutes
Atrium Health – Anson (Atrium-Anson)	2301 U.S. Highway 74 W Wadesboro, NC	27 miles – 36 minutes
Atrium Health – Stanly (Atrium-Stanly)	301 Yadkin Street Albemarle, NC	18 miles – 24 minutes
Atrium Health - Union (Atrium-Union)	600 Hospital Drive Monroe, NC	24 miles – 31 minutes
Atrium Health – Union West (Atrium-UW)	1000 Healing Way Matthews, NC 28104	21 miles – 26 minutes
Atrium Health – University City Urgent Care (University UC)	9325 J.W. Clay Boulevard, Suite 221, Charlotte, NC, 28262	24 miles – 26 minutes
Atrium Health – Waxhaw ED (AH-Waxhaw)	2700 Providence Rd S Waxhaw, NC 28173	33 miles – 42 minutes
Carolinascare Healthcare Urgent Care – Albemarle (Albemarle UC)	703 Leonard Avenue Albemarle, NC 28001	18 miles – 23 minutes

Carolinas Healthcare Urgent Care – Mint Hill (Mint Hill UC)	10545 Blair Road, Suite 1200 Mint Hill, NC 28227	12 miles – 15 minutes
Carolinas Healthcare Urgent Care – Union West (Union West)	6030 W HWY 74 Indian Trail, NC 28079	25 miles – 30 minutes
FirstHealth – Montgomery Memorial Hospital (FH - Troy)	520 Allen Street Troy, NC	37 miles – 47 minutes
Midland Family Medicine (Midland)	12925 HWY 601 South Midland, NC 28107	4 miles – 4 minutes
OrthoCarolina - Monroe	703 Comfort Lane Monroe, NC 28112	24 miles – 32 minutes
OrthoCarolina - University	9848 North Tryon Street Charlotte, NC 28262	23 miles – 27 minutes
Sports Medicine & Injury Center	5651 Poplar Tent Road, Suite 102 Concord, NC	21 miles – 32 minutes

Clinical Differences:

While it is the intent and objective of the Radiography Program to be as uniform as possible with all policies, students must realize that the program cannot change or circumvent hospital policies. For this reason, there will be differences at each clinical facility; and students shall be concerned with and adhere to the policies of the clinical facility to which he or she is assigned. The student is not qualified to make a determination of correctness and should never question or express their personal opinion.

Professional success depends upon more than academic achievement. Becoming a professional includes demonstrating a positive attitude, integrity, cooperation, dependability, and accountability. Radiography students are representatives of Stanly Community College and the Radiography Program. Unprofessional behavior on any level will not be tolerated and may serve as grounds for dismissal from the program. Students must treat all fellow students, faculty, hospital affiliates, and patients with respect. Self-confidence comes with practice and perseverance. Students are expected, to adhere to high standards of personal and professional conduct.

Students will be supervised, observed, critiqued and guided in the clinical site by SCC faculty or site preceptors each semester. Any clinical concerns such as questions concerning positioning, exposure and/or clinical procedures will be directed to the SCC faculty or site preceptor.

Clinical Site Denial:

Any student who is denied attendance to a clinical site by Radiology Department management or any other hospital management is not allowed to continue in the Radiography Program. The ineligibility to participate in clinical rotations at any site will result in immediate dismissal from the Radiography Program. The student will not be allowed for re-admission to the program at any time.

Definition of Safe Clinical Practice

- Practicing within the guidelines of the Radiography Program policies and objectives at Stanly Community College.
- Practicing within the American Registry of Radiologic Technologist standards.
- Practicing within the ethical standards of the American Society of Radiologic Technologists.
- Practicing within the standards of the Joint Review Committee on Education in Radiologic Technology.
- Practicing within the direction and supervision of the Radiologist on site at clinical affiliates.
- Practicing within the direction and supervision of the registered Radiologic Technologist assigned as clinical instructor or preceptor or staff technologist.
- Using appropriate shielding, imaging technique or other means of radiation exposure reduction commonly named ALARA at all times.
- Giving excellent care to every patient without regard to race, creed, sex, color, religion, and physical or mental limitations.
- SCC Radiography students may not remove a patient from the following:
 - Cervical collars
 - Traction devices
- SCC Radiography students may remove a patient from the following if directly supervised by a technologist:
 - Monitoring devices
 - Bandages or splints
- SCC Radiography students may not give medication or treatment to patients, with the exception of contrast agents and only with direct supervision and approval of a physician or technologist. Food and/or liquids may be given with consent of the attending physician.
- SCC Radiography students may not inject IV contrast.
- SCC Radiography students are not permitted to use fluoroscopy to locate or position anatomy for any examination in any clinical setting.
- Critically ill patients should take priority and should never be left alone. Note any changes in patient condition and report it immediately.
- SCC Radiography students should never keep valuables for a patient. Valuables should be given to a family member or given to nursing personnel to be locked up. Note the name of the person in possession of valuables in case it is needed later.
- SCC Radiography students should always check for glasses, clothing, and other personal belongings when escorting the patient from the exam room.
- SCC Radiography students should not be afraid to ask for a radiologist to check a patient.
- SCC Radiography students should not be afraid to ask a technologist for help.
- SCC Radiography students should not get between an upset or belligerent patient and the exit.

Dress Code and Appearance for Clinical Education:

- Uniforms: Uniforms must be clean, wrinkle-free standardized ceil blue uniform (with radiography student embroidery) purchased from A Perfect Fit Uniform Boutique.
- Shoes: Shoes must be solid white, black, or gray and laced (no crocs or slide on shoes).
- Student Photo ID Badge/Radiation Dose Monitor: SCC student photo ID badge and radiation dose monitor must be worn at the collar level and visible at all times. Photo ID badges must be worn so that the student name and photo are seen.
- Hygiene: Daily bathing, use of deodorants and mouth care are a must.
- Hair: Hair must be clean, neatly groomed, appropriately styled and colored. Long hair must be neatly pinned or pulled back above the collar. Hair should not fall forward when providing patient care or positioning a patient. Mustaches and beards must be neatly trimmed.
- Cosmetics: Use cosmetics sparingly. Do NOT wear perfume, body sprays, aftershave, or heavy makeup. Any lotions must be scent free.
- Nails: Nails must be cut to just cover the fingertips and kept clean. No nail polish. No artificial nails for infection control reasons.
- Jewelry: A watch, wedding band, engagement ring, and medical alert bracelet are permitted. Small posts may be worn in pierced ears. No visible body piercings (other than ear) may be worn. Smart watches are not allowed.
- Tattoos/Markings: All tattoos/markings must be covered with clothing, appropriate makeup or a skin tone band aid.
- Only a white t-shirt may be worn under the scrub top.

Any student not complying with the Radiography Program's dress code will be dismissed from clinical for the day and given a clinical absence.

General Conduct:

- Respect patient privacy and confidentiality. Do not discuss patients where others may hear your conversation.
- Report away from the patient's bedside.
- iPods/iPads are not to be openly displayed in patient areas.
- Speak softly.
- Do not use inappropriate or offensive commentary or body language toward others. Obscene or profane language will not be tolerated in the clinical area.
- Breaks and lunch will be arranged by the clinical instructor or preceptor.
- Students must remain within the clinical facility during meals and breaks unless otherwise instructed by the technologist.
- Students should bring textbooks and study materials to clinic unless asked not to by clinic site.

Labeling of Radiographs:

Patient identifiers must be placed appropriately on all images according to facility policy. All images will be marked with appropriate lead markers (provided by the program). Students will place the marker on the lateral border of the anatomic part. If a structure is in a lateral position, the marker will be placed anterior of that structure. Students should realize that clinical site regulations must be followed, but when not specified, students should apply the standard taught by the program in class or lab.

Medical Form and Immunizations Records:

Medical forms and immunization records must be maintained throughout the Radiography Program. TB Skin Testing (PPD) is required to maintain verification of freedom from tuberculin infection on a yearly basis while enrolled in the Radiography Program. Failure to maintain a current TB skin test may jeopardize the student's eligibility to participate in clinical activities.

MRI Safety Policy:

During clinical education, students may have the opportunity to observe imaging procedures in Magnetic Resonance Imaging (MRI). Students may also be asked to assist in moving/transfer of a patient in the MRI department. The student will always check with the MRI technologist prior to entering the MRI department with a patient to ensure it is safe to do so.

Equipment used in this modality generates a very strong magnetic field within and surrounding the MR scanner. This magnetic field is always on. Any unsecured magnetically susceptible (ferromagnetic) material, even at a distance, may accelerate into the bore of the magnet with enough force to damage equipment, patient, and any personnel in its path. Students are required to adhere to the MRI policies of the clinical affiliate and must disclose personal information which may be viewed as a health risk. The student will always be under the direct supervision of an MRI technologist.

In the first semester of the program and prior to entering the clinical site, students are required to complete the MRI Safety Screening Form found in the appendix of the Radiography Student Handbook. Students who indicate "yes" to any items in the table above must submit a note from their physician indicating it is safe for them to be in the MRI department.

Students are required to remove metallic objects prior to entering the MRI area. Items include but are not limited to: watches, jewelry, and items of clothing that have metallic threads or fasteners. Students are required to follow the instructions given by the MRI technologist.

Failure to follow the policies of the clinical affiliate or the radiography program will be deemed unsafe clinical practice, and the student will be dismissed from the radiography program. Failure to disclose any medical history which may cause harm to an individual will also be deemed as unsafe clinical practice and the above disciplinary action will be followed.

Patient Identification:

Before performing a radiographic procedure, students must first check with the supervising technologist and confirm the identification of the patient by at least two identifiers including:

- check the wrist band
- verify name and date of birth by asking patient
- verify patient's order with the information given by the patient
- verify patient's medical record number

Physical Requisites:

Students in the Radiography Program should have sufficient visual acuity and auditory perception to observe the patient during diagnostic procedures in order to take appropriate action if the patient experiences difficulties and may require immediate medical assistance. Auditory perception, gross and fine motor coordination is also important in order to receive verbal communication from the patient and manipulate the equipment. Students should be able to think critically to implement immediate care as needed. The performance of the tasks related to the Radiography profession includes potentially strenuous physical skills to include, but not limited to, heavy lifting/moving patients and equipment utilizing proper body mechanics. See *Essential Functions of a Radiographer* in appendix.

Policy of Student Supervision:**1) DIRECT SUPERVISION (JRCERT Standard 5.4):**

Students are required to perform procedures under the direct supervision of a qualified radiographer until competency is achieved. The JRCERT defines direct supervision of a qualified radiographer as follows:

- The radiographer reviews the procedure in relation to the student's achievement.
- The radiographer evaluates the condition of the patient in relation to the student's knowledge.
- The radiographer is physically present during the procedure.
- The radiographer reviews and approves the procedure and/or image.

2) INDIRECT SUPERVISION (JRCERT Standard 5.4):

Students may perform procedures under the indirect supervision of a qualified radiographer after competency is achieved in the respective procedure. The JRCERT defines indirect supervision of a qualified radiographer as follows:

- The radiographer must be immediately available to assist students regardless of the student's achievement level.
- "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.
- The radiographer reviews and approves the procedure and/or image.

3) REPEAT IMAGES (JRCERT Standard 5.4):

In the event a radiographic image produced by a student is unsatisfactory and must be repeated, the following steps will be followed as outlined below.

- a. The student and radiographer review the unsatisfactory image in order to identify the unacceptable factors and needed corrections.
- b. The student then accurately identifies how those corrections should be implemented.
 - If the student's correction plan is satisfactory, continue to step c.
 - If the student's correction plan is incorrect, the radiographer will assist the student in determining the steps needed to correct the error.
- c. The student implements the needed corrections under the direct supervision of a radiographer and makes the exposure with the approval of the radiographer.

- d. The supervising radiographer's initials are recorded in the "Repeat Supervision" section of the Daily Clinical Tracking database indicating that direct supervision was provided.

If a student performs a repeat image without proof of direct supervision of a qualified radiographer, the clinical instructor or primary x-ray technologist will notify the Director of Clinical Education who will meet with the student to discuss disciplinary actions. If the offense is repeated, the student will be dismissed from the program.

Student Supervision during Mobile Radiography:

All mobile exams performed by students, regardless of their level of competency, must be performed under direct supervision of a registered Radiologic Technologist. Students must wear lead aprons during mobile radiography.

Professionalism:

Students should always demonstrate high standards of professionalism in all settings and display a well-developed sense of moral obligation, ethical judgment, and respect for patients, staff, and faculty. Students who exhibit immature, objectionable, or inappropriate behavior, or violate any code of conduct will be subject to an unsatisfactory evaluation without remediation or dismissal from the program.

Radiation Safety Practices:

The Radiography Program strives to keep student radiation exposure As Low as Reasonably Achievable (ALARA). To minimize radiation exposure, the student must abide by the following guidelines:

- Students are not allowed to hold patients during an exposure under any circumstances.
- Students must stand behind a primary barrier, when available, during an exposure.
- Students must wear radiation protection apparel as appropriate when performing exams that require exposures to be made without a primary barrier (i.e. fluoroscopy, surgical studies, mobile studies, etc.).
- Students are required to wear their radiation badge at the level of the thyroid during clinic at all times.
- Students must follow the cardinal rules of radiation protection at all times:
 - Minimize time of exposure
 - Maximize distance to exposure
 - Maximize use of available shielding and radiation protection apparel
- Students must immediately contact the appropriate program official or clinical staff member with questions or concerns regarding the integrity of the radiation safety guidelines.

Required Clinical Tools:

- Radiation Monitoring Badge
- SCC Student Photo ID Badge
- iPod/iPad device with HandBase application
- Mini Pocket Notepad
- Black Ink Pen
- Lead Markers (provided by program)
- Bontrager's Pocket Guide

Routine Views of an Examination:

- Each radiology department should have a manual listing routine views for each examination.
- All radiographic examinations must be ordered by a physician or appropriate delegate.
- All radiographic examinations must have a written diagnosis or pertinent information related to the examination ordered.
- Any modification of routine views must be approved by the student's supervising technologist. A list of routine views recommended by the ARRT for competency can be found in the appendix of the Radiography Student Handbook and on the ARRT website at www.arrt.org.

Specialty Rotations:

Specialty or advanced modality rotations will allow for the understanding of the radiographer's expanding role in health care. Students will have an opportunity to observe specialized practices and other procedures that will aid the student in their overall knowledge of the Radiology Department. Learning modules and assignments may be given to accompany each of these rotations. Failure to complete the assignment in a satisfactory manner will result in a grade of unsatisfactory.

Clinical Grading Policy

Students will be held accountable for retaining and refining skills and knowledge obtained in previous courses as they progress through the curriculum. Students' overall clinical performance and ability to meet all predetermined criteria for the clinical course will be evaluated on a satisfactory/unsatisfactory basis. Any student receiving 3 unsatisfactory ratings during the program will receive a failing grade of Unsatisfactory (U) for the clinical course and will be immediately dismissed from the Radiography Program. **An unsatisfactory rating may be issued for any of the following, but not limited to: failing clinical competency exam, failing clinical performance evaluation, violation of the student code of conduct, failure to follow program policy.**

Clinical Competency Exams:

Competency exams are performed solely by the student with the supervision of a Registered Radiologic Technologist. The student must notify the Radiologic Technologist prior to beginning the competency and must follow through once they have requested the competency. The SCC Comp form must be completed in the iPod/iPad device by a Registered Radiologic Technologist after the exam. Students are only allowed to perform a competency on exams they have successfully tested on in both the classroom and lab settings.

Each semester students are required to complete an assigned number of competencies. All competencies must be completed during clinical hours. Exams performed while employed by a clinical site may not be used for the Radiography Program. Students who do not complete all required competencies will be issued an unsatisfactory rating.

Semester/Course	Total Number of Comps to be Completed
Semester 1/RAD 151	2 (one of which must be Chest)
Semester 2/RAD 161	15 (for 17 total)
Semester 3/RAD 171	10 (for 27 total)
Semester 4/RAD 251	20 (for 47 total)
Semester 5/RAD 261	Any remaining Comps 22 Clinical Objectives

*Students are strongly encouraged to work ahead and earn all ARRT competencies by the end of semester 4 so they can focus on completing clinical objectives (re-comps) during semester 5.

Clinical Objectives (Re-Comps):

Students will continue to develop and demonstrate an increasing degree of competence in the performance of radiographic examinations by completing clinical objectives during their final semester of the program. Clinical objectives must be evaluated with the direct supervision of a clinical instructor, except for fluoroscopy and OR exams. Clinical objectives will be documented in HandBase with a signature from the clinical instructor. Failure to successfully complete any objective will result in a repeat of the clinical objective with the Director of Clinical Education. An unsatisfactory will be given if the repeat exam is unsuccessfully completed.

Students must complete all clinical objectives during their assigned clinical rotation at Atrium Health - Union or Atrium Health – Stanly in the final semester of the program. Failure to do so will result in an unsatisfactory.

Clinical Attendance:

Since one of the objectives of clinical education is to prepare students to function as a reliable technologist upon graduation, attendance and punctuality will be emphasized throughout the program. A student's history of attendance and punctuality is always a point mentioned to prospective employers when members of the college faculty are used as references.

All students will be given a clinical schedule, directions concerning the rotations, and objectives for each area at the beginning of each semester. These rotations are mandatory, and no schedule changes can be made without prior approval of the Director of Clinical Education.

All students will be responsible for keeping their time recorded in their iPod/iPad device. Once the student arrives to the clinical site, they must enter the time of arrival (Sign-In) and have it initialed by a Radiologic Technologist. At the end of the clinical day, the student must enter the time of departure (Sign-Out) and have it initialed by a Radiologic Technologist.

Clinical Absences:

Absences are extremely difficult to deal with by all parties involved. **When the student is going to be absent from clinical practice, he/she must notify both the Director of Clinical Education and the clinical instructor or radiologic technologist at the scheduled clinic site prior to the scheduled clinical time.** The student must notify the Director of Clinical Education by phone (704-991-0113) or email at least 15 minutes prior to the start of the clinical day. The student must notify the clinical site by phone at the start of the clinical day. If the student is unable to reach the clinical instructor or radiologic technologist at the scheduled clinic site, a message must be left with a staff member in the appropriate clinical department. Students must continue calling until they have spoken directly with their clinical instructor or radiologic technologist. After returning from an absence, a *Clinical Absentee Form* (found in appendix) must be completed by the student and submitted to the Director of Clinical Education within 3 business days. In addition, **each clinical absence that should occur will be subject to a make-up day at a clinical site determined by the Director of Clinical Education.** If the make-up day is not completed satisfactorily, another clinical absence will result.

Semester/Course	Total Number of Allowed Absences
Semester 1/RAD 151	2
Semester 2/RAD 161	2
Semester 3/RAD 171	2
Semester 4/RAD 251	3
Semester 5/RAD 261	3
***Students who are absent more than the allowed number of absences per semester will be dismissed from the program.	

Absences resulting from unusual or extenuating circumstances will be reviewed by the Program Director and the Director of Clinical Education who will jointly decide if the absence is excused.

Arriving Late/Leaving Early:

As with any employment situation, routine tardiness and leaving early must be avoided. Students are expected to be punctual for all clinical education experiences. If a student is more than 5 minutes late for clinic or leaves clinic more than 5 minutes early, he/she will be counted absent and needs to adhere to the absence policy above.

Remediation Policy:

Students who receive an unsatisfactory rating on a clinical competency exam or clinical performance evaluation will be issued a remedial work slip by the Director of Clinical Education. A student will receive a remedial work slip if he/she does not properly demonstrate a skill, level of knowledge, or appropriate behavior in the clinical rotation. Students are to practice skills and/or complete assignment(s) as directed on the remedial work slip. The student has one week from the issue date to complete objectives/assignments in a satisfactory manner, unless otherwise indicated by the Director of Clinical Education. If the student does not complete all remedial objectives satisfactorily, an *additional* unsatisfactory rating will be issued.

If the student is still unable to perform to the program's standards/objectives upon returning to the clinical area after remediation has taken place, the student will receive another unsatisfactory evaluation. No more than 2 remedial work slips will be issued for the semester per clinical course. If the

student does not satisfactorily perform to program's standards/objectives after 2 slips have been issued, the student will receive a third unsatisfactory rating and subsequently fail the clinical course.

Unsatisfactory ratings may be issued *without* remediation to students who may potentially pose a threat to the safety of a patient or staff member due to lack of preparation, inappropriate demonstration, inadequate knowledge or skill level, or any previously remediated material. Students who exhibit immature, objectionable, or inappropriate behavior, or violate any code of conduct will be subject to an unsatisfactory evaluation or dismissal from the Radiography Program immediately.

Student CLINICAL Performance Evaluations (completed by Clinical Instructor or staff technologist):

Clinical instructors or registered radiologic technologists will complete an evaluation (in HanDBase) of individual student clinical performance at their institution at mid-term and end-of-semester. Grading categories include communication, professionalism, room preparation, positioning, radiation safety, technical factors, and image analysis. Students who visit multiple clinical sites in one semester are required to have a clinical performance evaluation completed at the end of each rotation. Clinical evaluations will be kept on file for accreditation purposes.

Stanly Community College
Radiography Program
Summary of Clinical Guidelines and Expectations

1. Students will present themselves punctually at the clinical site in the appropriate dress code. Each student is required to have the following items in clinical: SCC student photo ID badge, personal radiation badge, iPod/iPad device, x-ray markers, and an ink pen. Students who do not have these items will be sent home and an unsatisfactory rating will be issued.
2. Students may perform a competency on an x-ray exam after they have successfully completed the RAD 111 or 112 written and lab exams on the material. Competency exams will be performed solely by the student under the supervision of a Registered Radiologic Technologist. The student must notify the technologist prior to beginning the competency. A student is allowed to meet the patient before declaring competency but must follow through once they have requested the competency. The SCC Comp form (in HanDBase) must be completed by a Registered Radiologic Technologist on the iPod/iPad device on the same day the exam is completed.
4. Students are required to complete an assigned number of competencies each semester. All competencies must be completed during clinical hours. Exams performed while employed by a clinical site may not be used for the Radiography Program. Students who do not complete all required competencies for the semester will be issued unsatisfactory rating.
5. Students may perform multiple competencies on a patient. For example, if the patient has a knee, foot, and hand ordered, the student may perform a competency on each of these studies.
6. Students are not allowed to break up requisitions. For example, if a facility's protocol of a hip includes an AP pelvis, AP hip and a lateral hip, the student is not allowed to get a competency on both an AP pelvis and hip. The student will select either the AP pelvis or the hip to receive the competency.
7. Students are not allowed to hold a patient or IR under any circumstances, even if that student is obtaining a competency. The student will position the patient and if necessary, have a nurse or family member hold the patient during exposure.
8. At mid-semester and end-of semester, students must ask a clinical instructor or staff technologist to complete a clinical performance evaluation (in HanDBase). Students who fail to submit a clinical evaluation or receive a failing grade on a clinical evaluation will be issued an unsatisfactory rating.
9. Current CPR certification and PPD skin test are required for entry into the Radiography Program. Certification must be maintained during the entire program. It is the responsibility of the student to keep up with their expiration date. If a student fails to maintain current CPR certification and/or PPD skin test during the program, the student will not be allowed to participate in clinical rotations.
10. Students will keep track of their clinical competencies, clinical performance evaluations, daily clinical tracking and clinical time with an iPod/iPad. Each week's clinical data must be emailed to the Director of Clinical Education.

Radiography Program
RADIATION SAFETY MANUAL

I. Radiation Safety Officer

A. Radiation Safety Officer (RSO) Contact Information

Lindsey Hall, R.T.(R)ARRT
Director of Clinical Education
lhall9574@stanly.edu
704-991-0113

B. RSO Duties

- Issues dosimeters to students and faculty on a quarterly basis.
 - (In the case of pregnancy, dosimeters are exchanged on a monthly basis.)
- Receives and reviews dosimetry reports on a quarterly basis.
- Issues dosimetry reports to students for review within thirty days of receipt.
- Issues reports to graduates and/or employers of former students upon request and signed release.
- Maintains radiation exposure reports indefinitely.
- Maintains Radiation Safety Manual and updates information as required.
- Oversees maintenance, repair, and safety of radiographic equipment.
- Maintains all files pertaining to radiographic equipment including but not limited to repair, licenses, and surveys as required by the North Carolina RPS Safety Program.
- Updates Notice of Registration when required.

C. Location of Radiation Safety Documents

The Radiation Safety Manual is located on the bookshelf next to the control area in the radiography lab (room 222) and contains the following documents:

- Plan Review / Shielding Design
- Letter of Acknowledgement
- Report of Assembly / Installation Report
- Post-Installation Survey
- Service Reports
- Notice of Registration
- Written Safety Program
- NRC Regulations

A printed copy of the North Carolina Regulations for Protection against Radiation is available in the control area of the energized lab.

Radiation dosimetry reports are available in the RSO's office for students to review.

II. Radiation Exposure Limits

State of NC, Division of Health Service Regulation, Radiation Protection Section
Rule .0104 (65) "Limits" or "dose limits" – the permissible upper bounds of radiation dose are termed limits or dose limits. Dose limits represent an acceptable limit of potential risk and do not represent a level that will necessarily be unsafe if exceeded.

Rule .1604 (a) Occupational Dose Limits for Adults

5 rems (5,000 mrem) (0.05Sv) = Total effective dose equivalent (TEDE)

50 rems (50,000 mrem) (0.5 Sv) = Total Organ dose equivalent (TODE)

15 rems (15,000 mrem) (0.15 Sv) = Eye dose equivalent

50 rems (50,000 mrem) (0.5 Sv) = Shallow dose equivalent (SDE)

Radiation Exposure Action Limits

Dose Equivalent	Annual Limit (mrem)	ALARA 1 Level (mrem)	ALARA 2 Level (mrem)
Whole Body (TEDE)	5,000	125	250
Lens	15,000	375	750
Shallow (SDE)	50,000	1,250	2,500

- Typical quarterly readings are M (too low to record) to about 20 mrem.
- Students whose dose level exceeds ALARA Level 1 but is under ALARA Level 2 will meet with the RSO. This meeting will be documented, and the student will be counseled on radiation safety practices.
- Students whose dose level exceeds ALARA Level 2 will meet with the RSO and document the reason for the level on the "Exceeding Threshold Dose Report Form." The student will be counseled on radiation safety practices and closely monitored for the remainder of the year.

III. Pregnancy Policy

Students enrolled in the Radiography program are classified as occupational exposed individuals to ionizing radiation. Occupational radiation exposure to radiation does present health risk, particularly during pregnancy. Radiation exposure to females who are pregnant poses a number of potentially serious health risks to the developing embryo/fetus. However, pregnancy may be a private matter, and disclosure or acknowledgement of pregnancy must ultimately rest with the mother regardless of radiation exposure status or risk to the developing embryo/fetus.

Under federal and state regulations, any student who becomes pregnant has the option to declare her pregnancy. The student must declare her pregnancy in writing before this program can consider her pregnant and provide her with the appropriate steps to reduce and monitor the radiation risks to the embryo/fetus.

- Once the pregnancy is declared in writing, the student will be issued a fetal radiation dosimeter to be worn at waist level under the lead apron to monitor radiation exposure. The institution is required to ensure that the fetal exposure does not exceed 500 millirems during the term of the pregnancy as determined by the fetal radiation dosimeter. The declaration of pregnancy will remain in effect until the declared student withdraws the declaration in writing or is no longer pregnant. The student has the option to withdraw the declaration in writing at any time.

- If the student chooses not to declare her pregnancy, she cannot be considered pregnant and is putting the embryo/fetus at risk.

With or without disclosure, the pregnant student can opt to continue in the educational program without modification, but with the knowledge that she is at her own risk and has signed a waiver acknowledging that fact. Any pregnant student, who opts not to continue in the educational program, can be readmitted according to the readmission policy found in the Stanly Community College catalog and the Radiography Program Handbook.

IV. Authorized Personnel

- Only SCC radiography program faculty and current SCC students are authorized personnel.
- All faculty members of the radiography program are certified through the American Registry of Radiologic Technologists.
- All students, when in the lab, are supervised by a faculty member. The lab remains locked when RAD instructors are not available.
- All students and radiography faculty will be issued a dosimetry badge upon entry into the radiography program, prior to the first clinical rotation, or upon employment. This badge will be worn at collar level outside of any protective apron during lab and clinical time. Those who do not have their dosimetry badge will not be allowed to participate in lab and will be sent home from clinical.

V. Safe Operation of Imaging Equipment in Lab and Clinical Setting

- SCC's x-ray lab is for instructional use only and is not to be used for a medical examination on human or animal.
- Access to the radiography lab is restricted to authorized personnel. Signage is posted stating authorized personnel only.
- All students must wear their dosimetry badge at collar level at all times, when in the x-ray lab or in the clinical setting. Those who do not have their dosimetry badge will not be allowed to participate in lab and will be sent home from clinical.
- Students must follow the cardinal rules of radiation protection at all times:
 - Minimize time of exposure
 - Maximize distance to exposure
 - Maximize use of available shielding and radiation protection apparel
- No one, faculty or student, will be allowed in the mini x-ray room at the college during an exposure using the stationary x-ray unit.
- When in the clinical setting, faculty and students must be a minimum of 6 feet from the source of radiation during mobile or surgical exams.
- During mobile exams, surgical, and fluoroscopic exams, students must wear lead shielding, thyroid shielding, and their dosimetry badge at the collar level outside the lead apron.
- During any fluoroscopic procedure, all operators are to remain in the control booth, behind the protective barrier during each exposure. Exception: Assisting in fluoroscopy in the clinical setting requires that the student stand as far away from the source of exposure as possible or behind the radiologist.
- Students are to screen all patients for pregnancy and take precautions if the patient is pregnant per clinical site protocol

- Students are never permitted to use fluoroscopy to locate or position anatomy for any examination in any clinical setting.
- Students are not allowed, under any circumstance, to hold or support a patient or image receptor during an exposure. A mechanical holding device should be used in lieu of a human holder. Students and faculty shall seek counsel of clinical site staff for selection of mechanical or human holders.
- Students electing to work as an independent agent contracting with a hospital or clinic outside the requirements of the Program will not use the badge issued by Stanly Community College to measure exposure to ionizing radiation during that employment.

VI. Radiography Lab Equipment: Canon stationary system, GE AMX simulation portable, GE AMX energized portable, GE OEC mini C-arm

- All students and faculty are to adhere to ALARA principles/guidelines at all times.
- Only program authorized individuals are permitted to enter the lab.
- Purpose: The equipment listed above is for demonstration. Minimal exposures are made with the radiographic tube to teach students how to set technical factors according to the ALARA principle. Exposures are to be kept to a minimum and are only to be made using training phantoms.
- No student is permitted in the mini x-ray room during any type of exposure.
- The mini x-ray room door must be closed before an exposure can be made.
- Visual and audible indicators are located on the x-ray control panel and are functional.
- Radiation warning signs are placed outside of room doors.
- Faculty demonstrate use of the GE AMX energized portable unit and the GE OEC mini C-arm in the x-ray mini room. If an exposure is made, students must step out into the control area outside the mini room, and the door to the mini room is closed.

VII. Radiation Monitoring Policy

Students in the radiography program will be required to wear personnel radiation monitoring devices in all areas where ionizing radiation is generated. The student will be responsible for proper care of the dosimeter badge and for having it attached to his/her clothing during all lab and clinical assignments as follows:

1. Dosimetry Badge Wear: While in the lab and clinical areas, the student is required to wear his/her radiation monitoring badge in order to record the exposure obtained. The monitor will be worn at the collar level with the name facing outward. When in fluoroscopy, the radiation monitor must be worn outside the lead apron. The student should not attach the radiation monitor directly to the lead apron. This could result in a lost radiation monitor, if it is unintentionally left on the lead apron.

2. Dosimetry Badge Return: At the end of the monitoring period, the student will submit the current radiation monitoring badge to program faculty and replace it with a new one for the next monitoring period. There will be an announcement made either verbally in class or via email when new monitors are available. The student should bring the dosimeter badge to the class when changing is due. The badges are changed every three months. Students not turning in the old monitor and receiving the new monitor at the appropriate time will be given an unsatisfactory rating. Additionally, the student will not be allowed to attend lab or clinical

without their current monitor. The student must return the dosimeter badge in the event of dismissal from the program, or they will be billed the unreturned dosimeter cost the college incurs from the radiation monitoring company.

3. Lost Dosimetry Badge: If a student loses his/her dosimetry badge, it must be reported immediately to the Director of Clinical Education. The student must complete the "Lost Dosimetry Badge Report" contained in the appendix section of this manual. The student may be charged \$10.00, plus the cost of expedited shipping, for a new badge and will not be allowed in the lab or clinical area until he/she receives the new dosimetry badge. All clinical time missed until a new dosimeter is received must be made up before the completion of the semester. The student may also receive an unsatisfactory rating.

APPENDIX

**Stanly Community College
Radiography Program**

Essential Functions of a Radiographer

To successfully complete the clinical component of the Radiography Program, the student must be able to perform all of the essential functions of a radiographer.

1. Communicate effectively with patients, physicians, peers and ancillary staff.
2. Physically move and position patients manually, by wheelchair, and/or by stretcher.
3. Lift and move 50+ pounds at waist level or below waist level.
4. Capable of intermittent sitting, standing, walking, reaching, twisting, and bending as required.
5. Can use both hands for grip, speed, and precision work.
6. Can use both feet.
7. Must have good eye/hand/foot coordination.
8. See and hear adequately to note slight changes in the patient's condition.
9. Hear adequately to perceive and interpret various equipment signals.
10. See adequately to read emergency monitor data.
11. Can differentiate colors and shades of colors.
12. Able to inspect the dimensions of items (i.e. depth perception).
13. Can read and understand complex information.
14. Capable of collecting and classifying information about data, people, or events
15. Apply principles of logical or scientific thinking.
16. Can report and/or carry out a prescribed action in relation to collected information.
17. Effectively deal with stressful situations (i.e. emergency situation).

I understand and am capable of performing the functions listed above.

Print Name: _____

Signature: _____

Date: _____

If unable to perform the functions listed above, please provide an explanation below.

The inability to perform the functions listed above may prevent the student from progressing in the Radiography Program.

**Stanly Community College
Radiography Program**

iPad Usage for Clinical Agreement

- ◆ iPad devices (with fully charged batteries) will be taken to all scheduled clinical rotations. Students who fail to bring their iPod/iPad device to clinic will receive an unsatisfactory rating. If an iPad device is not in working condition because of low or dead battery, the student will receive an unsatisfactory rating.
- ◆ All clinical information will be synched to the student's personal computer and emailed to the Director of Clinical Education on a weekly basis.

HandBase Application

- ◆ TIME CLOCK: Students will clock in upon arrival and clock out upon exiting the clinical site. If a technologist is not available upon arrival to sign in a student, the technologist must provide a comment about why it is being signed late. The actual access times are recorded into the internal memory of the device.
- ◆ DAILY CLINICAL TRACKING: Every procedure viewed by or completed by the student will be logged into the Daily Clinical Tracking database.
- ◆ SCC COMP: Every clinical competency exam will be logged into the SCC Comp database.
- ◆ GENERAL PATIENT CARE: Every patient care competency exam will be logged into the General Patient Care database.
- ◆ CLINICAL EVALUATION: Performance evaluations will be completed by a Registered Radiologic Technologist at mid-semester and end-of-semester. The due dates for submitting these evaluations are located in the clinical course syllabus. Failure to submit evaluations by the indicated due date will result in an unsatisfactory rating.

I have been given the above guidelines for using the iPad device and HandBase application. I understand and agree to abide by these guidelines while a student in the Radiography Program at SCC.

Print Name: _____

Student Signature: _____

Date: _____

**Stanly Community College
Radiography Program**

**ARRT Didactic and Clinical Competency Requirements for Radiography
Receipt and Acknowledgement**

I have been provided with a copy of the ARRT Didactic and Clinical Competency Requirements for Radiography requirements. I have reviewed these requirements and understand that it is my responsibility to keep these in my possession as a guide and reference throughout the Radiography Program.

Print Name: _____

Student Signature: _____

Date: _____

Radiography Student Handbook Receipt and Acknowledgement

This is to certify that I have read and understood the information found in the Stanly Community College Radiography Student Handbook. I agree to abide by all rules and regulations set forth in this handbook. I also understand that failure to abide by these rules and regulations may serve as grounds for my dismissal from the Radiography Program. I understand that it is my responsibility to retain a copy of this Radiography Student Handbook for the duration of the program.

Print Name: _____

Student Signature: _____

Date: _____

**RECORD OF STUDENT INJURIES AND ILLNESSES OCCURRING AT
STANLY COMMUNITY COLLEGE**

Institution:

1. Name: _____
 2. Mailing address: _____
(No. and Street or P. O. Box) (City/Town) (State) (Zip)
 3. Location, if different from mailing address _____
-
-

Injured or Ill Student:

4. Name: _____
(First) (Middle) (Last) (SS#)
 5. Home address: _____
(No. and Street or P. O. Box) (City/Town) (State) (Zip)
 6. Age: _____ 7. Sex: Male ___ Female ___ (Check one)
 8. Program the student was enrolled in at the time of injury or illness: _____
-
-

The Accident or Exposure:

9. Place of accident or exposure: _____
(No. and Street or P. O. Box) (City/Town) (State) (Zip)

If the accident or exposure occurred on schools premises, give building number and/or name. If accident or exposure occurred away from main campus, furnish complete address. If it occurred on a public highway or at any other place which cannot be identified by number and street, please provide place references locating the place of injury as accurately as possible.

10. Was place of accident or exposure on the school's premises? _____ (Yes or No)
11. What was the student doing when injured? _____
(Be specific. If he/she was using tools or equipment or handling material, name

them and tell what he/she was doing with them.)

12. How did the accident occur? (Describe fully the events which resulted in the injury.) _____

Tell what happened and how it happened. Name any objects involved and tell how they were involved. Give full details on all factors. Use separate sheet if necessary. _____

13. Describe the injury or illness in detail and indicate the part of the body affected. _____

14. Name the object or substance which directly injured the student. (For example, the machine or thing he/she struck against or which struck him/her; the vapor or poison he/she inhaled or swallowed; the chemical which irritated his/her skin; or in cases of strains, etc., the item he/she was lifting, pulling, etc.) _____

15. Date of injury or initial diagnosis of student illness _____

16. Did the student die? _____ (Yes or No)

17. Name and address of physician; if hospitalized, give name and address of hospital: _____

Date of report _____ Prepared by _____ Official Position _____

Stanly Community College
Radiography Program
Clinical Absentee Form

Student's name: _____

Date of absence: _____

Clinical Education Level: _____

Clinic site notified prior to scheduled time: **YES** **NO**

D notified prior to scheduled time: **YES** **NO**

Total Absences (in current semester): _____

Student Signature: _____

Director of Clinical Education Signature: _____

**STANLY COMMUNITY COLLEGE
RADIOGRAPHY PROGRAM
VOLUNTARY DECLARATION OF PREGNANCY FORM**

In accordance with the NRC's regulation at 10CFR 20.1208, "Dose to an Embryo/Fetus," I am declaring that I am pregnant. I believe that I became pregnant in the month of _____, 20____ (*only the month and year need to be provided*) or my due date is _____.

I understand that the radiation dose to my embryo/fetus during my entire pregnancy will not be allowed to exceed 0.5 rem (5mSv). I also understand that I am responsible for practicing safe radiation practices at all times. By signing this form I am also confirming that I have read the program's pregnancy policy and agree to abide by the established policy.

I choose to:

- Continue in the program **without** modification
- Continue in the program **with** modification

Date _____

Student Signature _____

Print your name _____

Program Director

Signature _____ Date _____

Director of Clinical Education

Signature _____ Date _____

**STANLY COMMUNITY COLLEGE
RADIOGRAPHY PROGRAM
WITHDRAWAL OF DECLARATION OF PREGNANCY FORM**

In accordance to my right to do so, I do hereby withdraw my declaration of pregnancy. I realize that the radiation dose limits will then be applied only to the time between the declaration date and the date of withdrawal of declaration.

Date_____

Student Signature_____

Print your name_____

Program Director
Signature_____Date_____

Director of Clinical Education
Signature_____Date_____

**STANLY COMMUNITY COLLEGE
RADIOGRAPHY PROGRAM
LOST, DAMAGED, OR MISPLACED DOSIMETRY BADGE FORM**

Student Name: _____ Date: _____
Dosimetry Badge Identification Number: _____

- Lost or misplaced on ____ (date) ____
- Damaged
- Other

Student must provide an explanation below.

This form must be submitted to the Director of Clinical Education within 24 hours of loss or damage. The student is not permitted to attend clinic until the lost badge is replaced. The student will cover the cost of the lost badge plus expedited shipping.

Replacement badge was issued on _____.

Director of Clinical Education: _____

**STANLY COMMUNITY COLLEGE
RADIOGRAPHY PROGRAM
EXCEEDING THRESHOLD DOSE REPORT FORM**

Student Name: _____

Dosimeter Reporting Period: _____

The student's dosimetry badge indicated a reading in excess of the program's ALARA Level 2 threshold dose. The student must indicate why you think this threshold was exceeded.

Plan of Action

RSO Signature: _____ Date: _____

MRI SAFETY SCREENING FORM

WARNING: Certain implants, devices, or objects may be hazardous to you and/or may interfere with the MR procedure (i.e., MRI, MR angiography, functional MRI, MR spectroscopy). Do not enter the MR system room or MR environment if you have any question or concern regarding an implant, device, or object. Consult the MRI Technologist or Radiologist **BEFORE** entering the MR system room. The MR system magnet is **ALWAYS** on.

Before entering the MR environment or MR system room, you must remove all metallic objects including hearing aids, dentures, partial plates, keys, beeper, cell phone, eyeglasses, hair pins, barrettes, jewelry, body piercing jewelry, watch, safety pins, paperclips, money clip, credit cards, bank cards, magnetic strip cards, coins, pens, pocket knife, nail clipper, tools, clothing with metal fasteners, & clothing with metallic threads.

Please consult the MRI Technologist or Radiologist if you have any question or concern **BEFORE** you enter the MR system room.

Please indicate if you have any of the following:	YES	NO
Aneurysm clip(s)		
Cardiac pacemaker		
Implanted cardioverter defibrillator (ICD)		
Electronic implant or device		
Magnetically-activated implant or device		
Neurostimulation system		
Spinal cord stimulator		
Internal electrodes or wires		
Bone growth/bone fusion stimulator		
Cochlear, otologic, or other ear implant		
Insulin or other infusion pump		
Implanted drug infusion device		
Any type of prosthesis		
Heart valve prosthesis		
Eyelid spring or wire		
Artificial or prosthetic limb		
Metallic stent, filter, or coil		
Shunt (spinal or intraventricular)		
Vascular access port and/or catheter		
Radiation seeds or implants		
Swan-Ganz or thermodilution catheter		
Medication patch (Nicotine, Nitroglycerine)		
Any metallic fragment or foreign body		
Wire mesh implant		

Tissue expander (e.g., breast)		
Surgical staples, clips, or metallic sutures		
Joint replacement (hip, knee, etc.)		
Bone/joint pin, screw, nail, wire, plate, etc.		
IUD, diaphragm, or pessary		
Dentures or partial plates		
Tattoo or permanent makeup		
Body piercing jewelry		
Hearing aid		
Other implant? If so please list:		

I attest that the above information is correct to the best of my knowledge. I read and understand the contents of this form, and the MRI safety policy listed below, and had the opportunity to ask questions regarding the information on this form. I agree to abide by the MRI safety policy of the program and all clinical affiliates.

Signature of Person Completing Form: _____

Date ____/____/____



Radiography

1. Introduction

Candidates applying for certification and registration under the primary eligibility pathway are required to meet the Professional Education Requirements specified in the *ARRT Rules and Regulations*. *ARRT's Radiography Didactic and Clinical Competency Requirements* are one component of the Professional Education Requirements.

The requirements are periodically updated based upon a [practice analysis](#) which is a systematic process to delineate the job responsibilities typically required of radiographers. The result of this process is a [task inventory](#) which is used to develop the clinical competency requirements (see section 4 below) and the content specifications which serve as the foundation for the didactic competency requirements (see section 3 below) and the examination.

2. Documentation of Compliance

Verification of program completion, including Didactic and Clinical Competency Requirements and all degree-related requirements including conferment of the degree, will be completed on the Program Completion Verification Form on the ARRT Educator Website after the student has completed the Application for Certification and Registration.

Candidates who complete their educational program during 2022 or 2023 may use either the 2017 Didactic and Clinical Competency Requirements or the 2022 requirements. Candidates who complete their educational program after December 31, 2023 must use the 2022 requirements.

3. Didactic Competency Requirements

The purpose of the didactic competency requirements is to verify that individuals had the opportunity to develop fundamental knowledge, integrate theory into practice and hone affective and critical thinking skills required to demonstrate professional competence. Candidates must successfully complete coursework addressing the topics listed in the [ARRT Content Specifications](#) for the Radiography Examination. These topics would typically be covered in a nationally-recognized curriculum such as the ASRT Radiography Curriculum. Educational programs accredited by a mechanism acceptable to ARRT generally offer education and experience beyond the minimum requirements specified in the content specifications and clinical competency documents.

4. Clinical Competency Requirements

The purpose of the clinical competency requirements is to verify that individuals certified by the ARRT have demonstrated competence performing the clinical activities fundamental to a particular discipline. Competent performance of these fundamental activities, in conjunction with mastery of the cognitive knowledge and skills covered by the certification examination, provides the basis for the acquisition of the full range of procedures typically required in a variety of settings. Demonstration of clinical competence means that the candidate has performed the procedure independently, consistently, and effectively during the course of his or her formal education. The following pages identify the specific procedures for the clinical competency requirements. Candidates may wish to use these pages, or their equivalent, to record completion of the requirements. The pages do NOT need to be sent to the ARRT.



4.1 General Performance Considerations

4.1.1 Patient Diversity

Demonstration of competence should include variations in patient characteristics such as age, gender, and medical condition.

4.1.2 Elements of Competence

Demonstration of clinical competence requires that the program director or the program director's designee has observed the candidate performing the procedure independently, consistently, and effectively during the course of the candidate's formal educational program.

4.1.3 Simulated Performance

ARRT defines simulation of a clinical procedure routinely performed on a patient as the candidate completing all possible hands-on tasks of the procedure on a live human being using the same level of cognitive, psychomotor, and affective skills required for performing the procedure on a patient.

ARRT requires that competencies performed as a simulation must meet the same criteria as competencies demonstrated on patients. For example, the competency must be performed under the direct observation of the program director or program director's designee and be performed independently, consistently, and effectively.

Simulated performance must meet the following criteria:

- Simulation of imaging procedures requires the use of proper radiographic equipment without activating the x-ray beam.
- A total of ten imaging procedures may be simulated. Imaging procedures eligible for simulation are noted within the chart (see section 4.2.2).
- If applicable, the candidate must evaluate related images.
- Some simulations are acceptable for General Patient Care (see section 4.2.1). These do not count toward the ten imaging procedures that can be simulated.

4.2 Radiography-Specific Requirements

As part of the education program, candidates must demonstrate competence in the clinical procedures identified below. These clinical procedures are listed in more detail in the following sections:

- Ten mandatory general patient care procedures;
- 36 mandatory imaging procedures;
- 15 elective imaging procedures selected from a list of 35 procedures;
- One of the 15 elective imaging procedures must be selected from the head section; and
- Two of the 15 elective imaging procedures must be selected from the fluoroscopy studies section.

One patient may be used to document more than one competency. However, each individual procedure may be used for only one competency (e.g., a portable femur can only be used for a portable extremity or a femur but not both).



4.2.1 General Patient Care Procedures

Candidates must be CPR/BLS certified and have demonstrated competence in the remaining nine patient care procedures listed below. The procedures should be performed on patients whenever possible, but simulation is acceptable if state regulations or institutional practice prohibits candidates from performing the procedures on patients.

General Patient Care Procedures	Date Completed	Competence Verified By
CPR/BLS Certified		
Vital Signs – Blood Pressure		
Vital Signs – Temperature		
Vital Signs – Pulse		
Vital Signs – Respiration		
Vital Signs – Pulse Oximetry		
Sterile and Medical Aseptic Technique		
Venipuncture*		
Assisted Patient Transfer (e.g., Slider Board, Mechanical Lift, Gait Belt)		
Care of Patient Medical Equipment (e.g., Oxygen Tank, IV Tubing)		

*Venipuncture can be simulated by demonstrating aseptic technique on another person, but then inserting the needle into an artificial forearm or suitable device.

4.2.2 Imaging Procedures

Institutional protocol will determine the positions and projections used for each procedure. When performing imaging procedures, the candidate must independently demonstrate appropriate:

- patient identity verification;
- examination order verification;
- patient assessment;
- room preparation;
- patient management;
- equipment operation;
- technique selection;
- patient positioning;
- radiation safety;
- image processing; and
- image evaluation.



4.2.2 Imaging Procedures (continued)

Imaging Procedures	Mandatory or Elective		Eligible for Simulation	Date Completed	Competence Verified By
	Mandatory	Elective			
Chest and Thorax					
Chest Routine	✓				
Chest AP (Wheelchair or Stretcher)	✓				
Ribs	✓		✓		
Chest Lateral Decubitus		✓	✓		
Sternum		✓	✓		
Upper Airway (Soft-Tissue Neck)		✓	✓		
Sternoclavicular Joints		✓	✓		
Upper Extremity					
Thumb or Finger	✓		✓		
Hand	✓				
Wrist	✓				
Forearm	✓				
Elbow	✓				
Humerus	✓		✓		
Shoulder	✓				
Clavicle	✓		✓		
Scapula		✓	✓		
AC Joints		✓	✓		
Trauma: Shoulder or Humerus (Scapular Y, Transthoracic or Axial)*	✓				
Trauma: Upper Extremity (Non-Shoulder)*	✓				
Lower Extremity					
Toes		✓	✓		
Foot	✓				
Ankle	✓				
Knee	✓				
Tibia-Fibula	✓		✓		
Femur	✓		✓		
Patella		✓	✓		
Calcaneus		✓	✓		
Trauma: Lower Extremity*	✓				

* Trauma requires modifications in positioning due to injury with monitoring of the patient's condition.



4.2.2 Imaging Procedures (continued)

Imaging Procedures	Mandatory or Elective		Eligible for Simulation	Date Completed	Competence Verified By
	Mandatory	Elective			
Head – Candidates must select at least one elective procedure from this section.					
Skull		✓	✓		
Facial Bones		✓	✓		
Mandible		✓	✓		
Temporomandibular Joints		✓	✓		
Nasal Bones		✓	✓		
Orbits		✓	✓		
Paranasal Sinuses		✓	✓		
Spine and Pelvis					
Cervical Spine	✓				
Thoracic Spine	✓		✓		
Lumbar Spine	✓				
Cross-Table (Horizontal Beam)	✓		✓		
Lateral Spine (Patient Recumbent)					
Pelvis	✓				
Hip	✓				
Cross-Table (Horizontal Beam)	✓		✓		
Lateral Hip (Patient Recumbent)					
Sacrum and/or Coccyx		✓	✓		
Scoliosis Series		✓	✓		
Sacroiliac Joints		✓	✓		
Abdomen					
Abdomen Supine	✓				
Abdomen Upright	✓		✓		
Abdomen Decubitus		✓	✓		
Intravenous Urography		✓			



4.2.2 Imaging Procedures (continued)

Imaging Procedures	Mandatory or Elective		Eligible for Simulation	Date Completed	Competence Verified By
	Mandatory	Elective			
Fluoroscopy Studies – Candidates must select two procedures from this section and perform per site protocol.					
Upper GI Series, Single or Double Contrast		✓			
Contrast Enema, Single or Double Contrast		✓			
Small Bowel Series		✓			
Esophagus (NOT Swallowing Dysfunction Study)		✓			
Cystography/Cystourethrography		✓			
ERCP		✓			
Myelography		✓			
Arthrography		✓			
Hysterosalpingography		✓			
Mobile C-Arm Studies					
C-Arm Procedure (Requiring Manipulation to Obtain More Than One Projection)	✓		✓		
Surgical C-Arm Procedure (Requiring Manipulation Around a Sterile Field)	✓		✓		
Mobile Radiographic Studies					
Chest	✓				
Abdomen	✓				
Upper or Lower Extremity	✓				
Pediatric Patient (Age 6 or Younger)					
Chest Routine	✓		✓		
Upper or Lower Extremity		✓	✓		
Abdomen		✓	✓		
Mobile Study		✓	✓		
Geriatric Patient (At Least 65 Years Old and Physically or Cognitively Impaired as a Result of Aging)					
Chest Routine	✓				
Upper or Lower Extremity	✓				
Hip or Spine		✓			
Subtotal					
Total Mandatory exams required	36				
Total Elective exams required		15			
Total number of simulations allowed			10		