Blackhawk Technical College
Associate Degree Radiography Program

Student Handbook:
Policies, Procedures, and Evaluation
For the 2023-2025 Academic Years
(Class of 2025)

BLACKHAWK Technical College

6004 S County Road G, Janesville, WI 53546

(608) 758-6900 • info@blackhawk.edu • blackhawk.edu

American Registry of Radiologic Technologists
Code of Ethics

The Code of Ethics forms the first part of the Standards of Ethics. The Code of Ethics shall serve as a guide by which Registered Technologists and Applicants may evaluate their professional conduct as it relates to patients, health care consumers, employers, colleagues, and other members of the health care team. The Code of Ethics is intended to assist Registered Technologists and Applicants in maintaining a high level of ethical conduct and in providing for the protection, safety, and comfort of patients. The Code of Ethics is aspirational.

1. The Radiologic Technologist conducts himself/herself in a professional manner, responds to patient needs and supports colleagues and associates in providing quality patient care.
2. The Radiologic Technologist acts to advance the principal objective of the profession to provide services to humanity with full respect for the dignity of mankind.
3. The Radiologic Technologist delivers patient care and service unrestricted by the concerns of personal attributes or the nature of the disease or illness, and without discrimination regardless of sex, race, creed, religion, or socioeconomic status.
4. The Radiologic Technologist practices technology founded upon theoretical knowledge and concepts, utilizes equipment and accessories consistent with the purposes for which they have been designed, and employs procedures and techniques appropriately.
5. The Radiologic Technologist assesses situations, exercises care, discretion and judgment, assumes responsibility for professional decisions, and acts in the best interest of the patient.
6. The Radiologic Technologist acts as an agent through observation and communication to obtain pertinent information for the physician to aid in the diagnosis and treatment management of the patient, and recognizes that interpretation and diagnosis are outside the scope of practice for the profession.
7. The Radiologic Technologist utilizes equipment and accessories, employs techniques and procedures, performs services in accordance with an accepted standard of practice, and demonstrates expertise in minimizing the radiation exposure to the patient, self, and other members of the health care team.
8. The Radiologic Technologist practices ethical conduct appropriate to the profession, and protects the patient's right to quality radiologic technology care.
9. The Radiologic Technologist respects confidences entrusted in the course of professional practice, respects the patient's right to privacy, and reveals confidential information only as required by law or to protect the welfare of the individual or the community.
10. The Radiologic Technologist continually strives to improve knowledge and skills by participating in educational and professional activities, sharing knowledge with colleagues and investigating new and innovative aspects of professional practice. One means available to improve knowledge and skill is through professional continuing education.

Table of Contents

ADMINISTRATIVE POLICIES AND INFORMATION

BTC Mission, Vision and Guiding Principles 1
Radiography Program Mission and Goals and Outcomes 1
Institution & Program Accreditation 2
Program Compliance with JRCERT Policy 2
Non-Discrimination Policy 3
Policy Disclaimer 3
FERPA Information 3
Student Complaint and Resolution 3
BTC Core Abilities/Program Goals 3
BTC Student Catalog Content 5
Radiography Program Functional Abilities 7

ACADEMIC POLICIES

Program Admission Criteria/Petitioning 11
Program Withdrawal 11
Program Re-Entry 12
Early Program Release 12
Tuition Refund on Withdrawal 12
Academic Standards 13
Radiography Program Grading Scale 13
Program Curriculum/Course Sequence 14
Services for Students with Disabilities 15
Routine Academic Advising 15
Meeting with Faculty 15
Support to Students at Risk of Failure 15
Academic Honesty 15
BTC Student Code of Conduct and Due Process 16
Technical Skills Attainment/Exit Interview 16
Attendance for Class and Laboratory 16
Laboratory Experience Expectations 16
Textbooks 16
Missing Tests 17
Advanced Standing/Transfer 17
Cell Phones and Social Media On Campus 17
Graduation Requirements 18
ARRT Examination Eligibility 18
Wisconsin Radiographer License 18

CLINICAL EDUCATION POLICIES

Overview of Clinical Education 19
Objectives of Clinical Education 19
Structure of Clinical Education 19
Radiography Practice Standards 20
Professional Liability Insurance 20
Patient Privacy/HIPAA 21
Clinical Education Placement 21
Clinical Assignment and Rotations 21
Clinical Affiliate Orientation 22
Clinical Education Schedule 22
Weekend/Evening Rotations 23
Elective/Specialty Rotations 23
Mammography Rotation 24
Computed Tomography Rotation 24
Absence/Tardiness from Clinical Education 24
Clocking In and Out for Clinical 25
Leaving Early from Clinical Assignment 25
Extended Illness and Absence 26
Bereavement Time 26
Make Up Time 26
Emergency Closing of BTC 27
Reporting Absence from Clinical 28
Dress Code for Clinical Education 29
Clinical Competency Evaluation 30
Clinical Competency Evaluation Forms 30
Direct/Indirect Supervision & Repeats 31
Unsuccessful Competency Attempt 32
Patient Imaging Error 32
Non-Procedural Competency Forms 33
Other Clinical Education Forms 33
Equipment Handling and Manipulation 34
Telephone Calls 34
Computer Use at Clinical 34
Alcohol and/or Drugs 34
Smoking 35
Related Work Policy 35
Field Trips/Student Travel 35
Background Check 36
Code of Conduct 37
Violation of Clinical Education Policy 38
Investigation Process 39
Communication of Disciplinary Actions to Clinical Affiliates 40
Clinical Probation 40
Clinical Grading Methodology 40

RADIATION PROTECTION POLICIES

General Radiation Safety 43
Patient Radiation Safety 43
Patient Shielding 44
Student Radiation Safety 44
Holding Patients 45
Performing Radiographs without an Order 45
Mobile and Surgical Procedures 46
Student Pregnancy 46
Energized Laboratory Policies 47
MRI Safety and Screening 47

STUDENT HEALTH

Health and Safety for Clinical Education 49
Incident and Injury Reporting 50
Lifting or Other Restrictions 50
Return to Educational Activities following Extended Health-Related Absence 50
Infection Control 51
Airborne Isolation Patients 51
Hand Hygiene 51
Standard Precautions 52
Exposure to Blood & Body Fluids 52
Tuberculosis Testing and Precautions 53
Hepatitis B 53
Professional Development 54
Medical Imaging Club Membership 54
Student Input 54
Acknowledgement of Student Handbook 55

EXHIBIT SECTION

Forms/Evaluation Tools 57

Blackhawk Technical College Associate Degree Radiography Program Student Handbook
Section 1: Administrative Policies and Information

Blackhawk Technical College: Mission, Vision & Values

OUR MISSION: We help you build your future with a flexible education in a supportive environment.
OUR VISION: Delivering innovative education to enrich our communities.
OUR VALUES:

- **Responsive:** Meeting students when and where they learn best, providing supportive services empowering them to succeed.
- **Collaborative:** Creating critical partnerships, adapting to community needs.
- **Empowering:** Building an inclusive, aligned and supportive culture, allowing students and employees to develop, grow and succeed.
- **Strategic:** Optimizing college resources to meet the needs of learners and employers through data-informed decisions and innovative solutions.
- **Process-driven:** Developing transparent, consistent, aligned and repeatable processes and procedures, focusing on efficiency, accountability and excellence.

Our Commitment to Diversity

In an effort to provide flexible education and a supportive environment, Blackhawk Technical College aspires to create a climate in which all students, employees and community members feel welcomed, valued and included. To that end, the College strives to use inclusive and accessible practices to create a community of diverse ideas, abilities, cultures and lifestyles.

Blackhawk Technical College Associate Degree Radiography Program Mission and Goals

PROGRAM MISSION:
The Mission of the Blackhawk Technical College Associate Degree Radiography Program is to prepare the Student to Practice Entry-Level Diagnostic Medical Radiography.

PROGRAM GOALS (BTC CORE ABILITIES):

Goal 1: Demonstrate Critical Thinking
Goal 2: Demonstrate Effective Communication
Goal 3: Demonstrate Professional Work Behaviors
Goal 4: Demonstrate Diverse and Inclusive Practices
Goal 5: Demonstrate Professional use of Relevant Technology

PROGRAM OUTCOMES:

1. Carryout the Production and Evaluation of Radiographic Images
2. Practice Radiation Safety Principles
3. Provide Quality Patient Care
4. Model Professional and Ethical Behavior Consistent with the A.R.R.T. Code of Ethics
5. Apply Critical Thinking and Problem Solving Skills in the Practice of Diagnostic Radiography

The methodology used to assess the Radiography Program Mission, Goals, and Outcomes is available at http://www.blackhawk.edu/Portals/0/pdf/Program%20Brochures/RadiographyOutcomes.pdf

Institution and Program Accreditation

Accreditation is a non-governmental, voluntary means for an educational institution and/or program to assure those within the institution or program, the students, the public, and state and federal agencies that the institution or program has clearly defined objectives, an appropriate structure, and staff and resources to accomplish those objectives.

BLACKHAWK TECHNICAL COLLEGE ACCREDITATION:
Blackhawk Technical College is accredited by the Higher Learning Commission, 159 North Dearborn Chicago, IL 60601; 312-263-0456 www.ncahlc.org

RADIOGRAPHY PROGRAM ACCREDITATION:
The Blackhawk Technical College Associate Degree Radiography Program is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT) 20 North Wacker Drive, Suite 2850 Chicago IL 60606-3182; 312-704-5300 www.jrcert.org

The BTC Radiography Program received an accreditation award of 8 years on 21 April 2020 and the next site visit is tentatively scheduled for the Fourth Quarter of 2027.

Program Compliance with JRCERT Policy

The Federal Higher Education Act of 1965, as amended, provides that a student, graduate, faculty or any other individual who believes he or she has been aggrieved by an educational program or institution has the right to submit documented allegation(s) to the agency accrediting the institution or program.

The JRCERT, recognized by the United States Department of Education for the accreditation of radiography and radiation therapy educational programs investigates allegation(s) submitted, in writing, signed by any individual with reason to believe that an accredited program has acted contrary to Standards for an Accredited Educational Program in Radiologic Sciences or that conditions at the program appear to jeopardize the quality of instruction or the general welfare of its students.

PROCESS

1. The individual should first attempt to resolve the complaint directly with program/institution officials by following the internal complaint procedures provided by the program/institution. Each program/institution is required to publish its internal complaint procedure in an informational document such as a catalog or student handbook.
2. If the individual is unable to resolve the complaint with program/institution officials or believes that the concerns have not been properly addressed, he or she may contact the JRCERT to request an Allegations Reporting Form.

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

3. The Allegations Reporting Form must be completed, signed and sent to the above address. Incomplete or unsigned forms will not be considered. The completed form should indicate the resolution being sought and any efforts that have been made to resolve the complaint through program/institution internal complaint processes.
4. Submitted allegations must relate to the Standards for an Accredited Educational Program in Radiologic Sciences. The JRCERT will not divulge the identity of the complainant(s) unless required to do so through legal process.

Nondiscrimination Policy

The Blackhawk Technical College Associate Degree Radiography Program believes in equal opportunity for all students and program applicants. Therefore, the admission, grading, clinical assignments and evaluation, graduation requirements, and all other policies are designed and written to promote equal consideration regardless of age, sex, race, sexual orientation, physical handicap, national origin, or religious affiliation.

Policy Disclaimer

The Program Faculty of the Blackhawk Technical College Associate Degree Radiography Program reserves the right to make any additions or changes in program policy as deemed necessary at any time. Students will be notified of new policies and/or changes in program policies in writing.

Family Educational Rights and Privacy Act (FERPA)

GENERAL INFORMATION

The Family Educational Rights and Privacy Act (FERPA) (20 U.S.C. § 1232g; 34 CFR Part 99) is a Federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education.

Complete information regarding FERPA is found in the current Blackhawk Technical College Student Handbook.

Student Complaint and Resolution

The Procedure for the Investigation and Resolution of Complaints is outlined in the Current Blackhawk Technical College Webpage as well as the Student Handbook. Any Complaints made against the Blackhawk Technical College Radiography Program or its Faculty will be investigated in Accordance with these Policies.

Students choosing to a complaint against Blackhawk Technical College or the Radiography Program are advised to follow the process as outlined in these documents.

Blackhawk Technical College Core Abilities

Core abilities describe those fundamental talents and skills viewed as critical to student success. While technical skills are essential to perform a job, it is often an individual's "soft skills" such as the ability to communicate professionally, work in teams, and solve problems that ultimately determine success on the job.

Blackhawk Technical College has identified seven core abilities that describe the broadest outcomes, skills or purposes that are addressed and assessed throughout instruction. These core abilities are transferrable, and go beyond the context of a specific learning experience, course or even educational program. Additionally, each core ability has a number of indicators identifying strategies or practices that can and will be used to evaluate and document successful attainment of the core ability.

BTC CORE ABILITIES:

Goal 1: Demonstrate Critical Thinking
Goal 2: Demonstrate Effective Communication
Goal 3: Demonstrate Professional Work Behaviors
Goal 4: Demonstrate Diverse and Inclusive Practices
Goal 5: Demonstrate Professional use of Relevant Technology

CORE ABILITIES AND THE BTC RADIOGRAPHY PROGRAM It is the philosophy of Blackhawk Technical College and the Radiography Program that ***Core Abilities = Employability.*** As such all-program policies, procedures, and activities are developed and implemented with the intent of Technical Skills Attainment as described in the Radiography Program Mission, Goals and Outcomes, but also the BTC Core Abilities.

Throughout this document, policies, procedures, and evaluation tools will be referenced by the five core ability symbols identified by Blackhawk Technical College to demonstrate the program's commitment to attainment of these skills.

As with academic and clinical education requirements, the BTC Radiography Program assesses the attainment of the Core Abilities. As such, meeting the minimal standards of these skills and have an impact on academic and clinical standing.

BLACKHAWK TECHNICAL COLLEGE CORE ABILITIES

RADIOGRAPHY PROGRAM GOALS

Demonstrate Critical Thinking

- Define problems clearly and precisely
- Utilize relevant information gathered from diverse perspectives Evaluate potential solutions using relevant criteria and standards

Demonstrate Effective Communication

- Employ effective communication practices
- Adapt communication to engage diverse audiences
- Use technology to effectively communicate

Demonstrate Professional Work Behaviors

- Manage time effectively
- Adhere to policies, procedures, and safety protocols
- Demonstrate accountability

Demonstrate Diverse and Inclusive Practices

- Respond appropriately to diverse situations.
- Model respectful and inclusive interactions
- Acknowledge the contributions of a diverse society

Demonstrate Professional use of Relevant Technology

- Demonstrate proper selection of equipment, tools, and resources to produce desired results
- Demonstrate safe and secure use of technology
- Use occupational specific technology in appropriate ways

Blackhawk Technical College Catalog

With the exception of certain policies/procedures governed by program accreditation, the Blackhawk Technical College Catalog supersedes program policy/procedure. The following is a list of items addressed by the BTC Student Handbook. This document will serve as the resource and authority for issues identified below:

Academics:

- ☑ Academic Calendar
- ☑ Academic Forgiveness
- ☑ Adding a Course
- ☑ Attendance
- ☑ Auditing Classes
- ☑ Changes/Verifying Programs of Record Course
- ☑ Check your BTC email
- ☑ Compass Retest Policy
- ☑ Complete Withdrawal of Courses
- ☑ Course Scheduling
- ☑ Distance Learning
- ☑ Dropping a Course
- ☑ Formal Graduation Commencement
- ☑ Governing Catalog
- ☑ Grade Appeal Process
- ☑ Grading Procedures
- ☑ Graduation
- ☑ Health Science Assessments
- ☑ Honor Cord
- ☑ Honors
- ☑ Incomplete Course Work
- ☑ Make-Up Testing
- ☑ Mid-Term Grades
- ☑ Non-Attendance (No Show) Policy
- ☑ Pre-Requisites/ Co-Requisites
- ☑ President's Honor List
- ☑ Program Graduation and Persistence Rates
- ☑ Program Waitlists
- ☑ Records Information
- ☑ Refund Policy
- ☑ Religious Belief Accommodations
- ☑ Repeating Courses
- ☑ Retraining Guarantee Policy
- ☑ Standards of Academic Progress
- ☑ Student Referral
- ☑ Testing/Assessment Services
- ☑ Transcripts
- ☑ Transfer and Work Experience Credit
- ☑ Transfer of Credit from BTC
- ☑ Tuition and Fee Payment
- ☑ UW/WTCS Policy on Credit Transfer

Financial Assistance Information:

- ☑ Applying for Financial Aid
- ☑ Book Charge Information
- ☑ Disbursement of Financial Aid
- ☑ Federal Assistance
- ☑ Financial Assistance Information
- ☑ Helpful Websites
- ☑ Other Grants and Scholarships
- ☑ Private Scholarships
- ☑ Return of the Title IV Financial Aid
- ☑ Satisfactory Academic Progress
- ☑ State of Wisconsin Assistance
- ☑ Student Consumer Information
- ☑ Types of Financial Assistance
- ☑ Veterans/Military Programs

Student Services:

- ☑ Activity Period
- ☑ Advising Services
- ☑ Bookstore
- ☑ Bulletin Boards and Notices
- ☑ Bus Transportation
- ☑ Career and Professional Development Services
- ☑ Change of Name, Address and/or Phone Number
- ☑ Computer Use
- ☑ Family Educational Rights and Privacy Act (FERPA)
- ☑ GED/HSED Completion Ceremony
- ☑ GED Testing Service®
- ☑ General Education Development (GED) & High School Equivalency
- ☑ Health Insurance
- ☑ Learning Centers/ Tutoring Services
- ☑ Lockers
- ☑ Lost and Found
- ☑ Multicultural/Diversity Services
- ☑ Services for Students with Disabilities
- ☑ Student Computing Resource Guide
- ☑ Student Identification Cards
- ☑ Student Identification Numbers and FERPA
- ☑ Telephones and Messages
- ☑ Weather-Related School Closings

College Life:

- ☑ Awards Program
- ☑ BTC Ambassadors
- ☑ Clubs and Organizations
- ☑ Fitness Center
- ☑ Food Services
- ☑ Library
- ☑ Parking
- ☑ Recycling
- ☑ Smoke/Tobacco Free Campus
- ☑ Unattended Children

Students' Rights and Responsibilities:

☑ Academic Honesty
☑ Alcohol Regulations
☑ Complicity
☑ Disruptive Conduct
☑ Drugs
☑ Endangering the Safety of Others
☑ Failure to Comply
☑ False Information
☑ General Student Complaint Submission and Resolution
☑ Grievance Procedure
☑ Guests
☑ Mental Health Policy
☑ Misuse of College Materials Services or Property
☑ Off-Campus Conduct
☑ Sexual and Other Harmful Harassment
☑ Theft
☑ Weapons, Dangerous Instruments

Campus Safety:

☑ Accident or Illness Emergency Procedures
☑ Alcohol and Illegal Drugs Policies
☑ Grievance Procedure
☑ Behavior Intervention Team (BIT)
☑ Consensual Relations
☑ Crime Prevention and Security Procedures
☑ Criminal Offense Statistics at BTC Facilities
☑ Discrimination and Harassment Policies
☑ Emergency Campus Security Procedures
☑ Emergency Response Guides and Evacuation Procedures
☑ Non-Emergency Contact Numbers
☑ Security and Access to BTC Facilities
☑ Sex Offender Registry
☑ Timely Warning of Potential Threats

The BTC Student Handbook is located on the BTC Webpage:

http://catalog.blackhawk.edu/

Blackhawk Technical College Associate Degree Radiography Program Functional Abilities

The Americans with Disabilities Act of 1991 (42 U.S.C. 12101, et seq.) and Section 504 of the Rehabilitation Act of 1973 (29 U.S.C 794) prohibits discrimination of persons because of her of his disability. In keeping with these laws, colleges of the Wisconsin Technical College System (WTCS) make every effort to insure a quality education for students. The purpose of this document is to ensure that students acknowledge that they have been provided information on the functional abilities of a student in the above named program. In addition, information was given to the student on reasonable accommodations to meet the Functional Abilities at this time.

Program Skill Level	Application to Clinical Radiography
Gross Motor Coordination	
• Move within confined spaces • Maintain balance in multiple positions • Reach above shoulders • Reach below waist • Reach out front	• Perform radiography in small rooms/mobile radiography • Work with overhead x-ray tube/mobile equipment • Position patients for radiographic procedures • Move/transport patients
Fine Motor Coordination	
• Grasp/pick up objects with hands • Write with pen or pencil • Key/type • Twist/turn adjustment dials • Good eye hand & foot coordination • Simultaneous hand/wrist & finger movement	• Utilize radiographic ancillary devices • Obtain patient history/report • Utilize computers/digital radiographic equipment • Select technical factors • Perform exposures • Manipulate radiographic tube/table
Physical Endurance	
• Stand up for several hours • Sustain repetitive motions • Maintain same position for long period of time • Function in a fast paced environment	• Work in radiographic department • Perform radiographic procedures • Perform fluoroscopic procedures • Perform trauma/emergency radiography
Physical Strength	
• Push and pull 50 pounds • Support 50 pounds of weight • Lift/carry 50 pounds • Use upper body strength • Use lower body strength • Squeeze with hands	• Manipulate fixed/mobile radiographic equipment • Transport/transfer patients • Carry image receptors/ancillary radiographic equipment • Manipulate/transport fixed/mobile radiographic equipment
Mobility	
• Twist • Bend • Stoop/squat • Move quickly • Walk	• Perform routine radiographic examinations • Manipulate/transport fixed/mobile radiographic equipment • React to emergency situations • Transport/transfer patients
Vision	
• See objects up to 20 inches away • See objects up to 20 feet away • Use depth perception • Use peripheral vision • Distinguish colors and gray scale • See in darkened room	• Observe/monitor patients during radiographic procedures • Visualize structures on radiographic images • Perform fluoroscopic procedures
Hearing	
• Hear and discriminate speech at normal conversation levels • Hear faint voices • Hear faint body sounds • Discriminate speech with background noise • Hear when unable to see	• Hear patients during conversations • Detect patient issues from a distance • Assess vital signs • Identify problems in darkened room
Smell	
• Detect odors	• Identify changing/abnormal smells

ENVIRONMENT	
• Tolerate exposure to allergens, strong odors, soaps, temperature changes, safety equipment, and confined environments for extended periods of time	• Work with soaps/chemicals routinely used in healthcare/radiography
TACTILE	
• Feel differences in size and shape • Feel differences in surface characteristics • Feel Vibrations • Detect hot and cold temperatures	• Palpate patients during normal radiographic positioning • Feel for objects/structures in darkened environment Assess vital signs
READING	
• Read and understand written documents • Read digital displays and computer monitors	• Interpret orders for radiographic examinations • View information/images on computer monitor
MATH	
• Add, subtract , multiply, divide and count • Compute fractions and decimals • Comprehend and interpret graphical data • Tell and measure time • Read and interpret measurement marks • Document numbers in records	• Calculate/manipulate technical factors • Calculate dose administration (contrast media) • Interpret digital image histogram • Time radiographic examinations • Record technical factors/vital signs
INTERPERSONAL SKILLS	
• Establish rapport with individuals	• Interact professionally and clearly with patients/families/other healthcare professionals
COMMUNICATION SKILLS	
• Speak English • Read English • Write English • Listen and comprehend spoken and written English • Exhibit and comprehend nonverbal cues • Collaborate with others	• Communicate effectively and professionally with patient, family members, and all other members of the healthcare team.
EMOTIONAL STABILITY	
• Establish professional relationships • Adapt to changing environments • Deal with the unexpected • Focus attention on tasks • Accept feedback appropriately • Accept responsibility for own actions	• Interact appropriately and professionally in all situations.
CRITICAL THINKING	
• Comprehend and follow instructions • Identify cause and effect relationships • Follow processes from start to finish • Sequence information	• Adapt to non-routine and changing situations. • React appropriately to emergency situations.
ANALYTICAL THINKING	
• Solve problems • Transfer knowledge between situations • Process and interpret information from multiple sources • Apply math concepts • Analyze and interpret abstract and concrete data • Prioritize tasks • Evaluate outcomes • Use short and long term memory • Sequence information	• Adapt to non-routine situations • Calculate technical factor changes • Prioritize duties in stressful/emergency situations

CLASS STYLE

STYLE OF CLASS	ASSIGNMENTS	COMMENTS
• Large group • Lecture • Small groups • Laboratory • Clinical Education • 1:1 with staff • Audiovisual • Observation	• Short papers • Term papers/research • Worksheets • Lab projects • Radiographic critique • Demonstration • Oral reports • Group discussions • Oral presentations	• Strong academic expectations. Students are expected to understand and discuss material based on extensive hours of preparation and apply information to clinical education.

TEST STYLE

STYLE OF TEST	CONTENT OF TEST	COMMENTS
• Multiple choice • Matching • Short answer • Computation	• 20% Questions of knowledge • 20% Questions of comprehension • 20% Questions of application • 20% Questions of analysis and synthesis • 20% Questions of problem solving	• Strong knowledge base is required to synthesize lecture material and apply to clinical situations. • All unit/final examinations are multiple-choice format. • ARRT certification examination is multiple-choice format.

BLACKHAWK TECHNICAL COLLEGE GENERAL EDUCATION REQUIREMENTS

• English Composition 1 • Speech	• Introduction to Psychology • Introduction to Sociology	• General Anatomy and Physiology

EMPLOYMENT

EMPLOYER EXPECTATIONS	EMPLOYER ENVIRONMENT	HELPFUL EMPLOYMENT EXPERIENCES
• Competent, dependable and flexible radiography professional that can operate in a team-oriented environment and is also able to work independently and demonstrate good decision making skills.	• General radiography curriculum prepares the graduate to assume an entry-level technologist position in most areas of radiologic technology.	• Employment or volunteer in health care industry, particularly in a radiology department in the capacity of radiology assistant or aide.

SPECIAL FEATURES OF THE RADIOGRAPHY PROGRAM

1. Requirements to Petition Radiography Program for Admission.
2. Orientation sessions with Radiography Program Faculty.
3. Eligibility for ARRT National Certification Examination in Radiography.
4. Health requirements including TB testing and physician's certification of good health.
5. Hepatitis B and Influenza vaccination series required.
6. Documentation of immunization/immunity to varicella, MMR, tetanus/diphtheria, pertussis, and influenza.
7. Current BLS CPR certification.
8. Signed release of responsibility and proof of current medical insurance/waiver.
9. A criminal background check and drug screening is required prior to participating in clinical education.
10. Graduates may not be eligible for ARRT certification examination if he/she has an arrest or conviction record.
11. If pregnancy occurs during the educational program, BTC cannot guarantee normal graduation time

Blackhawk Technical College Associate Degree Radiography Program Student Handbook
Section 2: Academic Policies

Blackhawk Technical College Associate Degree Radiography Program Admission Criteria

TO BE ELIGIBLE TO PETITION THE ASSOCIATE DEGREE RADIOGRAPHY PROGRAM FOR PROGRAM ENTRY

Applying to BTC

All persons interested in enrolling in the BTC radiography program must first apply to the college:

- Complete an application form, identifying radiography as selected field of study,
- Sit for Accupalcer test as required

Petitioning for Program Entry

After being accepted to BTC, students must petition for program entry. Requirements to be eligible to petition include:

- Complete General Anatomy and Physiology and English Composition 1 with a grade of C or better,
- Sit for the TEAS – Allied Health test (administered at BTC),
- Attend a program petition meeting.

The BTC radiography program utilizes a competitive entry process awarding students points for additional consideration for program entry. Items that earn the petitioner additional consideration for program entry include:

- Completion and grade in remaining General Education requirements,
- Score on TEAS Allied Health test,
- Previous degree completion
- Work history; type of employment and length of time in position.

Specific information related to these criteria is thoroughly explained at the mandatory petition meetings. For further information regarding the petition process and dates of petition meetings, please visit https://www.blackhawk.edu/Site-Admins/Program-Admin/Programs/Radiography-Petition-Information

After Being Accepted to the Radiography Program

After being admitted to the radiography program, students must complete the following prior to being placed for clinical education:

- Attend all required program orientation sessions.
- Complete a criminal background check and drug screening.
- Complete a physical examination and all other program health requirements.
- Complete online HIPAA training.
- Complete American Heart Association Basic Life Support (BLS) CPR.
- Document current major medical health insurance.

DOCUMENTATION OF THESE REQUIREMENTS TO ENTER THE RADIOGRAPHY CURRICULUM MUST BE COMPLETED AND RETURNED TO THE APPROPRIATE FACULTY PRIOR TO BEING PLACED FOR CLINICAL EDUCATION.

Regardless of circumstances, students are only permitted program re-entry one time. This includes those students that re-enter through the program through the petition process described above, or those that re-enter through the re-entry process described on the next page.

Withdrawal from the Radiography Program

If the student decides to withdraw from the radiography program, he/she must submit in writing the reason and the effective date of withdrawal to the radiography coordinator and complete exit interview. The student is further required to officially drop all academic courses in the Student Services department. Failure to follow proper withdrawal procedures will result in failure of academic and clinical education courses, effecting possible program re-entry. Tuition will be refunded in accordance with college policy. If the student withdraws in good academic and clinical standing, re-entry as described below, can be considered.

The following situations *would not* constitute withdrawal in good standing:

1. Failure to follow the withdrawal process as outlined above.
2. Withdrawal following disciplinary advising, unless the disciplinary situation has been documented as resolved.
3. Withdrawal while under the status of probation or suspension.
4. Withdrawal with a current non-passing (below C) grade in any radiography course: academic or clinical.
5. Withdrawal at a time of any pending disciplinary action.

Radiography Program Re-Entry

Any student that has withdrawn from the program *in good standing* may apply to re-enter the program. Students that withdraw prior to successful completion of the second clinical semester (fall semester of the first year) must petition the program for entry as a new student. For the purposes of petition, the application completion date becomes the date of program withdrawal. Students that withdraw after successful completion of the second clinical semester may be considered for re-entry at the beginning of the semester of withdrawal in the next academic year. If a student that has withdrawn in good standing but does not re-enter the program the next academic year, the student must petition the college for program entry.

Any student that *has not* left the program in good standing by either withdrawal or dismissal re-entry may be considered for program re-entry under the following conditions:

1. A written request for program re-entry must be submitted to the Program Director prior to the semester proceeding the semester of re-entry as described above.
2. The Program Director, in consultation with program faculty and other college officials will consider the request. If it is determined that the request warrants consideration, the student will meet with the Program Director and appropriate members of program faculty to determine the terms of re-entry. These terms will be documented as a learning contract to be signed by both the student and Program Director.
3. If program re-entry is not granted, the student may appeal this decision following the college procedures as outlined in the current Blackhawk Technical College Catalog and Student Handbook. If re-entry is not granted through this process, the student is not eligible for program entry through the petition process.

Regardless of circumstances, students are only permitted program re-entry one time. This includes those students that re-enter through the process described above, or those that re-enter the program through the petition process.

Early Program Release

The Blackhawk Technical College Associate Degree Radiography Program does not allow for early program release.

Tuition Refund on Withdrawal

You may have a portion of your tuition and fees refunded if you drop or withdraw from a course. The amount of refund will depend on when you leave the course. Refunds will be in accordance with the state guidelines as outlined in the Current Blackhawk Technical College Catalog and the current Student Handbook.

Academic Standards

In order to remain in good academic standing, grades must be at least 75% on a 100% scale (grade of BC; GPA 2.5) in all Radiography Program courses (prefix 526) and 70% (grade of C; GPA 2.0) in all General Education classes required for graduation.

A Radiography Program Course grade lower than BC will disallow advancement into subsequent program academic and clinical courses. Students not meeting minimal academic requirements may request consideration for program re-entry.

IF THE STUDENT REPEATS A CLASS DUE TO NOT MAINTAINING THE MINIMAL ACADEMIC REQUIREMENTS, THE BLACKHAWK TECHNICAL COLLEGE ASSOCIATE DEGREE RADIOGRAPHY PROGRAM CANNOT GUARANTEE NORMAL GRADUATION TIME.

Grading Scale

The grading scale for the Blackhawk Technical College Associate Degree Radiography Program is as follows:

GRADE	DESCRIPTION	POINTS	SCALE
A	Excellent	4.0	93 – 100%
AB	Above Average	3.5	88 – 92%
B	Above Average	3.0	80 – 87%
BC	Average	2.5	75 – 79%
C	Average	2.0	70 – 74%
D	Below Average	1	60 – 69%
F	Failure	0	< 59%
The Blackhawk Technical College Radiography Program follows Standard Rounding of 0.5% in the Calculation of Grades			
The Process for Appealing an Academic Grade is found in the Current Blackhawk Technical College Student Handbook			

BLACKHAWK TECHNICAL COLLEGE

ASSOCIATE DEGREE RADIOGRAPHY PROGRAM CURRICULUM

Course Sequence

All students enrolled in the Blackhawk Technical College Associate Degree Radiography Program must progress through the radiography program curriculum (e.g., all courses starting with the prefix 526) in the sequence prescribed by the program, without exception.

Course Number	Course Name	Credits
Courses Taken Prior to Program Entry		
10-806-177	General Anatomy and Physiology	4
10-801-136	English Composition 1	3
	Total Credits	**7**
Semester 1: Summer Year 1		
10-526-158	Introduction to Radiography	3
10-526-168	Radiography Clinical 1: Introduction	2
	Total Credits	**5**
Semester 2: Fall Year 1		
10-526-149	Radiographic Procedures 1	5
10-526-159	Radiographic Imaging	3
10-526-192	Radiography Clinical 2	1
	Total Credits	**9**
Semester 3: Spring Year 1		
10-526-191	Radiographic Procedures 2	5
10-526-230	Advanced Radiographic Imaging	2
10-526-193	Radiography Clinical 3	1
	Total Credits	**8**
Semester 4: Summer Year 2		
10-526-199	Radiography Clinical 4	1
	Total Credits	**1**
Semester 5: Fall Year 2		
10-526-194	Imaging Equipment Operation	3
10-526-231	Imaging Modalities	2
10-526-195	Radiographic Image Analysis	2
10-526-190	Radiography Clinical 5	2
	Total Credits	**9**
Semester 6: Spring Year 1		
10-526-189	Radiographic Pathology	1
10-526-197	Radiation Protection and Biology	3
10-526-174	ARRT Certification Seminar	2
10-526-198	Radiography Clinical 6	2
	Total Credits	**8**
Remaining Required General Education Courses		
10-801-198	Speech	3
10-809-193	Introduction to Psychology	3
10-809-196	Introduction to Sociology	3
10-806-179	Advanced Anatomy and Physiology	4
	Total Credits	**13**
	Total Program Credits	***60***

Services for Students with Disabilities

BTC provides reasonable accommodations and support services to students with disabilities in compliance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act Amendments Act of 2008 (ADAAA). Students are required to provide documentation of their disability. Services that are available include, but are not limited to, testing accommodations, tutoring, note taking, texts in alternative format, interpreters, and assistive technology. If you have a disability for which you are requesting accommodations, please contact the Student Resources Learning Center at (608) 743-4422, deaf/hh call Relay 711. Please request accommodations at least three (3) weeks prior to the start of classes to ensure services are in place. Standards regarding course quality and academic progress must be maintained.

Transition Services are available to assist potential students with career exploration and developing a plan that outlines the steps that lead to a successful transition into BTC. Transition Services can be coordinated by calling (608) 757-7796, deaf/hh call Relay 711. Accommodations for the Compass and TABE tests are available in the Student Resources Learning Center.

BTC also provides accommodations for students and guests with disabilities participating in activities offered through BTC. If you require an accommodation, you should contact the Student Services Office at (608) 757-7713. Please request accommodations at least two (2) weeks prior to the event; however, requests with shorter notice will be provided whenever possible.

Routine Academic Advising

All radiography students meet with program faculty at mid-term and end of semester to discuss academic and clinical standing. These sessions will allow program faculty the opportunity to discuss current academic and clinical standing with the student and to discuss strategies for improvement as necessary. The evaluation form for these routine academic advising is the Academic Advising Form *(pp. 59-60)*

At the end of each semester, students will be given the opportunity to complete an online course evaluation for each academic and clinical education course. *(p. 61)* The first two pages of this document is standard for all BTC students, while the specific course outcomes are attached for the student to comment on attainment.

Unscheduled counseling sessions with the program director and/or members of the radiography faculty may occur in instances of program faculty receiving any information, positive or negative, related to academic or clinical performance. All student counseling sessions are documented.

Meeting with Faculty

The radiography program director and program faculty are available to meet with students by appointment.

Support to Students at Risk of Failure

If the student fails a quiz or examination, or if laboratory performance is unsatisfactory, students are encouraged to make an appointment to discuss concerns with the course instructor, academic advisor, or the Radiography Program Director. The Student Success Center may be able to help as well.

Student Services academic advising staff is notified via Starfish of students at risk of failure. This serves as official notification of unsuccessful performance and possible failure of the course if improvement is not made. Please review Standards of Academic Progress Policy in the current Student Handbook available to you on the through My BTC.

Academic Honesty

Adherence to the standards of academic honesty and integrity are an absolute expectation. It is therefore important that students are familiar with the rules and consequences of academic misconduct. Please refer to the Blackhawk Technical College Student Handbook.

Failure to comply with BTC academic honesty policies will result in disciplinary action, up to and including dismissal from the program.

Blackhawk Technical College Student Code of Conduct and Due Process

The Blackhawk Technical College Student Code of Conduct and Due Process is published in the current Student Handbook, available to all students through My BTC as well as the BTC webpage. In addition to expected conduct as published in this document, the Blackhawk Technical College Associate Degree Radiography Program requires that student radiographers conduct themselves in a manner consistent with the profession of diagnostic medical radiography.

For issues of appropriate behavior in the classroom and laboratory settings, Blackhawk Technical College has implemented a Behavior Intervention Team. Specific information regarding the BIT is available as part of the student handbook, available to students through My BTC as well as the BTC webpage, www.blackhawk.edu

Policies and procedures related to appropriate behavior at clinical education are addressed later in this document.

Technical Skills Attainment/Exit Interview

At the end of the two-year program, each student will be given an exit interview to comment on some specific areas of the program. This document contains questions addressing academic and clinical issues to help determine areas for program improvement. A Technical Skills Attainment (TSA) form is completed for each student when all clinical requirements for graduation are completed. *(pp. 63-70)*

Attendance for Classroom and Laboratory Sessions

Regular attendance and punctuality in classroom, laboratory, and clinical education activities is necessary for satisfactory achievement of learning objectives and program outcomes. The instructor will, at the first class meeting, provide the student with a course syllabus that indicates the attendance policy for the individual course. Students are required contact the instructor promptly to make up the missed assignments.

The effect of absence on the academic grade is at the discretion of the course instructor and indicated in the course syllabus. All absence from radiography laboratory sessions must be made up in accordance with instructor requirements as outlined in the course syllabus. In the case of Radiographic Procedures courses, students may not perform any radiographic examination in the clinical setting prior to completing laboratory competency. In the case of an extended illness, the radiography program director, as well as all faculty must be notified.

Blackhawk Technical College also has a policy related to Non-Attendance (No-Show) for courses that is outlined in the current BTC Student Handbook which is available through My BTC.

ABSENCE FROM CLINICAL EDUCATION IS DISCUSSED LATER IN THIS DOCUMENT.

Laboratory Experiences Expectations

During laboratory experiences the student will role-play as a radiographer and patient and will be assessed on technical skills, core abilities, and professionalism. All students are expected to have physical contact with other classmates while learning various radiographic procedures, and other experiences such as assessing blood pressure, pulse, and respirations, as well as performing/simulating venipuncture.

Textbooks

Students are required to purchase all radiography textbooks in the edition identified in course syllabi. Students are advised to retain their textbooks through the length of the educational program and for preparation for the national certification examination in radiography prepared by the American Registry of Radiologic Technologists (ARRT).

Missing Tests

Policy for make-up of tests due to absence is at the discretion of the course instructor as indicated in the course syllabus. Excessive absence on test days may be cause for disciplinary action and instructors may give an alternate examination that addresses the same academic material. All tests are made up in the BTC testing center in accordance with policy, procedure, and schedule of the facility.

Advance Standing/Transfer Policy

Institutional policy concerning prior credit and advanced status can be found in the current Blackhawk Technical College Catalog and the Student Handbook.

In addition to BTC institutional policy concerning prior credit and advanced status, the Blackhawk Technical College Associate Degree Radiography Program requires the following, prior to transfer into the program:

1. The student must transfer from a program accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT) in order for radiography courses to be considered for transfer.
2. The institution of origin must forward documentation of all clinical education activity completed.
3. Have an advising session with the radiography program director as well as an academic advisor in order to evaluate the degree of success in the completion of didactic and clinical education at the school of origin as well as anticipated success at Blackhawk Technical College.
4. Meet with appropriate program faculty and admissions personnel.

Those applicants accepted for transfer enter the program contingent upon the following:

1. The acceptance of a transfer student will not disrupt the educational progress of those students currently enrolled or negatively affect the accreditation status of the radiography program.
2. The student is required to complete a minimum of two semesters in Blackhawk Technical College Associate Degree Radiography Program.
3. The student agrees to abide by all policies and procedures of the radiography program.
4. Transfer students that complete all graduation requirements are eligible to apply to take the certification examination in radiography administered by the American Registry of Radiologic Technologists.
5. As the Blackhawk Technical College Associate Degree Radiography Program is approved for a predetermined number of students, transfer can be considered only if there are clinical openings available.

The Blackhawk Technical College Associate Degree Radiography Program reserves the right to perform laboratory and clinical pre-testing of radiographic knowledge and skills prior to clinical placement. Additionally, the program may require any transfer student to repeat any academic course previously taken based on either transfer transcripts or test scores. Finally, the Blackhawk Technical College Associate Degree Radiography Program reserves the right to require any transfer student to repeat any clinical education requirements as deemed necessary.

Students that have been out of a radiography program for more than one year at the time of application are not eligible for transfer. These students must apply to BTC at petition for program entry as a new student.

BECAUSE OF THESE CONSIDERATIONS, THE BLACKHAWK TECHNICAL COLLEGE ASSOCIATE DEGREE RADIOGRAPHY PROGRAM CANNOT GUARANTEE NORMAL GRADUATION TIME TO STUDENTS WHO TRANSFER INTO THE PROGRAM

Cell Phones and Social Media On Campus

In accordance with the BTC Student Code of Conduct, radiography students are not to send or receive and telephone/text message or post items to any social media site during any classroom or laboratory activity. Cell phones/social media/internet access at clinical are addressed later in this document.

Graduation Requirements

Requirements for graduation:

1. Students must earn a grade of BC (GPA 2.5) in all Radiography Program courses required for graduation.
2. Students must earn a grade of C (GPA 2.0) in all General Education courses required for graduation.
3. Students will have a minimum cumulative grade point average (GPA) of 2.0.
4. Students will have completed all mandatory, elective, and continued clinical competency examinations as outlined in the clinical education and evaluation portion of this document.
5. Complete Technical Skills Attainment/Exit Interview.
6. All outstanding bills related to the student's education must be paid in full before graduation.

ARRT Examination Eligibility

Blackhawk Technical College radiography students are eligible to apply to sit for the certification examination in radiography administered by the American Registry of Radiologic Technologists (ARRT) and may start that application process when within three months of graduation from the program. As the ARRT application process includes disclosure of criminal history and possible review by the ARRT Ethics Committee, final determination of examination eligibility rests with the ARRT.

State of Wisconsin License to Practice Radiography

The state of Wisconsin requires a license to work as a radiographer. Blackhawk Technical College radiography students are eligible to apply for a radiographer license and may begin the application process when within six months of graduation. However, issuance of a state of Wisconsin radiographer license is contingent on successful completion of the ARRT certification examination in radiography, and as stated above final determination of eligibility for this examination rests with the ARRT.

Information regarding the application process for becoming a Licensed Radiographer in the State of Wisconsin can be found at: https://dsps.wi.gov/Pages/Professions/RadiographerLicensed/Default.aspx

Blackhawk Technical College Associate Degree Radiography Program Student Handbook
Section 3: Clinical Education Policies

Overview of Clinical Education

The Blackhawk Technical College Associate Degree Radiography Program is committed to providing a comprehensive clinical education experience that is essential to prepare a student for entry into the profession of radiologic technology.

The clinical curriculum is composed of six sequentially linked, competency-based clinical education courses that increase in complexity and requirements.

Objectives of Clinical Education

The student will observe, practice, and demonstrate the professional skill of a radiographer by:

1. Performing the required number of competency examinations during each clinical course.
2. Evaluating the request for Radiographic Procedures.
3. Preparing the radiographic room for the examination.
4. Professionally and competently interacting with the patient.
5. Positioning the patient for the procedure.
6. Practicing proper radiation protection.
7. Properly using all radiographic equipment and accessory devices.
8. Evaluating radiographic images.
9. Demonstrating a professional level of documentation record keeping procedures.
   (Evaluation of Psychomotor and Problem-Solving Domain)

The student will observe, practice, and demonstrate learning and growth in the profession by:

1. Demonstrating an ability to work with others and independently as required.
2. Communicating a professional and caring attitude to the patients.
3. Accepting constructive criticism willingly as a helpful contribution toward his/her improvement.
4. Demonstrating an effective use of time by working systematically and efficiently.
5. Adhering to program policies and requirements.
6. Demonstrating ethical conduct and respecting the patients' rights, values, and confidentiality.
7. Demonstrating initiative in clinical responsibilities.
8. Demonstrating dependability and responsibility in clinical assignments.
9. Presenting an appearance and demeanor that communicates professionalism and competence.
10. Adhering to the policies and procedures of the clinical education center.
    (Evaluation of Affective Domain)

Structure of Clinical Education

The cognitive, psychomotor, and affective aspects of the curriculum are integrated through the clinical education experience and demonstrated by the student by:

1. Completing all required didactic prerequisites for clinical education.
2. Participating in laboratory practice and simulation exercises.
3. Performing laboratory competency procedures to the satisfaction of program faculty.
4. Observing a qualified radiologic technologist in the performance of his/her duties.
5. Assisting the radiologic technologist in the performance of radiographic procedures.
6. Performing radiographic examinations under the direct supervision of a radiologic technologist.
7. Performing clinical competency examinations of radiographic procedures under the direction of a trained clinical educator or technologist.
8. Critically evaluating images from clinical competency examination with a member of program faculty.

9. Performing radiographic examinations under indirect supervision after clinical competency examination has been successfully completed.
10. Demonstrating a progression of clinical competency by successfully performing competency examinations under more rigorous evaluation during the later stages of clinical education.
11. Demonstrating continued competency by performing designated continued competency examinations of previously tested procedures, or random examinations at the discretion of program faculty.

The clinical education curriculum is designed to ensure that the student progress systematically through the above listed sequence before ultimately achieving clinical competence.

After didactic instruction, the student begins moving from a passive to an active learning mode. By demonstrating laboratory simulation competency, it is documented that the student has an understanding of the given radiographic procedure before it is attempted on a patient.

If an attempted clinical competency is unsuccessful, it is documented using the unsuccessful competency examination form *(p. 145).* This form may be completed for either unsuccessful attempts at procedure performance of mandatory, elective or continued competency examinations, as well as subsequent image evaluation with program faculty. Laboratory remediation is performed as deemed necessary by program faculty. Recurrent unsuccessful attempts at clinical competency examination may result in the need for more stringent remediation.

If after successful clinical competency examination, the student no longer demonstrates the ability to perform any radiographic examination competently, the student will have that clinical competency examination withdrawn. The student must repeat any competency examination which has been withdrawn.

Radiography Practice Standards

Professional practice standards for medical imaging professionals define the role of the radiography practitioner and establish the criteria used to define appropriate professional actions and behavior.

Practice standards are important because they are recognized as the authoritative basis of a profession. The Practice Standards may be used to define what radiologic technologists do and how they do it, as well as to hold the radiologic technologist to a certain standard of care.

Because professional practice changes and actual practice varies from state to state, the standards are written in a general style. Within each discipline or specialty, there are standards for clinical practice, technical activities and professional responsibilities.

The American Society of Radiologic Technologists (ASRT) publishes the Practice Standards for Radiography. The Radiography Practice Standards are included as part of this document *(pp. 71-97)* and reprinted with the permission of the ASRT.

Professional Liability Insurance

All students enrolled in the Blackhawk Technical College Associate Degree Radiography Program are required to carry professional liability insurance. A fee is assessed to each of the 6 clinical education courses to pay for this coverage.

Students are only covered by the BTC professional liability policy while performing approved clinical education activities. Consequently, students may not be present at the clinical education setting outside of the assigned clinical hours (make-up time etc.) without authorization by both the clinical affiliate and a member of radiography faculty.

Patient Privacy/HIPAA

The Health Insurance Portability and Accountability Act (HIPAA) creates national standards to protect individuals' medical records and other personal health information:

- It gives patients more control over their health information.
- It sets boundaries on the use and release of health records.
- It establishes appropriate safeguards that healthcare providers and others may achieve to protect the privacy of health information.
- It holds violators accountable with civil and criminal penalties that can be imposed if the privacy rights of patients are violated.
- It strikes a balance when public responsibility requires disclosure of certain forms of data, for example, to protect public health.

HIPAA, and specifically the definition of "health care operations" within the rule provides for conducting training programs in which students, trainees, or practitioners in areas of health care learn under supervision to practice or improve skills as health care providers. Individual Covered Entities (institutions affiliated with Blackhawk Technical College Health Science programs) may shape their policies and procedures for minimum necessary use and disclosures to permit students access to patients' medical information, including entire medical records.

It shall be the policy of the Blackhawk Technical College Health Sciences Division and its programs that all information regarding care of the individual patient be maintained as confidential information. Patient care information is the property of the patient, and the Clinical Education Affiliate is the steward or caretaker of that information and the owner of the medium of storage.

The purpose of this policy is to protect the patient, the Clinical Education Affiliate and its employees, and all Blackhawk Technical College Health Sciences programs, faculty, and students from inappropriate dissemination of information regarding care of individual and collective patients. This policy applies to all program faculty, students, and prospective students participating in clinical education or observation, and refers to all information resources, whether verbal, printed, or electronic, and whether individually controlled, shared, stand alone or networked.

Students must complete on-line HIPAA training as part of the Background Check and Health Requirements through Viewpoint prior to being placed for clinical education. Additionally, patient privacy is discussed as part of the new student orientation process, as well as part of formal instruction in multiple radiography program courses. Students review patient privacy at the start of each clinical semester and sign an agreement of patient privacy (p. 99) documenting an understanding of this policy and an agreement to comply. This form is included as part of the course syllabus of each clinical education course.

- *Any HIPAA violation/breach of patient confidentiality is a major clinical grade infraction.*

Clinical Education Placements

The Blackhawk Technical College Radiography Program reserves the right to make and/or change clinical education assignments as necessary and appropriate to ensure the best educational experience for all students. Students are reminded that some facilities affiliated with the BTC radiography program can require significant travel and that good reliable transportation and/or other arrangements are vital to clinical success.

Clinical Assignment and Rotations

Starting with the Fall Semester of the first year, students are placed in the clinical education environment. The clinical assignments and schedule for clinical education rotations is posted and given to the student before the beginning of each semester. It is the student's responsibility to be present in the clinical assignment on time and at all times. All changes in the clinical assignment require faculty approval. Students not at the proper clinical assignment or switching clinical education assignments will be subject to disciplinary action in accordance with program policies related to unexcused absence.

Institutions with which the Blackhawk Technical College Associate Degree Radiography has clinical education affiliation include:

- Beloit Health System (Hospital and Clinic) Beloit, Wisconsin, Northpointe Wellness Center, Roscoe IL
- Mercy Walworth Hospital and Medical Center: Lake Geneva, Wisconsin/Aurora Lakeland Medical Center: Elkhorn, WI
- St. Mary's Janesville Hospital/Dean Janesville East Clinic: Janesville, Wisconsin/Edgerton Hospital and Health Services: Edgerton, Wisconsin
- Mercy Health System Main Campus/Mercy East Clinic/Mercy North: Janesville, Wisconsin
- Monroe Clinic (Hospital and Clinic): Monroe Wisconsin

Students are rotated between the clinical education centers as follows:

- Rotation I: Fall and Spring Semesters of Year 1
- Rotation II: Summer and Fall Semesters of Year 2
- Rotation III: Spring Semester of Year 2

The clinical education days are as follows:

- Rotation I: Tuesdays and Thursdays
- Rotations II and III: Mondays, Wednesdays, and Fridays; (4 day weeks summer semester only)
- *Periodic clinical rotations on weekends and in the evenings in all clinical semesters*

Clinical Affiliate Orientation

Students receive orientation at each clinical affiliate. Following completion of the orientation process, students must verify an understanding of the specific policies, procedures, and/or processes for items specific to performing clinical education activities at that facility. Students must complete the Clinical Orientation Checklist *(p. 101)* within 1 month of placement at a clinical affiliate.

Orientation days/times are at the discretion of the clinical affiliate and may be outside of scheduled class/clinical days/times. Students not participating in required orientation activities will not be permitted to attend clinical.

Clinical Education Schedule

Students are assigned to eight-hour clinical shifts, with start and end times that may vary depending on specific assignment. Clinical rotations are primarily daytime hours that can start as early as 5:00 AM and end as late as 7:00 PM. And will include periodic evening and weekend rotations are utilized. The eight-hour clinical education shift includes a ½ hour lunch break. Students may not elect to skip the lunch break and leave early.

- *Being out of the assigned area during clinical education is a minor clinical grade infraction.*

Schedule Change: The following guidelines are to be followed when requesting changes to the clinical education schedule: All requests are subject to approval by program faculty.

- All requests will be considered prior to and during the time the schedule is being drafted.
- A preliminary draft of the schedule is provided to students for a one week review prior to being finalized; students may again request changes during this time without potential negative grade impact. After one week the schedule is finalized.

After the schedule is finalized:

- Students may only request schedule changes in writing using the Schedule Change Request Form *(p. 103),* submitted electronically through Blackboard for the current clinical course.
  - *This form must be signed by the appropriate Clinical Instructor documenting approval*
  - *Please email assigned course instructor with completed request.*
- Request forms must be submitted minimally two weeks prior to the requested schedule change.
- Students may submit one schedule change request form per semester.
- Schedule changes must assure that students maintain appropriate clinical rotations to assure adequate clinical experiences.
- Following the single permitted schedule change students are to follow absence and make-up policies when clinical schedule requirements cannot be met.

Weekend/Evening Rotations

Students are placed in periodic clinical rotations on weekends and evenings. The purpose of these rotations is to provide the student with experience in emergency and trauma radiography. This experience working with trauma patients enhances the student's critical thinking and problem-solving skills.

Evening rotation hours will vary depending on semester and clinical placements; starting as early as 12:00 PM and ending as late as 11:00 PM. Students are scheduled for a single weekend rotation in the summer semester of the second year. ***As such, accrued compensation time cannot be used for this rotation.***

During this clinical rotation, an acceptable level of competence has been attained when the student is able to:

1. Understand the different types of equipment and advantages and disadvantages of each.
2. Select and use accessory items such as immobilization and supporting devices, collimators, and grids.
3. Use all radiographic techniques to include kVp, mAs, distance and time appropriately.
4. Determine diagnostic quality of radiograph.
5. Accurately interpret requisitions.
6. Position anatomical parts correctly.
7. Select proper image receptor size and type.
8. Adequately use x-ray beam limitation.
9. Properly use radiograph markers and identification systems.
10. Safely transfer patients to and from stretchers and wheelchairs.
11. Understand all principles of image processing.
12. Use proper radiation safety practices for patients and personnel.
13. Demonstrate all practical knowledge and understanding of basic general radiography and emergency procedures.
14. Visually monitor high-risk patients and know the procedure for initiating a "Code Blue".
15. Monitor IVs, cardiac monitors, and chest tubes.
16. Assist with surgical procedures and use proper sterile technique.
17. Understand the significance of speed and efficiency when working with difficult, critically ill or trauma patients.
18. Perform radiographic exams on the critically ill, difficult and trauma patients as needed.

Elective Specialty Modality Rotations

Students may participate in clinical rotations in specialty modality areas during the second year of the educational program. Students may elect to participate in one of the following areas:

- Computed Tomography (in addition to required rotations)
- Mammography
- Magnetic Resonance Imaging
- Special Procedures/Catheterization Laboratory
- Diagnostic Medical Sonography
- Radiation Oncology
- Nuclear Medicine
- PET CT
- Bone Density
- Read with Radiologist

A one-week rotation is reserved for specialty rotations for each student in each of the final two clinical semesters. Students are required to select these elective specialty rotations at the beginning of these semesters. Students are permitted to participate in as many different specialty areas as they choose within these rotations. Students may be asked to participate inservice training prior to placement in a specialty modality at the discretion of the clinical affiliate.

As all clinical education centers affiliated with the Blackhawk Technical College Associate Degree Radiography Program do not have all possible specialty rotation areas, students are encouraged to sign up for specialty rotations early. Requests for particular areas during particular weeks will be handled on a first-come first-served basis.

Students who are behind in Clinical Education Requirements for Graduation are advised to Forgo Participation in Elective Rotations.

Mammography Rotation

All BTC Radiography students will be offered the opportunity to participate in mammography clinical rotations and the program will make every effort to place any male student in a mammography clinical rotation if requested. The program cannot however override any clinical affiliate policy that restricts clinical experiences in mammography to female students. Male students are advised that placement in a mammography rotation is not guaranteed and is subject to the availability of a clinical setting allowing males to participate in mammographic procedures. The program will not deny female students the opportunity to participate in mammography rotations if clinical settings are not available to provide the same opportunity to male students.

Computed Tomography Rotation

All radiography students are required to participate in a one-week clinical rotation through computed tomography (CT) during the fall and spring semesters of the second year of the educational program.

Absence and Tardiness from Clinical Education

TARDINESS: Tardiness is defined as not being present at the clinical assignment as the start of the clinical shift.

- *Any third occurrence of tardiness 15 minutes or less is a minor clinical grade infraction*
- *Each occurrence of tardiness greater than 15 minutes is a minor clinical grade infraction.*
- *Any tardiness in excess of 60 minutes without notification of the clinical education affiliate and program faculty is a moderate clinical infraction.*

ABSENCE: An occurrence of absence is defined as not being present for the clinical shift. and must be documented **by the student** in Trajecsys using the Time Exception function. Students are permitted one occurrence of absence per semester that is not required to be made up. The first occurrence of absence remains a minor clinical infraction.

- *Each occurrence of absence is a minor clinical grade infraction. However, if the student is currently or has previously been on clinical probation for issues of clinical absence, each occurrence of absence will be viewed as a moderate infraction.*
- *Multiple absences from clinical education related to the same issue require official documentation in order to be considered a single occurrence of absence.*

UNEXCUSED ABSENCE: Unexcused absence is defined as a failure to report absence by the student to program officials and the clinical education center within 60 minutes of the scheduled start time or any no call/no show for a clinical education assignment.

- *Unexcused absence is a moderate clinical grade infraction.*
- *Any second unexcused absence is a major clinical grade infraction.*

All unexcused absent time from clinical education will be made up within 7 calendar days of the absence; compensation time may not be used to make up unexcused absence. The time will be made up on the shift or day it was missed (e.g. weekends, evenings).

COMPENSATION TIME: Defined as time students have accrued that can be taken off clinical within certain guidelines. This time is earned three different ways:

- Starting with the spring semester of the first year (Radiography Clinical 3), students receive 8 hours of time that may be used for any absence from clinical education provided that there were no occurrences of absence the previous semester.
- All time missed beyond accrued compensation time is made up in accordance with program policy.
- Students may request compensation time for accumulating documented clinical time in excess of 30 minutes owing to departmental or college/program needs
- Time can be accrued for participating in approved BTC or Medical Imaging Club activities.

Use of all accrued time off is subject to approval by program faculty within the following guidelines:

- Compensation time must be scheduled and taken in increments of 4 hours minimally.
- If the student does not have 4 hours of compensation time, any time taken beyond the accrued time is made up, and an occurrence of absence is incurred.
- ***Compensation time is always first applied to outstanding make-up time.***
- All requested compensation time requires a minimum of 2 calendar days to notify any affected clinical affiliates.
- All requested compensation time is subject to program approval.
- Any clinical time missed without approval is viewed as an occurrence of absence regardless of accrued time off.

Compensation time taken within these guidelines is not considered an occurrence of absence and does not negatively affect the clinical grade

REPORTING ABSENCE FROM CLINICAL: Students are required to notify the Clinical Education center and all radiography program staff of absence from clinical prior to the scheduled start time. The preferred method to contact program faculty is by email, however telephone messages are acceptable. *Students are not to report absence to program faculty personal cell phone or by text message.*

Students are required to report absence to clinical within the hour prior to the scheduled start time. Failure to contact both the Clinical Education center and BTC prior to the scheduled start time will be treated as follows:

- *Reporting absence up to 60 minutes following the scheduled start time or not adhering to reporting requirements is a minor clinical grade infraction.*
- *Reporting absence greater than 60 minutes following the scheduled start time is a moderate clinical grade infraction consistent with unexcused absence policy as described below.*

IT IS THE RESPONSIBILITY OF THE STUDENT TO NOTIFY THE PROGRAM DIRECTOR, PROGRAM FACULTY, AND CLINICAL EDUCATION AFFILIATE OF ANY ABSENCE

Clocking In and Out for Clinical Education


Students are required to clock in at the beginning and out at the end of the clinical shift using the Trajecsys. Failure to clock in or out must be corrected in Trajecsys using the Time Correction function.

- *Any third failure to clock in or out is a minor clinical grade infraction.*
- *Falsification of the attendance record is a moderate clinical grade infraction.*

Leaving Early from Clinical Assignment


Students are not to be released from clinical more than one hour before their scheduled end time without documentation of extenuating circumstances. Failure to provide such documentation will result in the accrual of an occurrence of absence and the time will be made up. Students with excessive instances of early dismissal will be assessed a minor clinical infraction at the discretion of program faculty.

Students with outstanding makeup time are not to leave clinical education activities early. Similarly, students are not to leave clinical activities early while performing scheduled makeup time.

Extended Illness and Absence

Absence due to extended illness would constitute a single occurrence of absence. In the event of illness or injury of three (3) consecutive days (excluding weekends and school breaks), a written release from the student's physician or provider without restrictions must be submitted to program faculty before the student may return to clinical activities.

Additional information regarding medical release to return to clinical activities is found in the student health section of this document.

Bereavement Time

Students will be granted up to five days for funeral leave for a member of the student's immediate family. Immediate family would include husband or wife, parents, sibling, children, grandparents, in-law parents, stepparents, step or half siblings.

Approved bereavement time meeting this criterion is not considered an occurrence of absence and is not required to be made up.

Make Up Time

After all accrued absent and compensation time has been exhausted, any missed clinical education time must be made up. This missed clinical time must be scheduled within 1 calendar week of the absence and made up within 1 month of the absence, and prior to the end of the current semester. Make up time can be scheduled with any member of Radiography Program faculty. Time must be made up at a minimum of 4-hour increments.

Absence from scheduled make-up time is viewed as an occurrence of absence as previously described. Students may not be excused from regularly scheduled clinical activities early in order to start making up missed clinical time, and students may not be excused early while making up missed clinical time.

As students are only covered by the professional liability insurance policy for approved clinical activities, time made up without prior approval of program faculty will not be counted towards the student's absent time and may result in disciplinary actions.

Making up absent time may constitute a situation in which it may be necessary for the student to exceed 10 clinical hours in a day and 40 total hours (class and clinical) in a single week. For the health and welfare of the student radiographer, the program faculty does not advise exceeding 10 hours per day and 40 total hours in a week. The BTC Radiography program does not allow more than 12 hours of clinical education per day.

Students must clock in and out for all sessions of make-up time as described previously.

- *Failure to follow make-up time process and policy is a minor clinical grade infraction.*

Emergency Closing of BTC

Decision regarding school closing will be made prior by 6:00 a.m. for day classes and prior to 3:00 p.m. for evening classes. The following list of radio stations are those that BTC contacts in the event of a closing.

All students must sign up for the BTC Safe Alert service/app at assure receiving any emergency information from BTC.

RADIO		TELEVISION	
STATION	FREQUENCY	STATION	CHANNEL
WBEL – AM	1380	WISC	3: Madison
WCLO – AM	1230	WREX	13: Rockford
WZOK – FM	97.5	WMTV	15: Madison
WTSO/Z104	1070 (AM) / 104 (FM)	WTVO	17: Rockford
WGEZ – AM	1490	WIFR	23: Rockford
WMJB – FM	105.9	WKOW	27: Madison
WKEZ – AM	1260 (Monroe)		
Information Related to School Closing can also be Found at www.blackhawk.edu			

In instances of inclement weather that BTC does not close, students are asked to use their best judgment when making the decision to attend didactic or clinical activities. Students may check their phones at clinical during inclement weather to receive information from Safe Alert regarding school closing.

Reporting Absence from Clinical Education

BLACKHAWK TECHNICAL COLLEGE

Central Campus 6004 Prairie Rd., P.O. Box 5009 Janesville, WI 53547 608-758-6900 1-800-498-1282 (in State only)	Health and Human Services Office Radiography Program 608-757-7692

PROGRAM FACULTY AND STAFF

Ali Liezert-Dale M.Ed. RT(R) 608-743-4428 office 815-262-7509 cell Email: aliezert@blackhawk.edu	Katie Church MSE RT(R)(M)(CT) 608-743-4415 office 608-295-3896 cell Email kchurch4@blackhawk.edu
John Ursem B.S. RT(R) 608-743-4462 office 262-212-8215 cell Email: jursem@blackhawk.edu	

CLINICAL EDUCATION CENTERS

Beloit Health System: Beloit Clinic 1905 Huebbe Pky. Beloit, WI 53511-1842 Dept. Phone: 608-364-2426 **Preceptor:** Paul Burnell: pburnell@beloithealthsystem.org	**Beloit Health System: Beloit Hospital** 1969 West Hart Rd. Beloit, WI 53511-2230 Dept. Phone: 608-361-6077 **Preceptor:** Celia Montero: cmontero@beloithealthsystem.org
Beloit Health System: Northpointe Wellness Center 5605 East Rockton Rd, Roscoe, IL 61073 Dept. Phone: 815-525-4206 **Preceptor:** Rashelle Graf: rmgraf@beloithealthsystem.org	
Dean Clinic: Dean Medical Group 3200 E. Racine St. Janesville, WI 53546-2343 Dept. Phone: 608-371-8851 **Preceptor:** Laura Gjestson: laura.gjestson@ssmhealth.com	**SSM St. Mary's Janesville Hospital** 3400 E. Racine St. Janesville, WI 53546-2344 Dept. Phone: 608-373-8700 **Preceptor:** Rachel Ludois: Rachel.Liro@ssmhealth.com
Edgerton Hospital & Health Services 11101 N. Sherman Rd. Edgerton, WI 53534-9002 Dept. Phone: 608-884-1380 **Preceptors:** Niria Santillan: nsantillan@edgertonhospital.com Heather Dimmel: hdimmel@edgertonhospital.com	
Mercy Hospital and Trauma Center 1000 Mineral Point Ave. Janesville, WI 53545-2940 Dept. Phone: 608-756-6361 **Preceptors:** Stephanie Lindgren: stlindgren@mhemail.org Lynn Holt: lholt@mhemail.org	**Mercy East Clinic** 3524 E. Milwaukee Janesville, WI 53545-1626 Dept. Phone: 608-756-7134 After hours voicemail: 608-756-7108 **Preceptor:** Tanner Hall: thall@mhemail.org
Mercy Clinic North 3400 Deerfield Dr. Janesville, WI 53546 Dept. Phone: 608-314-3620 **Preceptor:** Crystal Blakely: cblakely@mhemail.org	
SSM Monroe Clinic 515 22nd Ave. Monroe, WI 53566-1569 Dept. Phone: 608-324-2221 **Preceptor:** Evan Schultz: evan.schultz@ssmhealth.com	**SSM Monroe Hospital** 515 22nd Ave. Monroe, WI 53566-1569 Dept. Phone: 608-324-1390 **Preceptor:** Paul McMillan: Paul.McMillan@ssmhealth.com
Aurora Lakeland Hospital W3985 County Rd NN Elkhorn, WI 53121 Dept. Phone: 262-741-2531 **Preceptor:** Terrance DuBois: Terrance.Dubois@aah.org	**Mercy Walworth Hospital and Medical Center** N2650 Highway 67 Lake Geneva, WI 53147-2655 Dept. Phone: 262-245-2240 After hours voicemail: 262-245-2558 **Preceptor:** Scott Treichel: streichel@mhemail.org

Dress Code for Clinical Education

For the dignity and protection of the patient, the dress code for student radiographers while in clinical education assignments is as follows:

Hair	Jewelry/Tattoo
1. Hair will be neat and clean at all times. 2. Hair will be appropriate in style and of a natural color. 3. Long hair will be tied back at all times in the clinical setting. 4. Facial hair will be neat and trimmed.	1. A single ring or wedding set may be worn. 2. A maximum of 2 ear piercings with post-type earrings are the only acceptable jewelry for clinical education. Gauges in the ear lobe will not exceed size 8. Ear piercing is the only acceptable visible piercing permitted at clinical. 3. A watch with a second hand/counter is suggested when in the clinical setting. 4. Tattoos will be covered consistent with clinical affiliate policy. Any tattoos deemed offensive will be covered at all times.
Tops	**Slacks/Undergarments**
1. A uniform top in the program designated style and color will be worn when in the clinical setting. 2. A white crew-neck t-shirt or turtleneck will be worn under the uniform top. T-shirts will be tucked in. 3. The BTC patch will be worn on the left shoulder and the BTC nametag worn on the left chest when in the clinical setting.	1. Uniform slacks in the designated program color will be worn when in the clinical setting. 2. Uniform slacks will not drag on ground. 3. Undergarments must be appropriate in style and color. 4. Undergarments will not show through uniform.
Socks/Shoes	**Lab Coat**
1. Only standard duty shoes or athletic shoes either all white or all black will be worn in the clinical setting. 2. Only shoes which are at least 75% leather are acceptable for clinical education. 3. Socks worn in the clinical setting will be all white and minimally to the ankle.	1. A lab coat is recommended for clinical education. *Lab coats will be either white or approved school color.* 2. If a lab coat is worn, the BTC patch and nametag will be worn on the lab coat as described above.
Accessories	**Fingernails/Fragrances**
1. A current radiation monitor will be worn at the level of the collar at all times in the clinical setting. 2. A program nametag, as previously described, is required in the clinical setting. 3. The student will have all of the following at all times while in the clinical setting: ▪ *Markers with Initials.* ▪ *Pocket Guide* ▪ *Clinical Evaluation Handbook in its entirety*	1. Fingernails will be cut short. 2. Only clear nail polish is acceptable for clinical education. 3. Artificial nails will not be worn in the clinical setting. 4. Cologne, Perfume or scented personal products will not be worn in the clinical setting. 5. Any other odors viewed as offensive or unprofessional (e.g. cigarette smoke) will be viewed as out of uniform.

Replacement of lost markers, nametags, or radiation monitor must be coordinated through program faculty and paid for by the student.

- *Student out of uniform is a minor clinical grade infraction which must be corrected the immediately. If this requires leaving the clinical facility to change, an occurrence of absence will be assessed.*

THE FACULTY OF THE BLACKHAWK TECHNICAL COLLEGE ASSOCIATE DEGREE RADIOGRAPHY PROGRAM RESERVE THE RIGHT TO JUDGE ANY ISSUE OF APPEARANCE NOT SPECIFICALLY ADDRESSED ABOVE AS INAPPROPRIATE FOR CLINICAL EDUCATION.

Clinical Competency Evaluation

Students are required to perform a minimal number and variety of clinical competency evaluations each semester and prior to program completion. These evaluations are necessary to assure the knowledge, skills and competency level of all students for all radiographic procedures required for graduation.

The process of demonstrating clinical competency follows a number of distinct steps:

- Didactic instruction and testing in the classroom setting.
- Laboratory demonstration, return demonstration and competency evaluation as indicated.
- Clinical performance and competency evaluation.
- Clinical continued competency evaluation as indicated.

With the exception of mobile and surgical procedures, after the successful completion of the competency evaluation, the student may perform that particular radiographic procedure under *indirect supervision* as described on page 31 of this document.

If clinical competency is unsuccessful, the student may be asked to return to the laboratory setting for structured remedial instruction, practice, and evaluation before again attempting the competency examination.

Clinical competency may fall into one of three categories; mandatory, elective, and continued:

1. **MANDATORY CLINICAL COMPETENCY EXAMINATIONS:** More commonly performed examinations and are required for graduation.
2. **ELECTIVE CLINICAL COMPETENCY EXAMINATIONS:** Those radiographic procedures that are not as commonly available for student performance and are elective for clinical competency evaluation.
3. **CONTINUED CLINICAL COMPETENCY EXAMINATIONS:** Those selected mandatory competency examinations that must be performed multiple times through the educational program to demonstrate that the student has remained competent in the performance of that examination.

A list of radiographic procedures which a student may attempt clinical competency examination can be found in the exhibits portion of this document *(pp. 105-106)* of this document. Those procedures identified as mandatory competencies are identified with a star (*), while those examinations that require demonstration of continued competency are identified by the number of times competency must be demonstrated prior to graduation.

Clinical Competency Evaluation Forms

At the beginning of the first clinical semester, students will receive the Blackhawk Technical College Associate Degree Radiography Program Student Clinical Education Handbook. This document contains a clinical competency evaluation form for every examination identified on the procedure list.

CLINICAL COMPETENCY EVALUATION FORM COMPONENTS

Two major areas of performance are evaluated with the competency evaluation forms; procedure performance and student film critique evaluation.

- **Procedure Performance:** In the procedure performance portion of the evaluation form, a chronological task analysis serves as a checklist by which student performance is evaluated. The procedure performance area of the competency evaluation form also serves to evaluate the student extensively in the psychomotor/problem solving and affective behavior domains.

  Each form serves as the evaluation tool for both laboratory and clinical competency evaluation. In most instances students are required to demonstrate laboratory competency prior to attempting clinical competency. In those few procedures in which laboratory competency is not possible (e.g. surgical and portable procedures), the columns for laboratory check-off are blackened out on the form.

  Procedure performance may be evaluated by either a member of program faculty or any ARRT registered staff technologist.

- **Image Evaluation:** Using the image evaluation portion of the competency evaluation forms, students evaluate the quality of the radiograph produced, as well as their knowledge of proper radiographic demonstration. Students are asked to assess radiographic exposure, proper radiographic demonstration, identify radiographic anatomy, and in their second year of training to identify obvious pathology.

  The image evaluation portion of the competency evaluation forms primarily evaluates the cognitive domain to assure that concepts and ideas presented in the various academic courses are being carried over into the clinical setting. Only a member of program faculty may complete the film critique portion of the competency evaluation form. This helps assure that faculty can closely track the student's individual clinical progress.

- **Continued Competency:** Documentation of continued competency is performed using the film critique side of the competency form as well. For those procedures requiring the demonstration of continued competency, the student is required to document the clinical education center, date, and technologist signature. For examinations requiring demonstration of continued competency more than one time, these evaluations are required to be performed in subsequent semesters.

Example clinical competency forms are found in the exhibit section of this document. *(pp. 107-112)*

Direct/Indirect Supervision and Repeat Radiographs

In accordance with the Joint Review Commission on Education in Radiologic Technology (JRCERT) Standards for and Accredited Educational Program in the Radiologic Sciences, the policy for direct and indirect supervision and their relation to film repeats is as follows:

DIRECT SUPERVISION

Direct supervision assures patient safety and proper educational practices. The JRCERT defines direct supervision as student supervision by a qualified practitioner who:

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

Students must be directly supervised until competency is achieved and direct supervision is required for the performance of any mobile or surgical procedure regardless of competency attainment.

INDIRECT SUPERVISION

Indirect supervision promotes patient safety and proper educational practices. The JRCERT defines indirect supervision as that supervision provided by a qualified practitioner immediately available to assist students regardless of the level of student achievement. *As with direct supervision, all images/ examinations are required to be reviewed and approved by a qualified practitioner prior to being sent for interpretation.*

> ***Immediately Available*** is interpreted as the physical presence of a qualified practitioner adjacent to the room or location where a radiographic procedure is being performed; however, the practitioner may not be involved in another procedure. This availability applies to all areas where ionizing radiation equipment is in use.

REPEAT RADIOGRAPHS:

The presence of a qualified radiographer during the repeat of an unsatisfactory image assures patient safety and proper educational practices. A qualified practitioner must be present during the conduct of a repeat image and must approve the student's procedure prior to re-exposure. *There is No Exception to this Policy.*

Documentation of direct supervision for repeated radiographs is made using the Student Radiographic Examination Repeat Record *(pp.113-114).* The student must record clinical affiliate, date and time, and the initials of the technologist directly observing the repeat. Students are further required to the record the cause for the repeat.

- *Repeating any radiograph without the direct supervision of a technologist is a moderate clinical grade infraction.*
- *Additionally, any student failing to immediately report the repeated radiograph without direct supervision to the appropriate program faculty and clinical staff will be assessed a second moderate clinical grade infraction for falsification of records.*

Radiographic examination repeat records are to be turned in the first class day after they have been completed.

If it is reported to the program by any identified Clinical Instructor that a student is not permitted to perform any procedure under indirect supervision owing to concerns of patient safety, the student will be assessed a moderate grade infraction and subsequent probationary status. The student will be required to remediate and again demonstrate laboratory competency at the discretion of program faculty.

Unsuccessful Clinical Competency Attempt & Structured Remediation

Students may be deemed unsuccessful in attempting clinical competency 2 ways:

- Any unsuccessful Procedure Performance; mandatory, elective or continued
- Any unsuccessful Image Evaluation performed with program faculty.

Unsuccessful competency attempts are documented using the Unsuccessful Competency form *(p. 115)* and turned in to the program on the next day scheduled on campus. This form addresses both unsuccessful Procedure Performance as well as unsuccessful Image Evaluation.

Any student unsuccessful at demonstrating clinical competency on the same procedure twice is required to remediate on that procedure, demonstrating laboratory competency before clinical competency may be attempted again. This remediation may occur in the BTC imaging laboratory or at clinical, at the discretion of program faculty or staff. Similarly, two unsuccessful attempts at image evaluation with program faculty will result in structured remediation. The method by which unsuccessful Image Evaluation is remediated is at the discretion of the program faculty.

Finally, students documenting multiple repeated images on the same procedure and/or for the same reasons will be required to remediate and demonstrate clinical competency again on that particular procedure.

It is the responsibility of the student to assure that these forms are completed and turned in. Students are reminded that while unsuccessful attempts to demonstrate clinical competency do not adversely affect the clinical grade, failure to have the unsuccessful attempts recorded and turned in to the program is viewed as falsification of records.

- *Failure to turn in any unsuccessful competency form is a moderate clinical grade infraction.*

Patient Imaging Error

A patient imaging error is defined as an avoidable radiation exposure to any patient – e.g. wrong part, wrong patient, etc.

- *Any patient imaging error is a moderate clinical grade infraction.*
- *Additionally, any student failing to immediately report the patient imaging error to the appropriate program faculty and clinical staff will be assessed a second moderate clinical grade infraction for falsification of records.*

Non-Procedural Competency Evaluation Forms

- **Radiographic Equipment Competency Evaluation Form** *(pp. 117-118)*
  This form is designed to ensure that the student has a thorough understanding of the radiographic equipment he/she will be using during clinical education.

  Students may only perform clinical competency examinations with equipment that they have successfully demonstrated competency.

- **Patient Transport Competency Evaluation** *(p. 119)*
  This form is used to demonstrate that the student has a thorough understanding of patient movement and body mechanic techniques as well as assuring that the student understands the importance and the procedures of assuring proper patient identification. Patient transport competency is evaluated each time a student enters a new clinical education center.

- **Vital Signs Assessment Competency Evaluation** *(p.121)*
  This form is used to demonstrate that the student has a thorough understanding of evaluating patient vital signs. Assessment of vital signs is performed each clinical semester.

- **Sterile/Aseptic Technique Competency Evaluation** *(p.123)*
  This form is used to demonstrate that the student has a thorough understanding of working with and around a sterile field. Sterile technique is evaluated two times, as part of the Radiography Clinical 1 and Radiographic Procedures 2 courses.

- **Medical Aseptic Technique Competency Evaluation** *(p. 124)*
  This form is used to demonstrate that the student has a thorough understanding on the practices of attaining and maintaining medical (clean) asepsis of self and items and surfaces in all areas utilized. Medical aseptic technique is taught and evaluated in the Introduction to Radiography and Clinical Radiography 1 courses.

- **Venipuncture/IV Therapy Evaluation** *(p.125)*
  This form is used to demonstrate that the student has a thorough understanding of working with venipuncture and IV therapy equipment, as well as other sharps. Students will demonstrate venipuncture skills using simulation equipment. Venipuncture is evaluated once, as part of the Introduction to Radiography course. Students may be permitted to perform venipuncture clinically at the discretion of the affiliate and additional inservice training may be required.

Other Clinical Education Forms

- **Clinical Affective Evaluation** *(pp. 127-128)*
  The identified Clinical Preceptor(s) will complete this form on every student twice each semester, at mid-term and end of semester. This form allows the evaluator to provide input regarding “soft skills” such as appearance, dependability and reliability, interpersonal relations, and quality of work.

- **Clinical Preceptor Evaluation** *(pp. 129-130)*
  The student completes an on-line evaluation of the Clinical instructor and primary supervising staff technologist at the end of each clinical rotation. Areas of the clinical rotation that the student can provide input include the coordination of the clinical experience, CI/technologist knowledge and skills, degree of supervision, and CI/technologist interactions.

- **Clinical Site Evaluation:** *(pp. 131-132)*
  The student completes an online evaluation of the clinical education placement each semester at mid and end of semester. For placements with multiple facilities, an evaluation of each site must be completed.

- **Student Radiographic Repeat Log** *(p. 113-114)*
  Students are required to record all repeated radiographs that they performed, and are required to document the examination, facility, date and time, reason for repeat, and the initials of the technologist providing appropriate supervision for the repeat.

STUDENTS ARE REQUIRED TO RECORD ONLY THOSE REPEAT RADIOGRAPHS IN WHICH THEY PERFORMED THE EXAMINATION.

Equipment Handling and Manipulation


All students are given instruction on the use and handling of radiographic equipment and are required to demonstrate competency with any piece of radiographic equipment prior to using that machine for clinical competency using the Radiographic Equipment Evaluation form *(pp. 117-118)*.

Telephone Calls

The telephones in the imaging department are for business use only. Students are not to make or receive personal calls during clinical education activities. The use of cellular telephones, including text messaging and social networking at the clinical education center is permitted only during lunch or breaks or in the case of emergency. Consequently, students will not carry cell phones during clinical activities, but will retrieve them during lunch/breaks as necessary.

- *Violation of clinical telephone policy is a minor clinical grade infraction.*

Computer Use at Clinical


As with telephones, the computers in the radiology department are for business use only. Students are not to use facility internet access unless directed to do so for facility or college/program activities. Students are reminded that any information about the clinical facility and its staff or radiography program and its faculty to social networking site deemed derogatory or unprofessional is subject to disciplinary actions. Personal tablets/laptops may be used for studying/classwork at the discretion of the Clinical Preceptor.

- *Violation of clinical computer policy is a minor clinical grade infraction.*

Alcohol and or Drugs

The use of alcohol and/or drugs during clinical education is prohibited and clinical education affiliates reserve the right to require alcohol/drug testing at the student's expense if circumstances warrant.

- *Attending clinical education under the influence of alcohol or drugs is severe clinical grade infraction.*

Any student smelling of alcohol while at clinical, regardless of sobriety, will be sent home. Any second occurrence of smelling of alcohol at clinical will result in removal from clinical and failure of the clinical course.

- *Attending clinical education smelling of alcohol is moderate clinical grade infraction.*

Students may not attend clinical while taking any prescription medication that may impair motor function or judgment.

Smoking

Students that smoke are reminded that ill patients are particularly sensitive to odor. Consequently, students will not smell of smoke while performing clinical education activities.

- *Smelling of smoke during clinical education is a minor clinical grade infraction consistent with program dress code policy.*

Smoking during clinical education will be in accordance with the smoking policy of that individual institution and smoking students are not granted more frequent or longer breaks/lunch periods than non-smoking students.

- *Violation of clinical affiliate smoking policy is a moderate clinical grade infraction.*

Related Work Policy

While the faculty of the Blackhawk Technical College Associate Degree Radiography Program does not condone students working in capacity of technologists during the educational program, it is understood that students are free to work where they choose.

For this reason, students that choose to work as a paid employee in a department of radiology must observe the following criteria:

- The Blackhawk Technical College Associate Degree Radiography Program will not be liable for the actions of one of its students when he/she is working as the paid employee of any institution. The BTC Professional Liability Insurance Policy only covers students while performing approved clinical education activities.
- The employer must provide separate radiation monitoring and employee identification for students working in the capacity of a paid employee.
- The student will not wear any attire that would identify that individual as a student in the Blackhawk Technical College Associate Degree Radiography Program while working as a paid employee.
- Class and clinical schedules will not be altered to accommodate work schedules.
- Work time and clinical education cannot be performed concurrently, including the performance of clinical competency examinations.

Field Trips/ Student Travel

The following rules and regulations apply to all Blackhawk Technical College students participating in co-curricular or extracurricular travel which is either sponsored or cosponsored by a recognized Blackhawk Technical College student organization, academic program, committee, or group in which the name of the college is used in conjunction with the event:

1. Participants' behavior traveling to, from, and during the event should be such that it reflects credit to the organization, program, group, institution and individual at all times.
2. At all times, participants should show respect and courtesy toward others.
3. Advisors or their delegate must be present at all off-campus functions. Students are not allowed to attend conferences or other off-campus events without the presence of an advisor or other designated Blackhawk Technical College staff member pre-approved by the Student Services office.
4. All individuals (students & staff) attending off-campus functions must sign and have on file with Student Engagement the Student Travel Conduct Code and Liability Waiver form.
5. Participants are to report any accidents, injuries, or illness to the advisor/staff member immediately.
6. Participants responsible for theft and/or vandalism to properties during the course of the event will be held financially liable and will be subject to disciplinary and/or legal action.
7. Any unauthorized charges, charges to the room, or other personal expenses will be the responsibility of the individual participant and cannot be paid using college funds.

8. The advisor(s) or their delegate who escorts the group shall have total authority over supervision of the event and participants and has the ability to implement additional rules, regulations, and expectations as they see fit.

9. Participants who disregard or violate these rules may be subject to disciplinary action through the Student Code of Conduct, in addition to any disciplinary actions acted upon by local, state or national law enforcement officials. See the Blackhawk Technical College Student Code of Conduct for more information. http://catalog.blackhawk.edu/student-code-of-conduct/code-procedures/

Violation of BTC Student Extra-Curricular Travel Conduct Code is a moderate clinical grade infraction.

Background Check

Wisconsin law requires background checks of persons who provide care for others or have access to people who receive care. This law applies to Blackhawk Technical College Health Sciences Division students. A completed background check as prescribed under Wisconsin's law includes all of the following:

- Completed Background Information Disclosure (BID) form
- Status check of professional licenses and credentials through the Department of Safety and Professional Services
- Nation-wide criminal history search
- Review of Department of Health and Family Services records for any substantiated findings of abuse or neglect, and license restrictions or denials
- Nation-wide healthcare fraud and abuse search
- Tribal court criminal history search, check of relevant military records, and check of county or local records as warranted

The link to complete the background check requirement at Certified Background may be found at: https://www.viewpointscreening.com/blackhawk. Help is available in the Central and Monroe campus libraries for scanning signed documents in preparation for submission to Certified Background. All background checks are valid for four years.

Criminal convictions as well as arrests and/or pending charges may limit a student's ability to participate in clinical courses. Further, a criminal background could have a negative impact on certification examination eligibility and employability in health care facilities.

The following criminal background issues will likely be approved for clinical placements *if disclosed:*

- Dismissed crimes.
- One DUI or underage drinking, in any timeframe,
- Misdemeanor or less, single event, 5 years prior with no further issues.

The following criminal background issues will likely prevent assignment to a clinical experience:

- Lack of full disclosure of convictions, with honest descriptions and accountability.
- A pattern of more than three convictions.
- A pattern of convictions within the past 10 years.
- Conviction/Citation for a violent crime, including conviction of a reduced charge resulting from a violent crime.
- Conviction/Citation for drug related offenses, including theft, sale, and/or possession.
- Conviction/Citation for falsification of records.
- Conviction/Citation for theft, including shoplifting.
- Conviction/Citation of any serious crime within the past 3 years, including disorderly conduct or domestic abuse.

The single most important recommendation is complete disclosure on the Background Information Disclosure (BID) form, even for crimes that have been expunged. Failure to fully disclose and accept accountability may result in losing opportunities. Knowingly providing false information or omitting information may result in denial of program entry or dismissal. Citations, arrests and conviction records occurring in Wisconsin are most frequently found on the Consolidated Court Automated Program (CCAP) website. Open public records laws allow anyone, free of charge, to access rulings on court cases at https://wcca.wicourts.gov/

Once completed, Blackhawk Technical College, its employees, and agents will provide a copy of the student's signed State of Wisconsin Background Information Disclosure (BID) form and information obtained from the Caregiver Background Check to assigned clinical affiliation sites upon request. This information will be used in determining eligibility and suitability for clinical placement.

Students not completing all background check requirements by the date identified in the acceptance letter will forfeit their position in the radiography program.

- *Falsification or any attempt to subvert the background check process is a major is a clinical grade infraction.*

Students with New or Pending Charges:
In accordance with Wisconsin law, students are required to notify the Radiography Program Director the next business day following any citation (arrest/ticket) at 608-757-7703 or jipsen@blackhawk.edu

- *Failure to notify the Radiography Program Director of any arrest or citation is a major is a clinical grade infraction.*

Students who are arrested or receive a citation may be administratively withdrawn from current classes that involve a clinical experience until the criminal offense has been processed and a final judgment reached. Students who have not already registered will not be allowed to register for any classes that involve a clinical experience until the criminal offense is resolved. After resolution, the student must notify the appropriate program official with their court documentation. At this point, eligibility for clinical education placement will be re-assessed with input from the program's clinical education affiliates as deemed necessary. All information is kept strictly confidential.

As many local/municipal arrests or citations are not entered in databases that are accessed by the background check process, the BTC radiography program will require students to print a report from the Consolidated Court Automated Program (CCAP) website; https://wcca.wicourts.gov/ Additionally, the radiography program reserves the right to perform random checks on students to assure compliance with State of Wisconsin Caregiver Background law.

Code Of Conduct

The Blackhawk Technical College Student Code of Conduct and Due Process is published in the current Student Handbook, available to all students through MyBTC. In addition to expected conduct as published in this document, BTC Health and Public Safety (HPS) Division requires that students conduct themselves in a manner consistent with their chosen profession. HPS has identified the following as unethical conduct during any educational activity (lecture, clinical, laboratory, or simulation):

1. Improperly revealing confidential patient information. (Refer to HIPAA policy.)
2. Refusing to provide care based on a patient race, color, sex, religion, age, belief, disability, or the nature of the illness. (Refer to Non-Discrimination Policy.)
3. Abusing a patient physically or psychologically by conduct such as striking, improper confinement, swearing, or cursing at the patient.
4. Practicing beyond the scope of the student's education, training, or experience and/or outside of college sanctioned clinical assignments.
5. Falsifying academic, clinical, or patient records/reports.
6. Use of alcohol or other drugs that impair the ability to safely provide patient care.
7. Failure to report one's own errors.
8. Failure to safeguard the patient from incompetent or unethical health care provided by another person.
9. Destroying or stealing property of the instructor, school, clinical education center, or its employees.
10. Failure to report arrests or citations within one working day, in accordance with state law.

Failure to comply with any College and/or program policies will result in disciplinary action, up to and including dismissal from the program.

Violation of Clinical Education Policy

All violations of clinical education policy are categorized as Minor, Moderate and Severe:

- **Minor Violations** are not considered detrimental to patient safety and consequently have minimal impact on the clinical grade and as a rule will not result in clinical probation unless there are recurrent violations. Point deductions from the clinical grade for minor clinical infractions are identified in the chart that follows.
    - Examples of minor violations would include but are not limited to:
        - Dress code violations
        - Third missed clock-in/clock-out
        - Radiation monitor not exchanged/lost
        - Tardiness: Any 3rd tardiness ≤ 15 minutes or any tardiness > 15 minutes
        - Absence
        - Being out of the assigned area
- **Moderate Violations** include issues that negatively impact the relationship of the BTC radiography program and the clinical affiliate, or may have a negative impact on patient safety. As such, these infractions will typically result in placement on clinical probation minimally for the remainder of the current clinical semester and may include involvement of the BTC Behavior Intervention Team (BIT). Point deductions from the clinical grade for moderate clinical infractions are identified in the chart below.
    - Examples of moderate infractions would include but are not limited to:
        - Unexcused absence,
        - Imaging error,
        - Performing examination without appropriate supervision,
        - Unprofessional behavior,
        - Clock-in/clock-out falsification,
        - Falsification of any clinical documentation, including failure to disclose completed and/or competency evaluations to faculty,
        - A pattern of behaviors resulting in affective behavior evaluation scores lower than a 3 at midterm or final,
        - Inappropriate social media use.
- **Severe Violations** are typically related to issues of honesty, professionalism, or patient safety so egregious that they place BTC and/or the clinical affiliate at risk legally or risk affecting the accreditation of either the college or institution. These infractions will result in immediate removal from the clinical education setting while the situation is being investigated. If the investigation results in exoneration of the student, time missed during the investigation is not required to be made up and no occurrence of absence will be accrued. However if the violation is substantiated, the student will be dismissed from the BTC radiography program. These infractions will always include involvement of the BTC Behavior Intervention Team (BIT) and in the case of illegal activities, applicable law enforcement may be notified. Point deductions from the clinical grade for severe clinical infractions will be 30 percentage minimally.
    - Examples of severe clinical grade deductions include but are not limited to:
        - Patient privacy/HIPAA violations
        - Falsification of the patient record
        - Theft
        - Unprofessional behavior in the presence of patients
        - Intentional cover-up of any issue of patient safety
        - Gross Radiation Safety/ALARA breach
        - Any violation of the ARRT Rules of Ethics: https://www.arrt.org/docs/default-source/Governing-Documents/arrt-standards-of-ethics.pdf?sfvrsn=12

BTC RADIOGRAPHY PROGRAM CLINICAL INFRACTIONS				
Infraction	Occurrence	Impact on Clinical Grade	Maximum Grade	Notes
Minor	1	No Grade Deduction	100%: A	
	2	-4% from Clinical Grade	96%: A	
	3	-4% from Clinical Grade	92%: AB	
	4	-6% from Clinical Grade	86%: B	
	5	-6% from Clinical Grade	80%: BC	Clinical Probation
	6	-10% from Clinical Grade	70%: C	Non-Passing Grade
Moderate	1	-5% from Clinical Grade	95%: A	Clinical Probation
	2	-10% from Clinical Grade	85%: B	
	3	*-15% from Clinical Grade*	*70%: C*	*Non-Passing Grade*
Severe	*1*	*-30% from Clinical Grade*	*70%: C*	*Non-Passing Grade/ Program Dismissal*

Violation of Clinical Education Policy Investigation Process

Reasonable Cause
The BTC radiography program will investigate all suspected moderate and severe violations of clinical education policy any time there is reasonable cause to believe a violation exists. The following shall constitute reasonable cause:

1. A complaint or report with sufficient detail from a credible person or agency verifying that a violation does or may exist.
2. An observation by a member of BTC radiography faculty or staff that a violation does or may exist.
3. An admission by a BTC student of a violation.

Complaints may be filed by telephone, email, or in person at BTC.

Complaint Handling
Complaints deemed to have reasonable cause are investigated as follows:

1. Each conduct violation investigation will be documented using the Clinical Conduct Violation Investigation form *(pp. 135-136).*
2. Violations may warrant the involvement of the Blackhawk Technical College Behavior Intervention Process and Team.
3. Should the BIT process be initiated as described above, the process would likely become an issue of the BTC Student Conduct Code procedures as outlined in the BTC Student Handbook, available to the student through MyBTC.
4. All documents related to the investigation will be maintained by the radiography program for a minimum of one year and will serve as a source of data used as part of the program assessment and improvement process.
5. The student will be notified of the disposition of the investigation at its conclusion and will be given copies of all relevant documentation.
6. The student and program director will sign and date the Clinical Conduct Violation Investigation form to conclude the process.

Depending on the nature of the violation, the BTC radiography program reserves the right to remove any student from clinical placement during the investigation process.

Communication of Disciplinary Actions to Clinical Affiliates

Any disciplinary action resulting in either clinical probation or suspension will be communicated to all affected program clinical affiliates. In accordance with signed clinical education affiliation agreements, the clinical education center may refuse student placement at the facility. In the event that no clinical placement can be arranged, the student will receive a failing grade for the current clinical course.

Students are reminded that they and the faculty of the Blackhawk Technical College Associate Degree Radiography Program are the guests of the Clinical Education Centers. Students will not be permitted to jeopardize this relationship. As such, in accordance with signed affiliation agreements, any clinical education affiliate reserves the right to request the removal of any student from the facility.

Clinical Probation

In accordance with the policy and chart on the previous page, students can be placed on clinical probation for violation of radiography program policy. The student is required to complete a Plan for Success *(pp. 137-140)* which identifies goals and strategies for resolving those issues that resulted in the probationary status. The completed Plan for Success is uploaded to the appropriate Clinical Education Course Blackboard page by 4:00 PM of the next day the student is on campus. Each day the document is late in being uploaded will be viewed as a minor policy infraction.

Following review of the plan for success by program faculty, the student will meet with a minimum of 2 faculty members to discuss the probation. Items that will be determined at this meeting will minimally include:

- Minimum duration of probationary status, including a timeline for evaluation and final determination of lifting of probationary status.
- Requirements for meetings with faculty and/or other methods of progress updates
- Expected improvements in behaviors including timelines and benchmarks
- Documented progress that will result in lifting of probationary status

Program officials and the student will determine strategies to meet their goals and will meet as determined to discuss and document progress using the Plan for Success originally completed by the student when placed on probation. Appropriate Clinical Instructors are informed of student probationary status in order to assist the program in collaboratively monitoring and evaluating student progress. All probation meetings will be documented, and the student will receive copies of this documentation.

If it is determined that there is insufficient progress to warrant ending of the probationary status within the timeline as identified in the plan for success, the probationary status will be extended, and new timelines/conditions are established. However, any time probation is extended, or the student is placed on probation again for any reason, all point infractions as identified above are doubled for the duration of any extended or additional probation.

Students on Clinical Probation are not permitted to use accrued compensation time or leave clinical early for the duration of the probation period with the exception of inclement weather or other extenuating circumstances approved by program faculty.

Clinical Grading Methodology

Clinical grade is calculated each semester and is determined based on two components of clinical education. These components are weighted according to their impact on clinical competency as follows:

GRADE COMPONENT	PERCENTAGE OF GRADE
▪ Clinical Competency Evaluation	60%
▪ Affective and Preceptor/Clinical Instructor Evaluations	30%
▪ Clinical Assessment Activity (by semester)	10%
▪ **Total**	**100%**
± points as described throughout this section	

The student may track the clinical grade and the impact any infractions through the Blackboard Grade Center for the appropriate clinical course.

Adjustments can be recommended by Clinical Instructors or Staff or by members of the Program Faculty and must be submitted in writing. Final approval of clinical grade adjustments rests with the Program Director.

Final clinical grade is determined using the grading scale for academic courses as found in the program policy manual.

Clinical Competency Evaluation

The clinical competency examination component of the clinical education grade is figured as a percentage of the total number of examinations performed and the total number of examinations required. Performing a number of examinations less than the minimal number for that semester will negatively affect the student's grade.

While it is possible to earn a passing grade for clinical education without completing the minimal number of clinical competency examinations, the total number of examinations must be completed to graduate from the program. Consequently, students not performing the minimal number of examinations for a given semester will be advised in accordance with the disciplinary policies as outlined earlier in this document. Students with three or more examinations of the minimal number will be placed on clinical probation for the next semester, regardless of the grade for that particular clinical course. During clinical probation, the student will have regular, scheduled advising sessions to investigate the reasons for not completing the required number examinations as well as strategies for better clinical competency performance. A timetable for being caught up on competency examinations will be devised which must be followed through the duration of the probationary period. At the end of the probationary period, if the student has still not met the above outlined criteria to be taken off probationary status, further disciplinary actions could result, including failure of the clinical education course.

Completion of Clinical Competency Examination accounts for 70% of the Clinical Education Grade.

Clinical Affective and Clinical Instructor/Preceptor Evaluations

Students are graded on the timeliness of the completion of these on-line forms. Grade is determined as a percentage of the number of forms turned in to the minimal number expected. Additionally, one point is deducted from the total clinical grade for each day a weekly evaluation form is late being turned in.

Rotation Evaluations account for 30% of the Clinical Education Grade and must be completed as described in the Course Syllabus for the Clinical Course.

- *A pattern of behaviors resulting in affective behavior evaluation scores lower than a 3 at midterm or final is a moderate is a clinical grade infraction.*

Blackhawk Technical College Associate Degree Radiography Program Student Handbook
Section 4: Radiation Safety Policies

General Radiation Safety Practices

1. Students will be in the lead lined control area when making an exposure.
2. The tube is not to be positioned in such a way as to direct the central ray directly toward the control area.
3. No one is to be in the room at the time of exposure except the patient during non-fluoroscopic procedures. If the patient must be held or observed for the exposure, under no circumstances may is the student permitted to hold any patient. *Normal patient contact during fluoroscopic procedures does not constitute patient holding.*
4. All doors must be closed in each radiographic room for all examinations.
5. When assisting for fluoroscopic procedures, the student must wear a lead apron and should remain at least two feet away from the table during fluoroscopy. Other radiation protection devices such as thyroid shields, leaded gloves, glasses, and portable lead shields are available and should be utilized whenever applicable.
6. When performing portable examination, the student must stand at least six feet from the x-ray tube and wear a lead apron if making the exposure. If the student is not making the exposure, he/she must leave the room.
7. The portable machine is to be positioned in such a way that it is between the patient and the student. The central ray must be pointed away from the student.
8. No student will perform a radiographic exposure on any person that has not been ordered by a physician. If procedures are performed on employees, technologists, or each other without a doctor's order, the student will be removed from the clinical education setting and receive a failing grade in the clinical education course. *There is no exception to this policy.*

- *Any radiation safety practice violation is minimally a moderate is a clinical grade infraction, however gross radiation safety/ALARA violations can be viewed as severe based on investigation.*

Patient Radiation Safety

Students will perform radiologic examinations only when a written order for radiologic services that includes: the patient's name, ordering physician, examination to be performed, and indications. Any questions about the order should be directed to a staff radiologist or the ordering physician.

Before the patient being radiographed, the student, under the guidance of a staff technologist should follow the steps for informed consent:

1. Verify the identity of the patient by a minimum of 2 methods.
2. Explain the procedure requested to the patient.
3. Obtain and correlate patient history.

If any information does not correspond, check with the ordering physician, nursing floor, staff technologist, or radiologist.

In addition to assuring correct patient identity and informed consent, the following items must be verified prior to beginning the examination:

1. Female patients of childbearing age are to be asked if there is any possibility of pregnancy. This information may be correlated by use of the ten-day rule. In the event of possible pregnancy, the patient's physician, in consultation with a staff radiologist will decide what examinations are necessary and relay that information to the staff technologist.
2. The radiation field is to be collimated only large enough to include the anatomical part being radiographed and image masking is never to be used in lieu of collimation. Radiation field size must never exceed image receptor size.
3. Exposure factors utilized must produce the minimum amount of exposure needed to obtain a diagnostic radiograph.
4. Students will record/annotate all procedures with S-value/EI value information for all clinical competency examinations. “Dose Creep” overexposure is an ALARA principle violation and repeated instances of patient overexposure will result in disciplinary actions, including removal from clinical education.
5. Should a radiograph need to be repeated, under no circumstances will any student perform the repeat study without the direct supervision of a staff technologist. *There is no exception to this policy.*

Patient Shielding

Recommendations from the National Council on Radiation Protection and Measurements announced on Jan. 12, 2020, support an end to shielding specifically during abdominal and pelvic radiography.

Therefore, it is the position of the BTC Radiography Program that it is appropriate to discontinue shielding for abdominal and pelvic imaging when the exam is performed by a radiography student under the supervision of a registered radiologic technologist.

Student Radiation Safety

Radiation Monitoring

A currently dated radiation-monitor is to be at the level of the collar at all times during clinical education and on campus for laboratory experiences. During fluoroscopic examinations, the monitor must be worn outside of the apron.

1. The student is responsible for care and handling of the radiation monitor. When possible, the monitor should be kept at the clinical education setting in a controlled area. If this is not possible, care must be taken to assure accidental exposure does not occur in transport. The monitor must be protected from exposure to extremes in heat and humidity.
2. An accident with, or loss of the student's radiation monitor is to be reported immediately to program faculty. In the event of monitor loss, the student may not attend clinical education until a replacement monitor has been issued. Any missed clinical time will be considered an occurrence of absence and is made up in accordance with program policy. Repeated accidents or loss of the radiation monitor will be grounds for disciplinary action.
3. The radiation monitor is not to be worn if the student is having diagnostic medical or dental radiographs performed.
4. Each student is responsible for exchange of the radiation monitor each quarter.
5. Radiation monitors issued by the Blackhawk Technical College Associate Degree Radiography Program are to be worn only for program clinical education or laboratory activities.

Radiation monitors are to be exchanged in the Radiography Classroom on the first day of class following the 15th of the month of the new monitoring quarter. This date is identified on the monitor.

- *Each school day (excluding weekends) that elapses after this day without monitor exchange is a minor clinical grade infraction.*

If after three (3) school days (again excluding weekends) the student has not yet exchanged the radiation monitor, the student will be contacted at the clinical education center to come to campus and exchange the monitor. An occurrence of absence will be assessed for leaving clinical to exchange the monitor and all missed time will be made up. Additionally, BTC is assessed a charge if radiation monitors are replaced due to loss or damage.

EXPOSURE REPORTS

The program receives quarterly radiation monitor reports which are made available monthly student review. Students are required to initial these reports within 1 week of their posting. The student will initial the badge report to confirm reviewing the document. In accordance with NCRP Report # 116, Limitation of Exposure to Ionizing Radiation, radiation exposure will not exceed the following Dose Limits:

STUDENT DOSE LIMITS FOR STUDENTS UNDER THE AGE OF 18
1 mSv (100 mrem) Whole Body Exposure Annually *15 mSv (1500 mrem) Lens of the Eyes* *50 mSv (5000 mrem) Skin, Hands and Feet*
FOR STUDENTS OVER THE AGE OF 18
50 mSv (5 rem/5000 mrem) Whole Body Exposure Annually *150 mSv (15 rem/15,000 mrem,) Lens of the Eyes* *500 mSv (50 rem/50,000 mrem,) Skin, Hands and Feet*

- *Failure to review and initial the radiation monitor report is a minor clinical grade infraction.*

Any student whose report for a quarter exceeds 50 mrem will be advised using the Radiation Monitor Report Advising Form *(p. 141)*. Carelessness in radiation hygiene is not tolerated and repeated offenses will result in removal from clinical education.

Holding Patients for Radiographic Procedures

Under no circumstances is the radiography student to hold a patient during radiographic exposure. Normal patient contact during fluoroscopic procedures does not constitute patient holding.

If a patient must be held for a radiographic procedure, it is most appropriate that a parent (preferably father or other male family member/guardian) do so. Every effort should be made to assure that no person is in the room while exposures are made unless there is a clear need. In instances that a parent, guardian, or family member is insistent that they remain in the room, that individual will wear lead apron, thyroid shield, and remain as far from the patient as practical.

- *Holding a patient for any radiographic examination is a moderate clinical grade infraction.*

Performance of Radiographs Without an Order

It is a violation of Wisconsin State Statute to perform any radiographic exposure/examination on any patient without a written order from a physician or other medical provider.

- *Performing any radiographic procedure without an order is a severe clinical grade infraction.*

Mobile and Surgical Procedures

Students involved in mobile or surgical radiographic procedures must stand behind a protective barrier or wear a lead apron and thyroid shield if unable to leave the room for the exposure. All mobile and surgical procedures are to be performed under Direct Supervision and previously described, regardless of clinical competency attainment.

Student Pregnancy

Blackhawk Technical College views pregnancy as a wellness event and accommodations for a pregnant student will be made. While it is not required that any student declare pregnancy, there are unique hazards in the medical setting for a pregnant student. Consequently, Blackhawk Technical College advises that the pregnant student - in consultation with her physician – consider declaring pregnancy. Blackhawk Technical College requires that any declaration or un-declaration of pregnancy be in writing, signed and dated by the student, and delivered to the appropriate Dean or program administrator.

> ***Title IX: Pregnant/Parenting Students***
> *Blackhawk Technical College will excuse any absences due to pregnancy or any related conditions for as long as a health provider documents that it is necessary to be absent. Upon return to school the student will be reinstated to the status held before the leave.*
>
> *Consistent with Health Sciences policies related to absence from clinical education activities, a health provider's note releasing the student to return to clinical education activities without restrictions is required.*
>
> *Students will not be penalized academically for pregnancy or related conditions and will be given the opportunity to earn back any credit and make up any work missed from classes missed due to pregnancy or any related condition.*
>
> *Students can initiate this option by contacting the college's Access and Accommodations Specialist at (608) 757-7796.*
>
> *For more information, please refer to the document Know Your Rights: Pregnant or Parenting? TitleIX Protects You From Discrimination At School, (p. 143)*

STUDENT PREGNANCY AND RADIATION SAFETY: Ionizing radiation poses great potential danger to the developing fetus, especially during the first trimester of pregnancy. It is not required to declare pregnancy, and students may *undeclare* pregnancy at any point after initial declaration.

THE BLACKHAWK TECHNICAL COLLEGE ASSOCIATE DEGREE RADIOGRAPHY PROGRAM REQUIRES THAT ANY DECLARATION OR UNDECLARATION OF PREGNANCY BE IN WRITING, AND SIGNED AND DATED BY THE STUDENT.

If the student chooses to declare pregnancy, the following steps are taken:

1. Advising sessions with the radiography program director and the program medical advisor will be held to explain radiation and other risks associated with remaining in the clinical setting. This advising session will be documented using the Student Pregnancy Advising Form. *(pp. 145-146)*
2. The U.S. Nuclear Regulatory Commission Regulatory Guide 8.13 Instruction Concerning Prenatal Radiation Exposure is included in the exhibits section of this document and will be reviewed as part of this advising session. *(pp.147-152)*
3. A fetal monitor is provided, along with instruction for its use.

After these steps have been taken, the student may then elect:

1. To withdraw from the program in good standing with re-admission after the pregnancy.
2. To continue in the program, after signing a release.

If the student elects to remain in the radiography program, it is her responsibility to progress in her educational responsibilities both clinical and academic. If she is unwilling or unable to do so, she will be strongly advised to withdraw from the program.

If delivery occurs during the educational program, all course work and clinical time must be completed before the student is eligible for graduation and the ARRT examination. The Associate Degree Radiography Program cannot guarantee normal program completion time if a pregnancy/delivery occurs prior to program completion.

If the pregnant student chooses to withdraw, the BTC radiography program guarantees reentry at the beginning of the same semester that she withdrew the following year. In accordance with program withdrawal/re-entry policy, if the student does not re-enter the program the following year, she must reapply to the program.

There are also Title IX considerations and implications for the pregnant student which are addressed in the Student Health portion of this document.

MRI Rotations for the Declared Pregnant Student

Although MRI has no known long-term effects for pregnant technologists or students, it is necessary to provide as safe an environment as possible for these individuals. Pregnant radiography students will be permitted to participate in MRI rotations, with the following conditions and limitations:

1. Pregnant technologists may assist and position patients as a part of their routine responsibilities, consistent with the directions of their supervising obstetrician.
2. The student will be outside the MRI room while the system is scanning, to limit exposure to radiofrequency pulses. Known side effects of MRI are heating of tissues directly within the area of the RF pulses. Heat is transferred to a fetus across the placenta, so limiting exposure to RF pulsing is vital.

Energized Laboratory Policies

In addition to other policies related to student radiation safety, policies for use of the Blackhawk Technical College Associate Degree Radiography Program energized laboratory are as follows:

1. Radiation safety procedures and techniques must be always practiced; students must wear radiation monitoring any time exposures are being made in the laboratory or radiographic procedures are being simulated.
2. No x-ray exposures may be made without a member of the radiography program faculty present in the laboratory.
3. No student may use any equipment in the radiography laboratory prior to formal instruction and demonstration of laboratory competency.
4. The radiographic equipment shall be properly "warmed-up" as directed by program faculty and equipment manufacturer.
5. Proper start-up and shut down procedures will be followed for imaging equipment.
6. Should a problem arise with the x-ray machine, or CR/DR systems, do not attempt to resolve the problem unless directed to do so by a member of program faculty.
7. At the end of each laboratory session, all equipment is to be shut down following correct procedure and all supplies and/or equipment put away.

MRI Safety and Screening

Basic MRI safety training is required for all Blackhawk Technical College Radiography students prior to the first clinical placement. Although students do not perform elective modality rotations until the second year of the program and some may not choose an MRI rotation, any student may be asked to assist in this area.

To assure student safety prior to any MRI exposure:

1. Initial training and screening for all of all BTC Radiography students that may potentially enter the MRI examination room regarding MRI safety in regards to ferromagnetic objects and other MRI-specific safety issues is provided as part of the new student orientation process, as well as included in the Introduction to Radiography course. The training consists of didactic instruction and viewing a safety video. Students are assessed on this material. Documentation of this training and the initial screening is permanently kept on file. *(p. 153)*
2. Students with the following devices are prohibited from entering the MR examination room: pacemakers, defibrillators, aneurysm clips and certain ear and eye implants. Students with implanted devices other than those described above must be able to provide specific details regarding the type of implant, manufacturer and date of implantation. These devices are then cross-referenced for MRI safety utilizing the manufacturer's specification or other approved reference guidelines.

3. If the student has a history of metal work, welding, grinding or prior eye injury, radiographs of the orbits may be acquired to exclude the presence of a retained foreign body prior to allowing that individual access to the examination room.
4. Radiography students are not allowed to enter the MRI examination room without direct supervision by MRI staff.
5. For those students that choose an MRI elective rotation, additional training and/or screening at the discretion of the clinical affiliate may be required.

Blackhawk Technical College Associate Degree Radiography Program Student Handbook
Section 5: Student Health

Health and Safety Requirements for Clinical Education

For your protection and for the protection of the patients with which you will come in contact, it is required that you complete the following health and safety requirements:

1. **PHYSICAL EXAMINATION:** A physical examination is to be completed by your physician utilizing the Physical Requirements/Physical Examination form *(p. 155).*

2. **Immunizations:** Official immunization records generated by the healthcare facility for the following must be uploaded to https://www.viewpointscreening.com/blackhawk
   - 2-Step Tuberculin Skin Test or Titer
   - Diphtheria/Pertussis/Tetanus Immunization
   - Measles Immunization (MMR).
   - Varicella
   - Hepatitis B
   - Influenza

   Students are provided with a checklist to help assure that all immunization requirements are met to assure clinical placement *(p. 157). While not mandatory, COVID immunization is strongly recommended for all students performing clinical education activities, and clinical affiliates may refuse placement of students declining vaccination.*

3. **RELEASE OF RESPONSIBILITY FORM:** The student waives all clinical education centers of responsibility, financial or otherwise, for illness or injury during clinical education. *(pp. 159-160)*

4. **HEALTH/ACCIDENT INSURANCE:**
   All students are required to carry private health (Major Medical) insurance and upload documentation of coverage to https://www.viewpointscreening.com/blackhawk.to attend clinical education activities. If the student's medical insurance expires, or if the insurance carrier or policy changes during the educational program current documentation must be provided to assure that clinical education activities are not interrupted. BTC Student Services has information regarding health insurance coverage for students. Additionally, all BTC students purchase accident insurance as part of registration fees that provides coverage for all injuries occurring during educational activities. *Additional information regarding Health Insurance available through Blackhawk Technical College is found in the BTC Student Handbook, located at MyBTC as well as the college webpage*.

5. **DRUG SCREENING:** All Blackhawk Technical College Health and Public Safety programs require a standard 10-panel drug test as part of the health requirements for clinical/externship placement. Program entry is contingent upon participation in initial drug testing, and subsequent for-cause drug testing if necessary. Consequently, a negative result for this drug screen test (no drugs found) is required. As with background check and all other health requirements, the drug test is done at the student's expense.

   If a student is suspected of being under the influence of alcohol or drugs in the clinical/practicum setting, the clinical affiliate reserves the right to require a for-cause drug test consistent with its institutional policy. For on-campus educational activities, BTC policies related to drugs and alcohol are followed.

   More details about the process of drug testing (where to be tested, the cost of the test, and results reporting) are disseminated to students as part of the program onboarding/orientation process.

6. **CPR Certification:** All students are required to be certified in Basic Life Support (BLS) CPR by the American Heart Association in order to attend clinical education, and the CPR card must be uploaded to https://www.viewpointscreening.com/blackhawk. CPR certification/refresher courses are available at BTC (please check the current catalog or with registration), but are also available at other facilities.

Student Health Requirements and CPR Certification must be current in order to Attend Clinical Education. If any of these Requirements Lapse during the Educational Program, the Student is Removed from Clinical until Resolved

Each Clinical Day Missed is an Occurrence of Absence in accordance with Program Policy and Accrued Absent Time may not be used.

Incident and Injury Reporting

Any non-injury incident that occurs on campus or at clinical education is documented using the Blackhawk Technical College General Incident Report form *(p. 161).* Although this form will likely be completed by a member of program faculty, students may be involved with providing information included in the completed document.

Should the student suffer an injury or illness either on campus or during clinical education activities, it is required that a Blackhawk Technical College Personal Injury and Illness Report form *(p. 163)* be completed and returned to the radiography coordinator within 24 hours of the incident.

For injuries occurring during clinical education activities, the Clinical Education center incident report forms may be required.

As stated on the previous page, Blackhawk Technical College, neither the Associate Degree Radiography Program, nor the clinical education centers are responsible for injuries suffered by students during the clinical education component of the program. Students are again strongly advised to carry medical insurance.

Lifting Restrictions and Other Temporary Disabilities

Students may not attend clinical education when lifting or other physical restrictions are imposed by temporary disability. Should the student have other temporary physical restrictions (e.g., crutches, cast. sling, etc.), participation in clinical activities will be at the discretion of program faculty and the clinical education center. Students are required to provide documentation from a physician or other primary health provider that they may return to clinical activities without restrictions.

Return to Educational Activities Following Extended Health-Related Absences

Following any extended health-related absence, returning students must provide a Release to Return to Educational Activities *(pp. 165-166)* completed by their health provider stating that they may resume educational activities without restriction or with reasonable accommodation. In the case of clinical education activities, return to the clinical assignment may be impacted by policies of that institution. Such conditions could include, but are not limited to:

- Surgery
- Hospitalization
- Lifting restrictions
- Other temporary physical restrictions (crutches, cast, sling, etc.)
- Pregnancy and related conditions.

If the student's physical condition in the classroom, laboratory, or clinical setting is deemed by program faculty or clinical staff as posing a safety risk to classmates, patients, or self, the program reserves the right to excuse the student from that activity.

Infection Control

Students receive extensive instruction in the mechanisms of disease transmission and infection control in the Methods of Patient Care course of the radiography curriculum. All students in Blackhawk Technical College Health and Human Services programs that perform procedures involving contact with blood or other body fluids, mucous membranes, or non-intact skin, are required to adhere to these practices.

Students are discouraged from engaging in patient care activities when they themselves have an active potentially contagious disease. It is the responsibility of the student to protect patients, visitors, and staff members. It is program policy that regardless of the nature or the cause of the patient's illness, radiography students may not elect to limit their participation in the care of any patient.

The following are taken from the CRC document: *Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings 2007.* The entire document is available for student reference in the Medical Imaging classroom/laboratory or at the CDC website:
http://www.cdc.gov/ncidod/dhqp/pdf/guidelines/Isolation2007.pdf

Airborne Isolation Patients

Patients with suspected airborne transmitted disease – including but not limited to COVID-19 and TB – require isolation that includes the use of a fitted N95 mask. It is the position of the Blackhawk Technical College Radiography Program that students assigned to clinical affiliates permitting student participation on patients with suspected airborne transmitted disease will participate in these procedures. Students will be fitted and provided with N95 masks by either the clinical affiliate or by BTC, and that any isolation training required by the facility will be completed and documented.

For any facility allowing participation in procedures on patients with confirmed airborne transmitted disease, it is the position of the Blackhawk Technical College Radiography Program that student participation is permitted, but not mandated. Again, assuring that any isolation training required by the facility has been completed and documented.

Hand Hygiene

Hand hygiene has been cited frequently as the single most important practice to reduce the transmission of infectious agents in healthcare settings and is an essential element of Standard Precautions. The term “hand hygiene” includes both handwashing with either plain or antiseptic-containing soap and water, and use of alcohol-based products (gels, rinses, foams) that do not require the use of water. In the absence of visible soiling of hands, approved alcohol-based products for hand disinfection are preferred over antimicrobial or plain soap and water because of their superior microbiocidal activity, reduced drying of the skin, and convenience. Improved hand hygiene practices have been associated with a sustained decrease in the incidence of MRSA and VRE infections primarily in the ICU. The scientific rationale, indications, methods, and products for hand hygiene are summarized in other publications[559, 717.]

The effectiveness of hand hygiene can be reduced by the type and length of fingernails. Individuals wearing artificial nails have been shown to harbor more pathogenic organisms, especially gram-negative bacilli and yeasts, on the nails and in the subungual area than those with native nails. BTC radiography students may not wear artificial nails while performing clinical education.

The entire hand hygiene document is available for student reference in the Medical Imaging classroom/laboratory or at the CDC website: http://www.cdc.gov/mmwr/PDF/rr/rr5116.pdf

Standard Precautions

Standard Precautions combine the major features of Universal Precautions (UP) and Body Substance Isolation (BSI) and are based on the principle that all blood, body fluids, secretions, excretions except sweat, nonintact skin, and mucous membranes may contain transmissible infectious agents. Standard Precautions include a group of infection prevention practices that apply to all patients, regardless of suspected or confirmed infection status, in any setting in which healthcare is delivered. These include: hand hygiene; use of gloves, gown, mask, eye protection, or face shield, depending on the anticipated exposure; and safe injection practices. Also, equipment or items in the patient environment likely to have been contaminated with infectious body fluids must be handled in a manner to prevent transmission of infectious agents (e.g. wear gloves for direct contact, contain heavily soiled equipment, properly clean and disinfect or sterilize reusable equipment before use on another patient).

The application of Standard Precautions during patient care is determined by the nature of the HCW-patient interaction and the extent of anticipated blood, body fluid, or pathogen exposure. For some interactions (e.g., performing venipuncture), only gloves may be needed; during other interactions (e.g., intubation), use of gloves, gown, and face shield or mask and goggles is necessary. Education and training on the principles and rationale for recommended practices are critical elements of Standard Precautions because they facilitate appropriate decision-making and promote adherence when HCWs are faced with new circumstances. An example of the importance of the use of Standard Precautions is intubation, especially under emergency circumstances when infectious agents may not be suspected, but later are identified (e.g., SARS-CoV, *N. meningitides*).

Standard Precautions are also intended to protect patients by ensuring that healthcare personnel do not carry infectious agents to patients on their hands or via equipment used during patient care.

The entire isolation precautions document is available for student reference in the Medical Imaging classroom/laboratory or at the CDC website: http://www.cdc.gov/hicpac/pdf/isolation/Isolation2007.pdf

Exposure to Blood and Body Fluids

Even with good adherence to all exposure prevention practices, exposure incidents can occur. Consequently, procedures have been established for post-exposure evaluation and follow-up following exposure to bloodborne pathogens.

If a Health Occupation student is involved in an accident where exposure to bloodborne pathogens may have occurred there are two areas where efforts should be focused:

- Documenting the circumstances surrounding the exposure incident;
- Encouraging the student to seek medical consultation and treatment as expeditiously as possible.

EXPOSURE INCIDENT

The occurrence of an exposure incident must first be established. An exposure incident has been defined by OSHA as a specific eye, mouth, other mucous membrane, non-intact skin or parenteral contact with blood, or the inhalation or ingestion of potentially infectious materials that results from the performance of clinical tasks.

POST EXPOSURE PROCEDURES

Early action is crucial. Reporting an exposure incident immediately permits early medical follow-up. Immediate intervention can forestall the development of Hepatitis B and enable the affected student to track potential HIV infection. Prompt reporting can also help the student avoid spreading bloodborne infection to others. Further, it enables an evaluation of the circumstances surrounding the exposure incident in order to find ways to prevent such a situation from occurring again.

The following procedures should be followed if an incident involving a Health Occupation student should occur:

1. **COMMUNICATION OF EXPOSURE:** If an incident occurs, the student must immediately notify the clinical instructor and a member of program faculty. The medical evaluation and follow-up then becomes the responsibility of the student. Should the exposure occur at a clinical affiliate of the BTC Radiography Program, the student will adhere to any policies and/or procedures of the facility.
2. **FILING THE INCIDENT REPORT:** Upon determination of exposure the following incident reports must be completed and become part of the student's record:
    a. BTC Accident/Illness Report *(p. 187).*
    b. Clinical Facility Incident Report as appropriate.

Copies of all incident reports are maintained by the office of the BTC Vice President of Learning Support, as well as the student's clinical education record, maintained by the program. Copies of incident reports are available to the involved student upon request.

3. **EVALUATION AND FOLLOW-UP:** While OSHA standards require employers to provide free medical evaluation and treatment to employees who experience an exposure incident, unfortunately at this time, this service is not typically available to Health Occupation students. However, evaluation and follow-up procedures and any recommended treatments are *strongly recommended* to any student exposed to blood or body fluids.

Tuberculosis Testing and Precautions

Students are required to be tested for exposure to TB as part of the physical examination process, and annually for as long as the student remains in the program. BTC requires a TB titer (blood test), or 2-Step TB skin test:

- There must be a minimum of 7 days between the two injections.
- The time between injections cannot exceed 21 days.
- The first injection must occur within 3 months of the first clinical semester (fall of the first year).

Contact with patients with known, active tuberculosis requires special equipment to assure safety of the caregiver. Consequently, no Blackhawk Technical College Associate Degree Radiography Program student will work with a patient diagnosed with active TB.

Hepatitis B:

Unlike HIV/AIDS, which to date cannot be vaccinated against, Hepatitis B, which also causes catastrophic illness or death, can be prevented with a vaccine. Therefore, the Center for Disease Control & Prevention in Atlanta, Georgia made a recommendation that Hepatitis B vaccine should be considered for a number of groups. One of those groups is health care workers having blood or needle stick exposure.

Procedures, which deal with blood and body fluids, can present occupational hazards. Risks among health care professionals vary during the training and working career of each individual but are often highest during the professional training period. For this reason, it is *required* that vaccination be completed by the end of the fall semester of the first year of training.

You will receive instructions on protective procedures and universal precautions once you are in school. However, we encourage you to consult your personal physician about the advisability of receiving the hepatitis B vaccine before entering school. Should an exposure occur during a clinical experience, neither the school nor the health care facility can be held liable or responsible for costs incurred at such time.

THE DISEASE

Hepatitis B is a viral infection caused by Hepatitis B virus (HBV), which causes death in approximately 1-2% of patients. Most people with Hepatitis B recover completely, but approximately 5-10% become chronic carriers of the virus Most of these people have no symptoms, but continue to transmit the disease to others. Some may develop chronic active Hepatitis and Cirrhosis. HBV also appears to be a causative factor in the development of liver cancer. Thus, immunization against Hepatitis B can prevent acute Hepatitis and reduce sickness and death from chronic active Hepatitis, Cirrhosis, and liver cancer.

THE VACCINES The hepatitis B vaccine has been available since 1982. The vaccines currently in use in the United States are made with recombinant DNA technology, and contain protein portions of HBV (usually parts of the outer protein or the surface antigen of HBV). Thus, the vaccines do not contain any live virus. The vaccine is administered intramuscularly in three doses usually given on a schedule of 0, 1, and 6 months, but there can be flexibility in this schedule. More than 95% of children and adolescents and more than 90% of young, healthy adults develop adequate immunity following the recommended three doses. Persons who respond to the vaccine are protected from both acute hepatitis B infections as well as chronic infection.

WHO SHOULD BE VACCINATED?

The Advisory Committee on Immunization Practices (ACIP) recommends hepatitis B vaccination for everyone 18 years of age and younger, and for adults over 18 years of age who are at risk for HBV infection, which include:

- Sexually active heterosexual adults with more than one sex partner in the prior 6 months, or have a history of sexually transmitted disease;
- Homosexual and bisexual men;
- Illicit injection drug users;
- Persons at occupational risk of infection;
- Hemodialysis patients;
- Household and sex contacts of persons with chronic HBV infection;
- Clients and staff of institutions for the developmentally disabled.

ADMINISTRATION

The vaccine is readily available at your doctor's office or local health clinic. Three doses are generally required to complete the hepatitis B vaccine series, although there is an accelerated two-dose series for adolescents.

- First Injection - At any given time
- Second Injection - At least one month after the first dose
- Third Injection - Six months after the first dose

POSSIBLE VACCINE SIDE EFFECTS

Serious side effects after administration of the hepatitis B vaccine are extremely rare. There have been some anecdotal reports of the association of hepatitis B vaccination with chronic illness such as autoimmune disorders. However, there have been no scientific data supporting these claims. Large-scale immunization exercises have been ongoing in many other countries and in the United States, and thus far there has been no association of hepatitis B vaccination with serious adverse events.

CONTRAINDICATIONS TO THE VACCINE

A serious allergic reaction to a prior dose of hepatitis B vaccine or a vaccine component is a contraindication to further doses of hepatitis b vaccine. The recombinant vaccines that are licensed for use in the United States are synthesized by Saccharomyces cerevisiae (common bakers' yeast), into which a plasmid containing the gene for HBsAg has been inserted. Purified HBsAg is obtained by lysing the yeast cells and separating HBsAg from the yeast components by biochemical and biophysical techniques. Persons allergic to yeast should not be vaccinated with vaccines containing yeast.

Professional Development

Radiography students are encouraged to become active in the American Society of Radiologic Technologists (ASRT) and/or the Wisconsin Society of Radiologic Technologists (WSRT). Students attending any educational or continuing education activity related to radiography with the prior authorization of program faculty, will receive a comparable amount of compensation time as previously described.

Medical Imaging Club Membership

The BTC Medical Imaging Club on-campus club for students enrolled in the Radiography Program. This club performs a number of positive functions for the community, as well as for its student members. The Medical Imaging Club helps pay the registration fee and lodging for the annual WSRT/WAERT Spring educational symposium as well as the costs associated with the program pinning ceremony.

All Medical Imaging Club members are required to participate in fundraising and community service activities as directed by club advisor.

Student Input

The input of ideas and suggestions by the students in the radiography program are very important to the faculty. A member of the senior class represents the interests of the students as a member of the program advisory committee. The faculty and administration of this program are also available to you for personal appointments at your request. A student representing the class may request to appear at a program faculty meeting to discuss issues related to any aspect of the educational program. If you feel that you have an idea that would increase communication between faculty and students, please let any one of us know.

Acknowledgement of Student Handbook

After having read The Blackhawk Technical College Associate Degree Radiography Program Student Handbook, students must agree to comply with all academic and clinical education policies as written before entering the clinical education center. Failure to comply with program policy will result in disciplinary action as described throughout the student handbook.

The student is required to sign the Blackhawk Technical College Associate Degree Radiography Program Acknowledgment of Student Handbook Form *(pp. 167)* and turn this form into the Radiography Coordinator.

STUDENTS SHOULD NOT SIGN THIS FORM UNTIL ALL POLICIES ARE CLARIFIED AND QUESTIONS ANSWERED TO THEIR SATISFACTION

Blackhawk Technical College Associate Degree Radiography Program Student Handbook

Forms and Evaluation Tools

Blackhawk Technical College Associate Degree Radiography Program Academic Advising Form		
Student Name	Semester	
Clinical Site	Mid-Term	Final

Part I: Academic Standing

Describe the Current Student Standing in All Academic Courses

Discuss Strategies for Maintenance or Improvement in Academic Standing

Student Response or Input to Issues of Academic Standing as Described Above

Due to your current academic standing, you are required to make an appointment to meet with the following faculty

Ali		*Katie*		*John*	

Blackhawk Technical College Associate Degree Radiography Program Mid-Semester Advising Form			
Part II: Clinical Standing			
Number of Clinical Competency Examinations Completed		All Rotational Evaluations Completed	
Repeat Log Checked		Reviewed Affective Evaluations	
Notable Comments from Evaluations			
Identify Any Other Required Evaluation/Competency Forms Outstanding			
Occurrences of Absence this Semester		Occurrences of Tardiness this Semester	
Current Amount of Make Up Time Outstanding		Accrued Compensation Time	
Up to Date with Health Requirements, CPR, etc.		Overall Current Clinical Grade Percentage/Letter	
Total Clinical Grade Point Adjustments:			
Describe Current Standing in Clinical Education & Any Strategies Needed for Improvement			
Student Response or Input to Issues of Clinical Standing as Described Above			

Due to your current clinical standing, you are required to make an appointment to meet with the following faculty							
Ali		*Katie*		*John*			

Please sign below to acknowledge your understanding of everything discussed on this form and in the advising session.	
Student Signature	Date

HPS 526 Section 64539 CLAS CR Advanced Radiographic Imaging [2021 Spring] taught by: Joseph Ipsen

Instructor Joseph Ipsen (PREVIEW MODE NOTE: The answers to these questions are viewable only by Ipsen, department heads and administrators. Additional instructors will not see them.)

Aspects of Your Course Experience: Please indicate how much you agree with each of the following statements related to your experience in this course.

Instruction

The instructor provided timely feedback on projects and assignments as outlined in the syllabus.

- Strongly Agree
- Agree
- Disagree
- Strongly Disagree

Comment about: The instructor provided timely feedback

Class time was used effectively to enhance my learning.

- ***Strongly Agree***
- Agree
- Disagree
- Strongly Disagree

Comment about: Class time was used effectively

The course grading policies were clear.

- Strongly Agree
- Agree
- Disagree
- Strongly Disagree

Comment on: The course grading policies were clear

The course grading policies were clear.

- Strongly Agree
- Agree
- Disagree
- Strongly Disagree

Comment on: The course grading policies were clear

The instructor provided valuable feedback on projects and assignments as outlined in the syllabus.

- Strongly Agree
- Agree
- Disagree
- Strongly Disagree

Comment on: The instructor provided valuable feedback

I learned as much or more than I expected in this course.

- Strongly Agree
- Agree
- Disagree
- Strongly Disagree

Comment on: I learned as much or more than I expected

Submit

Blackhawk Technical College Associate Degree Radiography Program Exit Interview: Student Self-Assessment		
At program completion, students of the Blackhawk Technical College Associate Degree Radiography Program perform this self-assessment in order to evaluate the educational experience and the radiography program. Information from this document will be used to improve the quality of the Blackhawk Technical College Associate Degree Radiography Program.		
Demographic Information		
Name	Graduation year	
Graduate Placement	**Yes**	**No**
Have you found employment as a radiographer after graduation?		
If no, have you been actively looking?		
If no, are you planning to seek employment in radiography?		
May the program contact your employer to complete an employer survey to collect data for program improvement?		
Comments		
Before starting classes at BTC, how long has it been since you were a student?		
Was it necessary for you to work while in school?		
How many hours per week did you work outside of school and what shift?		
What issues would have kept you from completing the program?		
What kind of support system did you have while in the program?		
Did either parent complete college?		
What BTC resources did you utilize while in the program?		

Specialization in Medical Imaging	Yes	No
Do you have an interest in specializing in Medical Imaging?		
Would you like to see BTC provide training/programming in specialty areas of Medical Imaging?		
In the space below, please identify the specific specialty areas you would like to see BTC provide		

Radiography Curriculum Please Comment on the Individual Courses In the Radiography Curriculum				
The Following Radiography Courses Adequately Prepared Me to Perform General Radiography in the Clinical Setting:				
Course	**Strongly Agree**	**Agree**	**Disagree**	**Strongly Disagree**
Introduction to Radiography				
Radiographic Procedures 1				
Radiographic Procedures 2				
Radiographic Imaging				
Advanced Radiographic Imaging				
Imaging Equipment Operation				
Radiographic Image Analysis				
Modalities				
Radiographic Pathology				
Radiation Protection and Biology				
Radiography Clinical 1				
Radiography Clinical 2				
Radiography Clinical 3				
Radiography Clinical 4				
Radiography Clinical 5				
Radiography Clinical 6				
Comments				

The Following General Education Courses Served to Support and Reinforce the Program Curriculum:				
Course	**Strongly Agree**	**Agree**	**Disagree**	**Strongly Disagree**
English Composition 1				
Speech				
Introduction to Psychology				
Introduction to Sociology				
General Anatomy and Physiology				
Comments				

Clinical Education Please Comment on the Clinical Education Experience				
1. I feel competent to perform general radiography of the following areas:	Strongly Agree	Agree	Disagree	Strongly Disagree
▪ *Chest and Thorax*				
▪ *Extremities*				
▪ *Head and Neck*				
▪ *Spine and Pelvis*				
▪ *Abdomen/GU and GI Tract*				
▪ *Portable and Surgical Procedures*				
▪ *Pediatric Procedures*				
▪ *Geriatric Procedures*				
▪ *Trauma and Emergency Procedures*				
▪ *Selection of Technical Factors*				
▪ *Critiquing Radiographic Quality*				
▪ *Adapting Positioning/Technical Factors for Non-Routine Situations.*				
2. After performing clinical competency evaluation on a procedure, I was able to perform that examination independently after.				
3. The staff technologists are good clinical educators.				
4. The majority of staff technologists are good role models.				
5. The clinical education experience adequately prepared me for the role of a staff technologist.				
Comments				

ARRT Certification Examination Preparation Please Comment on Your Preparation to Sit for the ARRT Certification Examination				
I Feel Adequately Prepared to Successfully Write the following Portions of the ARRT Examination:				
Course	**Strongly Agree**	**Agree**	**Disagree**	**Strongly Disagree**
Patient Care *Patient Interactions and Management*				
Safety *Radiation Physics and Radiobiology* *Radiation Protection*				
Image Production *Image Acquisition and Technical Evaluation* *Equipment Operation and Quality Assurance*				
Procedures *Head, Spine, and Pelvis Procedures* *Thorax and Abdomen Procedures* *Extremity Procedures*				
Comments				

Program Mission, Goals and Outcomes				
Please Comment on Your Personal Attainment Of the Radiography Program Mission and Outcomes				
Program Mission	**Strongly Agree**	**Agree**	**Disagree**	**Strongly Disagree**
The Mission of the Blackhawk Technical College Associate Degree Radiography program is to Prepare the Student to Practice Entry-Level Diagnostic Medical Radiography				
Comments				
Program Goals	**Strongly Agree**	**Agree**	**Disagree**	**Strongly Disagree**
1. Students Demonstrate Critical Thinking				
Comments				
	Strongly Agree	**Agree**	**Disagree**	**Strongly Disagree**
2: Students Demonstrate Effective Communication				
Comments				
	Strongly Agree	**Agree**	**Disagree**	**Strongly Disagree**
3: Students Demonstrate Professional Work Behaviors				
Comments				
	Strongly Agree	**Agree**	**Disagree**	**Strongly Disagree**
4: Students Demonstrate Diverse and Inclusive Practices				
Comments				
	Strongly Agree	**Agree**	**Disagree**	**Strongly Disagree**
4: Demonstrate Professional use of Relevant Technology				
Comments				

Program Outcomes	Strongly Agree	Agree	Disagree	Strongly Disagree
1: Carryout the Production and Evaluation of Radiographic Images				
Comments				
	Strongly Agree	**Agree**	**Disagree**	**Strongly Disagree**
2: Practice Radiation Safety Principles				
Comments				
	Strongly Agree	**Agree**	**Disagree**	**Strongly Disagree**
3: Provide Quality Patient Care				
Comments				
	Strongly Agree	**Agree**	**Disagree**	**Strongly Disagree**
4: Model Professional and Ethical Behavior Consistent with the A.R.R.T. Code of Ethics				
Comments				
	Strongly Agree	**Agree**	**Disagree**	**Strongly Disagree**
5: Apply Critical Thinking and Problem Solving Skills in the Practice of Diagnostic Radiography				
Comments				
In this space please include any other information relevant to your experience as a student in the BTC Radiography Program useful for program improvement.				

10-526-1 Radiography WTCS TSA Scoring Guide [2018]

Directions

This TSA scoring guide will be used to document your attainment of technical program outcomes for the Radiography program. To meet the requirements on the scoring guide, you will be asked to draw upon the skills and concepts that have been developed throughout the program and are necessary for successful employment in your field. Results will be used to inspire continual improvement of teaching and learning in Wisconsin Technical College System Programs. In addition, this assessment will provide feedback to you about your performance.

This scoring guide will be used to evaluate your performance on radiologic procedures. You must demonstrate competence on the mandatory and elective competencies as determined by the ARRT.

After your instructor completes this scoring guide, you will receive feedback on your performance including your areas of accomplishment and areas that need improvement.

Target Program Outcomes

1. Carryout the production and evaluation of radiographic images
2. Practice radiation safety principles
3. Provide quality patient care
4. Model professional and ethical behavior consistent with the A.R.R.T. Code of Ethics
5. Apply critical thinking and problem-solving skills in the practice of diagnostic radiography

Rating Scale

Value	Description
PASS	Performs adequately; meets basic standards
FAIL	Does not meet basic standards

Scoring Standard

You must achieve an overall average rating of PASS on all criteria for each program outcome to demonstrate competence (passing). A rating of FAIL on any criterion results in a FAIL score for that program outcome and for the TSA Assessment

Scoring Guide

Criteria	Ratings
Carryout the production and evaluation of radiographic images	
Position patient for specified examination	Pass Fail
Select appropriate image production exposure factors and make exposure	Pass Fail
Evaluate final images for acceptable exposure quality, anatomical presentation, and patient identifying information	Pass Fail
Practice radiation safety principles	
Use proper collimation	Pass Fail
Shield patient and others	Pass Fail

Criteria	Ratings
Wear personnel dosimeter	Pass Fail
Practice the cardinal principles of radiation protection: time, distance, and shielding	Pass Fail
Provide quality patient care	
Identify correct patient and procedure to perform	Pass Fail
Assess patient condition and respond accordingly	Pass Fail
Obtain and document accurate patient history	Pass Fail
Explain exam and give clear instructions	Pass Fail
Communicate/interact with patients as appropriate	Pass Fail
Provide for patient modesty and comfort	Pass Fail
Model professional and ethical behavior consistent with the A.R.R.T. Code of Ethics	
Maintain confidentiality	Pass Fail
Interact professionally with healthcare professionals, patients and family	Pass Fail
Respect diversity	Pass Fail
Apply critical thinking and problem-solving skills in the practice of diagnostic radiography	
Adapt procedure to patient condition	Pass Fail
Adapt exposure techniques to patient's physical and pathological conditions	Pass Fail
Evaluate image for diagnostic quality and implement corrective action if necessary	Pass Fail
Use logic and judgment in performing procedure efficiently	Pass Fail
Comments:	

TSA Assessment Score		Pass	Fail
Student Name:		**ID#**	
Evaluator Signature:		**Date:**	

The Practice Standards for Medical Imaging and Radiation Therapy

Table of Contents

Preface 1

Format 1

Introduction 3

Definition 3

Education and Certification 9

Medical Imaging and Radiation Therapy Scope of Practice 15

Standards 20

Standard One – Assessment 20

Standard Two – Analysis/Determination 23

Standard Three – Education 26

Standard Four – Performance 29

Standard Five – Evaluation 34

Standard Six – Implementation 37

Standard Seven – Outcomes Measurement 39

Standard Eight – Documentation 41

Standard Nine – Quality 44

Standard Ten – Self-Assessment 46

Standard Eleven – Collaboration and Collegiality 48

Standard Twelve – Ethics 50

Standard Thirteen – Research, Innovation and Professional Advocacy 52

Glossary 54

Advisory Opinion Statements 59

Guidance for the Communication of Clinical and Imaging Observations and Procedure Details by Radiologist Assistants to Supervising Radiologists 60

Medication Administration by Medical Imaging and Radiation Therapy Professionals 64

Medication Administration in Peripherally Inserted Central Catheter Lines or Ports With a Power Injector 67

Medication Administration Through Existing Vascular Access 69

Placement of Personal Radiation Monitoring Devices 72

Use of Postexposure Shuttering, Cropping and Electronic Masking in Radiography 75

Preface

A profession's practice standards serve as a guide for appropriate practice. The practice standards define the practice and establish general criteria to determine compliance. Practice standards are authoritative statements established by the profession for evaluating the quality of practice, service and education provided by individuals within the profession.

Practice standards can be used by individual facilities to develop job descriptions and practice parameters. Those outside the profession can use the standards as an overview of the role and responsibilities of individuals within the profession.

The medical imaging and radiation therapy professional and any individual who is legally authorized to perform medical imaging must be educationally prepared and clinically competent as a prerequisite to professional practice. The individual should, consistent with all applicable legal requirements and restrictions, exercise individual thought, judgment, and discretion in the performance of the procedure. Federal and state statutes, regulations, accreditation standards and institutional policies could dictate practice parameters and may supersede these standards.

Format

The ASRT Practice Standards for Medical Imaging and Radiation Therapy are divided into five sections:

- *Introduction* – defines the practice and the minimum qualifications for the education and certification of individuals in addition to an overview of the specific practice.
- *Medical Imaging and Radiation Therapy Scope of Practice* – delineates the parameters of the specific practice.
- *Standards* – incorporate patient assessment and management with procedural analysis, performance and evaluation. The standards define the activities of the individual responsible for the care of patients and delivery of medical imaging and radiation therapy procedures; in the technical areas of performance, such as equipment and material assessment safety standards and total quality management; and in the areas of education, interpersonal relationships, self-assessment and ethical behavior.
- *Glossary* – defines terms used in the practice standards document.
- *Advisory Opinion Statements* – provide interpretations of the standards intended for the clarification and guidance of specific practice issues.

The standards are numbered and followed by a term or set of terms that describes the standards. The next statement is the expected performance of the individual when performing the procedure or treatment. A rationale follows and explains why an individual should adhere to the particular standard of performance.

- *Criteria* – used to evaluate an individual's performance. Each standard is divided into two parts: the general criteria and the specific criteria. Both should be used when evaluating performance.
- *General Criteria* – written in a style that applies to medical imaging and radiation therapy professionals and should be used for the appropriate area of practice.
- *Specific Criteria* – meet the needs of the individuals in the various areas of professional performance. Although many areas of performance within medical imaging and radiation therapy are similar, others are not. The specific criteria were developed with these differences in mind.

Within this document, all organizations are referenced by their abbreviation and spelled out within the glossary.

Introduction

Definition

The medical imaging and radiation therapy profession comprises health care professionals identified as a bone density technologist, cardiac-interventional and vascular-interventional technologist, computed tomography technologist, magnetic resonance technologist, mammographer, medical dosimetrist, nuclear medicine technologist, quality management technologist, radiation therapist, radiographer, radiologist assistant or sonographer who are educationally prepared and clinically competent as identified by these standards.

Furthermore, these standards apply to health care employees who are legally authorized to perform medical imaging and radiation therapy and who are educationally prepared and clinically competent as identified by these standards.

The complex nature of disease processes involves multiple imaging modalities. Medical imaging and radiation therapy professionals are vital members of a multidisciplinary team that forms a core of highly trained health care professionals, who each bring expertise to the area of patient care. They play a critical role in the delivery of health services as new modalities emerge and the need for medical imaging and radiation therapy procedures increases.

Medical imaging and radiation therapy integrates scientific knowledge, technical competence and patient interaction skills to provide safe and accurate procedures with the highest regard to all aspects of patient care. A medical imaging and radiation therapy professional recognizes elements unique to each patient, which is essential for the successful completion of the procedure.

Medical imaging and radiation therapy professionals are the primary liaison between patients, licensed practitioners and other members of the support team. These professionals must remain sensitive to the needs of the patient through good communication, patient assessment, patient monitoring and patient care skills. As members of the health care team, medical imaging and radiation therapy professionals participate in quality improvement processes and continually assess their professional performance.

Medical imaging and radiation therapy professionals think critically and use independent, professional and ethical judgment in all aspects of their work. They engage in continuing education to include their area of practice to enhance patient care, safety, public education, knowledge and technical competence.

Radiography

The practice of radiography is performed by health care professionals responsible for the administration of ionizing radiation for diagnostic, therapeutic or research purposes. A radiographer performs a full scope of radiographic and fluoroscopic procedures that create the images needed for diagnosis at the request of and for interpretation by a licensed practitioner.

Radiographers must demonstrate an understanding of human anatomy, physiology, pathology and medical terminology.

Radiographers must maintain a high degree of accuracy in radiographic positioning and exposure technique. They must possess, apply and maintain knowledge of radiation protection and safety. Radiographers independently perform or assist the licensed practitioner in the completion of radiographic procedures. Radiographers prepare, administer and document activities related to medications and radiation exposure in accordance with federal and state laws, regulations or lawful institutional policy.

Only medical imaging and radiation therapy professionals who have completed the appropriate education and obtained certification(s) as outlined in these standards should perform radiographic procedures.

Radiographers prepare for their roles on the interdisciplinary team by successfully completing a program in radiography that is programmatically accredited or part of an institution that is regionally accredited, and by attaining appropriate primary certification from the ARRT.

Those passing the radiography examination use the credential R.T.(R).

Medical Imaging and Radiation Therapy Scope of Practice

Scopes of practice delineate the parameters of practice and identify the boundaries for practice. A comprehensive procedure list for the medical imaging and radiation therapy professional is impractical because clinical activities vary by the practice needs and expertise of the individual. As medical imaging and radiation therapy professionals gain more experience, knowledge and clinical competence, the clinical activities may evolve.

The medical imaging and radiation therapy professional and any individual who is legally authorized to perform medical imaging must be educationally prepared and clinically competent as a prerequisite to professional practice. The individual should, consistent with all applicable legal requirements and restrictions, exercise individual thought, judgment and discretion in the performance of the procedure. Federal and state statutes, regulations, accreditation standards and institutional policies could dictate practice parameters and may supersede these standards.

The scope of practice of the medical imaging and radiation therapy professional includes:

- Administering medications parenterally through new or existing vascular access, enterally or through other appropriate routes as prescribed by a licensed practitioner.
- Administering medications with an infusion pump or power injector as prescribed by a licensed practitioner.
- Applying principles of ALARA to minimize exposure to patient, self and others.
- Applying principles of patient safety during all aspects of patient care.
- Assisting in maintaining medical records, respecting confidentiality and established policy.
- Corroborating a patient's clinical history with procedure and ensuring information is documented and available for use by a licensed practitioner.
- Educating and monitoring students and other health care providers.
- Evaluating images for proper positioning and determining if additional images will improve the procedure or treatment outcome.
- Evaluating images for technical quality and ensuring proper identification is recorded.
- Identifying and responding to emergency situations.
- Identifying, preparing and/or administering medications as prescribed by a licensed practitioner.
- Performing ongoing quality assurance activities.
- Performing venipuncture as prescribed by a licensed practitioner.
- Postprocessing data.
- Preparing patients for procedures.
- Providing education.
- Providing optimal patient care.
- Receiving, relaying and documenting verbal, written and electronic orders in the patient's medical record.
- Selecting the appropriate protocol and optimizing technical factors while maximizing patient safety.
- Starting, maintaining and/or removing intravenous access as prescribed by a licensed practitioner.
- Verifying archival storage of data.
- Verifying informed consent for applicable procedures.*

Radiography

- Assisting the licensed practitioner with fluoroscopic and specialized radiologic procedures.
- Performing diagnostic radiographic and noninterpretive fluoroscopic procedures as prescribed by a licensed practitioner.

Standard One – Assessment
The medical imaging and radiation therapy professional collects pertinent data about the patient, procedure, equipment and work environment.

Rationale
Information about the patient's health status is essential in providing appropriate imaging and therapeutic services. The planning and provision of safe and effective medical services relies on the collection of pertinent information about equipment, procedures and the work environment.

The medical imaging professional:

General Criteria

- *Assesses and maintains the integrity of medical supplies.*
- *Assesses factors that may affect the procedure, such as medications, patient history, patient preparation or artifact-producing objects.*
- *Assesses patient lab values, medication list and risk for allergic reaction(s) prior to procedure and administration of medication.*
- *Confirms that equipment performance, maintenance and operation comply with the manufacturer's specifications.*
- *Determines that services are performed in a safe environment, minimizing potential hazards.*
- *Maintains restricted access to controlled areas.*
- *Obtains and reviews relevant previous procedures and information from all available resources and the release of information as needed.*
- *Participates in ALARA, patient and personnel safety, risk management and quality management activities.*
- *Recognizes signs and symptoms of an emergency.*
- *Verifies patient identification and appropriateness of the procedure requested or prescribed.*
- *Verifies that the patient has consented to the procedure.*
- *Verifies that protocol and procedure manuals include recommended criteria and are reviewed and revised.*
- *Verifies the patient's pregnancy status.*

Specific Criteria

Radiography

- Complies with federal and state laws and regulations to minimize radiation exposure levels.
- Develops and maintains standardized exposure technique guidelines for all equipment.
- Maintains and performs quality control on radiation safety equipment.
- Reviews digital images for the purpose of monitoring radiation exposure.

Standard Two – Analysis/Determination
The medical imaging and radiation therapy professional analyzes the information obtained during the assessment phase and develops an action plan for completing the procedure.

Rationale
Determining the most appropriate action plan enhances patient safety and comfort, optimizes diagnostic and therapeutic quality and improves efficiency.

The medical imaging professional:

General Criteria

- Consults appropriate medical personnel to determine a modified action plan.
- Determines that all procedural requirements are in place to achieve a quality diagnostic or therapeutic procedure.
- Determines the appropriate type and dose of contrast media to be administered based on established protocols.
- Determines the course of action for an emergent situation.
- Determines the need for and selects supplies, accessory equipment, shielding, positioning, and immobilization devices.
- Employs professional judgment to adapt imaging or therapeutic procedures to improve diagnostic quality or therapeutic outcomes.
- Evaluates and monitors services, procedures, equipment and the environment to determine if they meet or exceed established guidelines, and revises the action plan.
- Selects the most appropriate and efficient action plan after reviewing all pertinent data and assessing the patient's abilities and condition.

Specific Criteria

Radiography

- Analyzes images to determine the use of appropriate imaging parameters.
- Verifies that exposure indicator data for digital radiographic systems has not been altered or modified and is included in the DICOM header and on images exported to media.

Standard Three – Education

The medical imaging and radiation therapy professional provides information about the procedure and related health issues according to protocol; informs the patient, public and other health care providers about procedures, equipment and facilities; and acquires and maintains current knowledge in practice.

Rationale

Education and communication are necessary to establish a positive relationship and promote safe practices. Advancements in the profession and optimal patient care require additional knowledge and skills through education.

The medical imaging professional:

General Criteria

- Advocates for and participates in continuing education related to area of practice, to maintain and enhance clinical competency.
- Advocates for and participates in vendor specific applications training to maintain clinical competency.
- Educates the patient, public and other health care providers about procedures and the associated biological effects.
- Elicits confidence and cooperation from the patient, the public and other health care providers by providing timely communication and effective instruction.
- Explains effects and potential side effects of medications.
- Maintains credentials and certification related to practice.
- Provides an accurate explanation and instructions at an appropriate time and at a level the patient and their care providers can understand; addresses questions and concerns regarding the procedure.
- Provides information on certification or accreditation to the patient, other health care providers and the public.
- Provides information to patients, health care providers, students and the public concerning the role and responsibilities of individuals in the profession.
- Provides pre-, peri- and post-procedure education.
- Refers questions about diagnosis, treatment or prognosis to a licensed practitioner.

Specific Criteria

Radiography

- Maintains knowledge of the most current practices and technology used to minimize patient dose while producing diagnostic quality images.

Standard Four – Performance

The medical imaging and radiation therapy professional performs the action plan and quality assurance activities.

Rationale
Quality patient services are provided through the safe and accurate performance of a deliberate plan of action. Quality assurance activities provide valid and reliable information regarding the performance of equipment, materials and processes.

The medical imaging professional:

General Criteria

- Adheres to radiation safety rules and standards.
- Administers first aid or provides life support.
- Applies principles of aseptic technique.
- Assesses and monitors the patient's physical, emotional and mental status.
- Consults with medical physicist or engineer in performing and documenting quality assurance tests.
- Explains to the patient each step of the action plan as it occurs and elicits the cooperation of the patient.
- Immobilizes patient for procedure.
- Implements an action plan.
- Maintains current information on equipment, materials and processes.
- Modifies the action plan according to changes in the clinical situation.
- Monitors the patient for reactions to medications.
- Participates in safety and risk management activities.
- Performs ongoing quality assurance activities and quality control testing.
- Performs procedural timeout.
- Positions patient for anatomic area of interest, respecting patient ability and comfort.
- Uses accessory equipment.
- Uses an integrated team approach.
- When appropriate, wears one or more personal radiation monitoring devices at the location indicated on the personal radiation monitoring device or as indicated by the radiation safety officer or designee.

Specific Criteria

Radiography

- Coordinates and manages the collection and labeling of tissue and fluid specimens.
- Routinely reviews patient exposure records and reject analyses as part of the quality assurance program.
- Uses appropriate uniquely identifiable pre-exposure radiopaque markers for anatomical and procedural purposes.
- Uses pre-exposure collimation and proper field-of-view selection.

Standard Five – Evaluation

The medical imaging and radiation therapy professional determines whether the goals of the action plan have been achieved, evaluates quality assurance results and establishes an appropriate action plan.

Rationale
Careful examination of the procedure is important to determine that expected outcomes have been met. Equipment, materials and processes depend on ongoing quality assurance activities that evaluate performance based on established guidelines.

The medical imaging professional:

General Criteria

- Communicates the revised action plan to appropriate team members.
- Completes the evaluation process in a timely, accurate and comprehensive manner.
- Develops a revised action plan to achieve the intended outcome.
- Evaluates quality assurance results.
- Evaluates the patient, equipment and procedure to identify variances that might affect the expected outcome.
- Identifies exceptions to the expected outcome.
- Measures the procedure against established policies, protocols and benchmarks.
- Validates quality assurance testing conditions and results.

Specific Criteria

Radiography

- Evaluates images for positioning to demonstrate the anatomy of interest.

Standard Six – Implementation

The medical imaging and radiation therapy professional implements the revised action plan based on quality assurance results.

Rationale
It may be necessary to make changes to the action plan based on quality assurance results to promote safe and effective services.

The medical imaging professional:

General Criteria

- Adjusts imaging parameters, patient procedure or additional factors to improve the outcome.
- Bases the revised plan on the patient's condition and the most appropriate means of achieving the expected outcome.
- Implements the revised action plan.
- Notifies the appropriate health care provider when immediate clinical response is necessary, based on procedural findings and patient condition.
- Obtains assistance to support the quality assurance action plan.
- Takes action based on patient and procedural variances.

Specific Criteria

Radiography
Refer to general criteria.

Standard Seven – Outcomes Measurement

The medical imaging and radiation therapy professional reviews and evaluates the outcome of the procedure according to quality assurance standards.

Rationale
To evaluate the quality of care, the medical imaging and radiation therapy professional compares the actual outcome with the expected outcome. Outcomes assessment is an integral part of the ongoing quality management action plan to enhance services.

The medical imaging professional:

General Criteria

- Assesses the patient's physical, emotional and mental status prior to discharge.
- Determines that actual outcomes are within established criteria.
- Evaluates the process and recognizes opportunities for future changes.
- Measures and evaluates the results of the revised action plan.
- Reviews all data for completeness and accuracy.
- Reviews and evaluates quality assurance processes and tools for effectiveness.
- Reviews the implementation process for accuracy and validity.
- Uses evidence-based practice to determine whether the actual outcome is within established criteria.

Specific Criteria

Radiography
Refer to general criteria.

Standard Eight – Documentation

The medical imaging professional documents information about patient care, procedures and outcomes.

Rationale
Clear and precise documentation is essential for continuity of care, accuracy of care and quality assurance.

The medical imaging and radiation therapy professional:

General Criteria

- Archives images or data.
- Documents diagnostic, treatment and patient data in the medical record in a timely, accurate and comprehensive manner.
- Documents procedural timeout.
- Documents unintended outcomes or exceptions from the established criteria.
- Maintains documentation of quality assurance activities, procedures and results.
- Provides pertinent information to authorized individual(s) involved in the patient's care.
- Records information used for billing and coding procedures.
- Reports any out-of-tolerance deviations to the appropriate personnel.
- Verifies patient consent is documented.

Specific Criteria

Radiography

- Documents fluoroscopic time.
- Documents radiation exposure.
- Documents the use of shielding devices and proper radiation safety practices.

Standard Nine – Quality

The medical imaging and radiation therapy professional strives to provide optimal care.

Rationale
Patients expect and deserve optimal care during diagnosis and treatment. The medical imaging professional:

General Criteria

- Adheres to standards, policies and established guidelines.
- Anticipates, considers and responds to the needs of a diverse patient population.
- Applies professional judgment and discretion while performing the procedure.
- Collaborates with others to elevate the quality of care.
- Participates in ongoing quality assurance programs.

Specific Criteria

Radiography
Refer to general criteria.

Standard Ten – Self-Assessment

The medical imaging professional evaluates personal performance.

Rationale
Self-assessment is necessary for personal growth and professional development. The medical imaging and radiation therapy professional:

General Criteria

- Assesses personal work ethics, behaviors and attitudes.
- Evaluates performance, applies personal strengths and recognizes opportunities for educational growth and improvement.

Specific Criteria

Radiography
Refer to general criteria.

Standard Eleven – Collaboration and Collegiality

The medical imaging and radiation therapy professional promotes a positive and collaborative practice atmosphere with other members of the health care team.

Rationale
To provide quality patient care, all members of the health care team must communicate effectively and work together efficiently.

The medical imaging professional:

General Criteria

- Develops and maintains collaborative partnerships to enhance quality and efficiency.
- Informs and instructs others about radiation safety.
- Promotes understanding of the profession.
- Shares knowledge and expertise with others.

Specific Criteria

Radiography
Refer to general criteria.

Standard Twelve – Ethics

The medical imaging and radiation therapy professional adheres to the profession's accepted ethical standards.

Rationale
Decisions made and actions taken on behalf of the patient are based on a sound ethical foundation.

The medical imaging professional:

General Criteria

- Accepts accountability for decisions made and actions taken.
- Acts as a patient advocate.
- Adheres to the established ethical standards of recognized certifying agencies.
- Adheres to the established practice standards of the profession.
- Delivers patient care and service free from bias or discrimination.
- Provides health care services with consideration for a diverse patient population.
- Respects the patient's right to privacy and confidentiality.

Specific Criteria

Radiography
Refer to general criteria.

Standard Thirteen – Research, Innovation and Professional Advocacy

The medical imaging and radiation therapy professional participates in the acquisition and dissemination of knowledge and the advancement of the profession.

Rationale
Participation in professional organizations and scholarly activities such as research, scientific investigation, presentation and publication advance the profession.

The medical imaging professional:

General Criteria

- Adopts new best practices.
- Investigates innovative methods for application in practice.
- Monitors changes to federal and state law, regulations and accreditation standards affecting area(s) of practice.
- Participates in data collection.
- Participates in professional advocacy efforts.
- Participates in professional societies and organizations.
- Pursues lifelong learning.
- Reads and evaluates research relevant to the profession.
- Shares information through publication, presentation and collaboration.

Specific Criteria

Radiography
Refer to general criteria.

Glossary

The glossary is an alphabetical list of defined terms or words specifically found in the ASRT Practice Standards for Medical Imaging and Radiation Therapy. The terms or words have meaning that might not be general knowledge. The definitions are formulated using evidentiary documentation and put into place following extensive review and subsequent approval. The glossary is not all-inclusive. New terms and new usage of existing terms will emerge with time and advances in technology.

AAPM – American Association of Physicists in Medicine

ACR – American College of Radiology

advanced-practice radiographer – A registered technologist who has gained additional knowledge and skills through the successful completion of an organized program or radiologic technology education that prepares radiologic technologists for advanced-practice roles and has been recognized by the national certification organization to engage in advanced-practice radiologic technology.

adverse event – Any undesirable experience associated with the use of a medical product in a patient.

ALARA – Acronym for "as low as (is) reasonably achievable," which means making every reasonable effort to maintain exposures to radiation as far below the dose limits as practical, consistent with the purpose for which the licensed activity is undertaken, while taking into account the state of technology, the economics of improvements in relation to state of technology, the economics of improvements in relation to benefits to the public health and safety and other societal and socioeconomic considerations, and in relation to the use of nuclear energy and licensed materials in the public interest. The ASRT recognizes the concept of ALARA to include energies used for magnetic resonance and sonographic imaging.

anatomic (anatomical) landmarks – Bones or other identifiable points that are visible or palpable and indicate the position of internal anatomy.

archive (archival) –The storage of data in either hard (film) or soft (digital) form.

ARDMS – American Registry for Diagnostic Medical Sonography

ARRT – American Registry of Radiologic Technologists

artifact – Extraneous information on the image that interferes with or distracts from image quality.

ASRT – American Society of Radiologic Technologists

authorized user – A physician, dentist or podiatrist who meets the requirements as defined by the United States Nuclear Regulatory Commission.

beam-modification devices – Devices that change the shape of the treatment field or distribution of the radiation at (tissue) depth.

brachytherapy – A type of radiation therapy in which radioactive material sealed in needles, seeds, wires or catheters is placed directly into or near a tumor. Also called implant radiation therapy, internal radiation therapy and radiation brachytherapy.

CCI – Cardiovascular Credentialing International

change management – Systematic approach to preparing for, implementing and sustaining a change in process.

clinical – Pertaining to or founded on actual observations and treatments of patients.

clinically competent – The ability to perform a clinical procedure in a manner that satisfies the demands of a situation, as assessed and documented by a qualified individual.

contrast media – A substance administered during a medical imaging procedure for the purpose of enhancing the contrast between an internal structure or fluid and the surrounding tissue.

cropping – The process of selecting and removing a portion of the image.

custom blocks – Devices designed to shape the radiation field.

DICOM – Acronym for “Digital Imaging and Communications in Medicine.” The DICOM standards are a complex set of instructions to exchange and present medical image information.

dose distribution – Spatial representation of the magnitude of the dose produced by a source of radiation. It describes the variation of dose with position within an irradiated volume.

dosimetric calculations – Computation of treatment unit settings, monitor units, treatment times and radiation doses to anatomical areas of interest.

educationally prepared – The successful completion of didactic and clinical education necessary to properly perform a procedure in accordance with accepted practice standards.

electronic masking – Electronic collimation or cropping of the digital radiographic image that occurs during

postprocessing of the acquired image and does not alter the size of the irradiated field.

fiducial markers – Fixed reference points against which other objects can be measured. They may be placed internally, at skin surface or fixed externally to the patient.

GRADE – Grading of Recommendations Assessment, Development and Evaluation

hybrid imaging – The combination of imaging technologies that allows information from different modalities to be presented as a single set of images.

image-guided radiation therapy – A process of using various imaging techniques to localize the target and critical tissues and, if needed, reposition the patient just before or during the delivery of radiotherapy.

immobilization device – Device that assists in maintaining or reproducing the position while restricting patient movement.

initial observation – Assessment of technical image quality with pathophysiology correlation communicated to a radiologist.

interpretation – The process of examining and analyzing all images within a given procedure and integration of the imaging data with appropriate clinical data in order to render an impression or conclusion set forth in a formal written report composed and signed by a licensed practitioner.

interventional procedures – Invasive medical imaging guidance methods used to diagnose and/or treat certain conditions.

ISCD – International Society for Clinical Densitometry

JRC-DMS – Joint Review Committee on Education in Diagnostic Medical Sonography

least significant change – The least amount of bone mineral densitometry change that can be considered statistically significant.

licensed practitioner – A medical or osteopathic physician, chiropractor, podiatrist or dentist who has education and specialist training in the medical or dental use of radiation and is deemed competent to perform independently or supervise medical imaging or radiation therapy procedures by the respective state licensure board.

MDCB – Medical Dosimetrist Certification Board

medical physicist – An individual who is competent to practice independently in the safe use of x-rays, gamma rays, electron and other charged particle beams, neutrons, radionuclides, sealed radionuclide sources, ultrasonic radiation, radiofrequency radiation and magnetic fields for diagnostic and therapeutic purposes. An individual is considered competent to practice in the field of medical physics if he or she is certified by the appropriate recognized certification organization.

medication – Any chemical substance intended for use in the medical diagnosis, cure, treatment or prevention of disease.

minimal sedation (anxiolysis) – A drug-induced state during which patients respond normally to verbal commands. Although cognitive function and coordination may be impaired, ventilatory and cardiovascular functions are unaffected.

moderate sedation – A drug-induced depression of consciousness during which patients respond purposefully to verbal commands, either alone or accompanied by light tactile stimulation. No interventions are required to maintain a patent airway, and spontaneous ventilation is adequate. Cardiovascular function is usually maintained.

molecular imaging – A biomedical discipline enabling the visualization, characterization and quantification of biologic processes taking place at the cellular and subcellular levels within intact living subjects.

monitor units – Unit of output measure used for linear accelerators, sometimes indicated with the abbreviation MU. Accelerators are calibrated so that 1 MU delivers 1 cGy for a standard reference field size at a standard reference depth at a standard source to calibration point.

NECS – National Education Curriculum for Sonography

NMTCB – Nuclear Medicine Technology Certification Board

noninterpretive fluoroscopic procedures – Use of fluoroscopic imaging under the direction of a licensed practitioner for purposes other than interpretation.

normal tissue tolerance – Radiation tolerance levels of healthy organs near or within the radiation treatment fields.

NRC – U.S. Nuclear Regulatory Commission

panning – Movement of the imaging equipment during image acquisition to maintain visualization of an anatomic region of interest.

personal radiation monitoring devices – Devices designed to be worn or carried by an individual for the purpose of measuring the dose of radiation received.

physics survey – Performing equipment testing, evaluating the testing results and completing a formal written report of results. The written survey report, validated by a medical physicist, contains sufficient information to document that each test was conducted according to local, federal or state requirements and includes an assessment of corrective actions and recommendations for improvements.

postprocessing – Computerized processing of data sets after acquisition to create a diagnostic or therapeutic image.

procedure – Specific course of action intended to result in an imaging study, treatment or other outcome.

protocol – The plan for carrying out a procedure, scientific study or a patient's treatment regimen.

quality assurance – Activities and programs designed to achieve a desired degree or grade of care in a defined medical, nursing or health care setting or program. Sometimes indicated with the abbreviation QA.

quality control – The routine performance of techniques used in monitoring or testing and maintenance of components of medical imaging and radiation therapy equipment. This includes the interpretation of data regarding equipment function and confirmation that corrective actions are/were taken. Sometimes indicated with the abbreviation QC.

radiation oncologist – A physician who specializes in using radiation to treat cancer.

radiation protection – Prophylaxis against injury from ionizing radiation. The only effective preventive measures are shielding the operator, handlers and patients from the radiation source; maintaining appropriate distance from the source; and limiting the time and amount of exposure.

radioactive material – A substance composed of unstable atoms that decay with the spontaneous emission of radioactivity. Includes radiopharmaceuticals, unsealed sources (open, frequently in liquid or gaseous form) and sealed sources (permanently encapsulated, frequently in solid form).

radiobiology – The study of the effects of radiation on living organisms.

radiography – The process of obtaining an image for diagnostic examination using x-rays.

sentinel event – An unexpected occurrence involving death or serious physical or psychological injury, or the risk thereof. Serious injury specifically includes loss of limb or function. The phrase “or the risk thereof” includes any process variation for which a recurrence would carry a significant chance of a serious adverse outcome.

setup – Arrangement of treatment parameters used in preparation for delivering radiation therapy; includes patient positioning data, field alignment information and equipment configurations.

shuttering – A postprocessing technique that may be used to eliminate ambient light around an image for the sole purpose of improving the quality of the displayed image. It should not be used as a substitute for insufficient collimation of the irradiated field.

simulation – A process using imaging technologies to plan radiation therapy so that the target area is precisely located and marked; the mockup procedure of a patient treatment with medical imaging documentation of the treatment portals.

SNMMI – Society of Nuclear Medicine and Molecular Imaging

static – Any medical image that is fixed or frozen in time.

supervising radiologist – A board-certified radiologist who oversees duties of the radiologist assistant and has appropriate clinical privileges for the procedure performed by the radiologist assistant.

timeout – Preprocedural pause to conduct a final assessment that the correct patient, site and procedure are identified.

tolerance levels (doses) – The maximum radiation dose that may be delivered to a given biological tissue at a specified dose rate and throughout a specified volume without producing an unacceptable change in the tissue.

treatment calculations – See dosimetric calculations.

treatment field (portal) – Volume of tissue exposed to radiation from a single radiation beam.

treatment planning – The process by which dose delivery is optimized for a given patient and clinical situation. It encompasses procedures involved in planning a course of radiation treatment, including simulation through completion of the treatment summary.

treatment record – Documents the delivery of treatments, recording of fractional and cumulative doses, machine settings, verification imaging and the ordering and implementation of prescribed changes.

T-score – Number of standard deviations the individual’s bone mineral density is from the average bone mineral density for gender-matched young normal peak bone mass.

vascular access device – Apparatus inserted into the peripheral or central vasculature for diagnostic or therapeutic purposes.

vascular closure device – Active or passive medical devices used to achieve hemostasis after a cardiovascular or endovascular procedure that requires catheterization.

venipuncture – The transcutaneous puncture of a vein by a sharp rigid stylet or cannula carrying a flexible plastic catheter or by a steel needle attached to a syringe or catheter.

verification images – Images produced to confirm accurate treatment positioning and accurate treatment portals.

Z-score – Number of standard deviations the individual's bone mineral density is from the average bone mineral density for age- and gender-matched reference group.

Advisory Opinion Statements

Advisory opinion statements are interpretations of the practice standards. They are intended for clarification and guidance for specific practice issues.

The ASRT issues advisory opinions as to what constitutes appropriate practice. As such, an opinion is not a regulation or statute and does not have the force and effect of law. It is issued as a guidepost to medical imaging and radiation therapy professionals who wish to engage in safe practice. Federal and state laws, accreditation standards necessary to participate in government programs and institutional policies and procedures supersede these standards. The individual must be educationally prepared and clinically competent as a prerequisite to professional practice.

The profession holds medical imaging and radiation therapy professionals responsible and accountable for rendering safe, effective clinical services to patients and for judgments exercised and actions taken in the course of providing those services.

Acts that are within the recognized scope of practice for a given license or certification may be performed only by those individuals who possess the education and clinical proficiency to perform those acts in a safe and effective manner.

The medical imaging and radiation therapy professional's performance should be evidence-based and consistent with federal and state laws, regulations, established standards of practice, facility policies and procedures. Links to external websites may change without notice.

Each medical imaging and radiation therapy professional must exercise professional and prudent judgment when determining whether the performance of a given act is within the scope of practice for which the individual is licensed, if applicable within the jurisdiction in which the person is employed, educationally prepared and clinically competent to perform.

The ASRT's position is to determine the practice standards and scopes of practice for medical imaging and radiation therapy professionals. The practice standards emphasize the importance of an individual being educationally prepared and clinically competent to practice in the profession of medical imaging and radiation therapy.

Medication Administration Through Existing Vascular Access

After research of evidentiary documentation such as current literature, curricula, position statements, scopes of practice, laws, federal and state regulations and inquiries received by the ASRT, the ASRT issued opinions contained herein.

Advisory Opinion
It is the opinion of the ASRT that based upon current literature; curricula set forth by the ASRT, SNMMI and the NECS; certification examination specifications by the ARRT, NMTCB and CCI; recommendations by the ACR; and where federal or state law and/or institutional policy permits that:

1. It is within the scope of practice for medical imaging and radiation therapy professionals to access and administer medications through existing vascular access.

With proper education and proven competence, accessing and administering medications through existing vascular access provides quality patient services in a safe environment.

GRADE: Strong

Definitions

access – The process of inserting the designated needle through the access point of an existing vascular access device to deliver IV fluids or medication.
existing vascular access – Peripheral or central vascular implanted devices or external access lines that include, but are not limited to, peripherally inserted central catheter lines, intravenous lines, central lines and ports.

The following definitions can be found in the glossary to the ASRT Practice Standards for Medical Imaging and Radiation Therapy:

- clinically competent
- educationally prepared
- medication

Evidentiary Documentation
Current Literature

- ACR Committee on Contrast Media. ACR Manual on Contrast Media. Version 10.3. Reston, VA: American College of Radiology; 2017. Accessed November 29, 2018.
- American College of Radiology. ACR practice parameter for performing and interpreting diagnostic computed tomography (CT). Revised 2017. Accessed November 30, 2018.
- American College of Radiology. ACR practice parameter for performing and interpreting magnetic resonance imaging (MRI). Revised 2017. Accessed November 30, 2018.
- American College of Radiology. ACR-SPR practice parameter for the use of intravascular contrast media. Revised 2017. Accessed November 30, 2018.
- Rockwell D. A competency for central line use in radiology. J Radiol Nurs. 2008;27(2):84. doi:10.1016/j.jradnu.2008.04.016

QUALITY OF EVIDENCE: High

Curricula

- Cardiac-Interventional and Vascular-Interventional Curriculum (ASRT, 2014)
- Computed Tomography Curriculum (ASRT, 2018)
- Magnetic Resonance Curriculum (ASRT, 2015)
- Mammography Curriculum (ASRT, 2018)
- National Education Curriculum for Sonography (JRC-DMS, 2016)
- NEC Common Curricula (JRC-DMS, 2016)
- Nuclear Medicine Technology Competency-Based Curriculum Guide (SNMMI, 2013)
- Radiation Therapy Professional Curriculum (ASRT, 2014)
- Radiography Curriculum (ASRT, 2017)
- Radiologist Assistant Curriculum (ASRT, 2015)

QUALITY OF EVIDENCE: High

Certification Agency Examination Content Specifications

- Computed Tomography (ARRT, 2017)
- Magnetic Resonance Imaging (ARRT, 2017)
- Nuclear Medicine Technology (ARRT, 2017)
- Radiography (ARRT, 2017)
- Registered Radiologist Assistant (ARRT, 2018)
- Vascular Interventional Radiography (ARRT, 2017)

Other Certification Agency Content Specifications

- Components of Preparedness (NMTCB, 2017)
- Examination Overview: Registered Cardiovascular Invasive Specialist (CCI, 2018)

QUALITY OF EVIDENCE: High

Scopes of Practice and Practice Standards Reference

- Scope of Practice
  - Administering medications parenterally through new or existing vascular access, enterally or through other appropriate routes as prescribed by a licensed practitioner.
  - Identifying, preparing and/or administering medications as prescribed by a licensed practitioner.
  - Performing venipuncture as prescribed by a licensed practitioner.
  - Starting, maintaining and/or removing intravenous access as prescribed by a licensed practitioner.

QUALITY OF EVIDENCE: High

Federal and State Statute References
Not applicable

Other
Not applicable

Approved: July 1, 2012
Amended, Main Motion, C-13.21 and C13.23, 2013
Amended, Main Motion, C-16.14, 2016
Amended, Main Motion, C-17.10, 2017
Amended, Main Motion, C-18.12, 2018
ASRT House of Delegates

Placement of Personal Radiation Monitoring Devices

After research of evidentiary documentation such as current literature, curricula, position statements, scopes of practice, laws, federal and state regulations and inquiries received by the ASRT, the ASRT issued opinions contained herein.

Advisory Opinion
It is the opinion of the ASRT that based upon current literature; curricula set forth by the ASRT and SNMMI; certification examination specifications by the ARRT and NMTCB; regulatory requirements; AAPM recommendations; and where federal or state law and/or institutional policy permits that:

1. Radiation workers wear a personal radiation monitoring device outside of protective apparel with the label facing the radiation source at the level of the thyroid to approximate the maximum dose to the head and neck.
2. In specific cases, a whole-body monitor may be indicated. This monitor should be worn at the waist under a protective lead apron.
3. In some cases, a ring monitor may be indicated. This monitor should be worn on the dominant hand with the label facing the radiation source.

With proper education and proven competence, the determination of proper use of personal monitoring devices provides quality patient services in a safe environment.

GRADE: Strong

Definitions
The following definition can be found in the glossary to the ASRT Practice Standards for Medical Imaging and Radiation Therapy:

- personal radiation monitoring device

Evidentiary Documentation
Current Literature

- Bushong S. Occupational radiation dose management. In: Radiologic Science for Technologists: Physics, Biology, and Protection. 11th ed. St Louis, MO: Elsevier; 2017:581-598.
- By standards number: 1910.1096(d)(3)(i) – ionizing radiation. Occupational Safety and Health Administration website. Accessed November 30, 2018.
- Statkiewicz-Sherer MA, Visconti PJ, Ritenour ER, Welch-Haynes K. Radiation monitoring. In: Radiation Protection in Medical Radiography. 8th ed. St Louis, MO: Elsevier; 2018:75-92.

QUALITY OF EVIDENCE: High

Curricula

- Bone Densitometry Curriculum (ASRT, 2014)
- Limited X-ray Machine Operator Curriculum (ASRT, 2015)
- Positron Emission Tomography (PET)-Computed Tomography (CT) Curriculum (ASRT, 2004)
- Nuclear Medicine Technology Competency-Based Curriculum Guide (SNMMI, 2013)
- Radiation Therapy Professional Curriculum (ASRT, 2014)
- Radiography Curriculum (ASRT, 2017)
- Radiologist Assistant Curriculum (ASRT, 2015)

QUALITY OF EVIDENCE: High

Certification Agency Examination Content Specifications

- Cardiac Interventional Radiography (ARRT, 2017)
- Limited Scope of Practice in Radiography (ARRT, 2018)
- Nuclear Medicine Technology (ARRT, 2017)
- Radiation Therapy (ARRT, 2017)
- Radiography (ARRT, 2017)
- Registered Radiologist Assistant (ARRT, 2018)
- Vascular Interventional Radiography (ARRT, 2017)

Other Certification Agency Content Specifications

- Components of Preparedness (NMTCB, 2017) QUALITY OF EVIDENCE: High

Scopes of Practice and Practice Standards Reference
Not applicable

Federal and State Statute References

- § 19.12 Instruction to Workers (NRC, 2018)
- § 20.1208 Dose Equivalent to an Embryo/Fetus (NRC, 2018)
- § 20.1502 Conditions Requiring Individual Monitoring of External and Internal Occupational Dose (NRC, 2018)
- Regulatory Guide 8.34: Monitoring Criteria and Methods to Calculate Occupational Radiation Doses (NRC, 1992)
- Regulatory Guide 8.36: Radiation Dose to the Embryo/Fetus (NRC, 2018)
- Regulatory Guide 8.7: Instructions for Recording and Reporting Occupational Radiation Exposure Data (NRC, 2016)

QUALITY OF EVIDENCE: High

Other
AAPM Report No. 58: Managing the Use of Fluoroscopy in Medical Institutions. Appendix A: Radiation Safety/Quality Assurance Program

QUALITY OF EVIDENCE: High

Approved: July 1, 2012
Amended, Main Motion, C-13.21 & C13.23, 2013
Amended, Main Motion, C-16.15, 2016
Amended, Main Motion, C-18.09, 2018
ASRT House of Delegates

Use of Postexposure Shuttering, Cropping and Electronic Masking in Radiography

After research of evidentiary documentation such as current literature, curricula, position statements, scopes of practice, laws, federal and state regulations, and inquiries received by the ASRT, the ASRT issued opinions contained herein.

Advisory Opinion
It is the opinion of the ASRT that based upon current literature, curricula set forth by the ASRT, certification examination specifications by the ARRT, and recommendations by the ACR that:

1. It is within the scope of practice of a radiologic technologist to determine and apply appropriate pre-exposure collimation to individual projections of examinations to comply with the principle of ALARA. Postexposure shuttering, cropping, electronic collimation or electronic masking to eliminate the visibility of large regions of brightness are acceptable, where automatic processing fails to do so.
2. It is outside of the scope of practice of a radiologic technologist to use postexposure shuttering, cropping, electronic collimation or electronic masking to eliminate any anatomical information. This information is a part of the patient's permanent medical record and should therefore be presented to the licensed practitioner to determine whether the exposed anatomy obtained on any image is significant or of diagnostic value.
3. It is outside the scope of practice of a radiologic technologist to use postexposure shuttering, cropping, electronic collimation or electronic masking to duplicate and use any acquired image for more than one prescribed view or projection on any exam. Facilities acquiring digital images are legally required to retain information in the DICOM information of each image that identifies the selected view or projection at the time of image acquisition. Using the same acquired image to represent two different prescribed views or projections is a falsification of the information in the patient medical record and imaging study made available to the licensed practitioner.

With proper education and proven competence, the elimination of improper use of postexposure shuttering, cropping and electronic masking provides quality patient services in a safe environment.

GRADE: Strong

Definitions

- **processing:** Manipulation of the raw data just after acquisition.

The following definitions can be found in the glossary to the ASRT Practice Standards for Medical Imaging and Radiation Therapy:

- cropping
- DICOM
- electronic masking
- shuttering

Evidentiary Documentation
Current Literature

- American College of Radiology. ACR-AAPM-SIIM-SPR practice parameter for digital radiography. Revised 2017.
- Bomer J, Wiersma-Deijl L, Holscher HC. Electronic collimation and radiation protection in paediatric digital radiography: revival of the silver lining. Insights Imaging. 2013;4(5):723-727. doi:10.1007/s13244-013-0281-5
- Carroll QB. Radiography in the Digital Age. 2nd ed. Springfield, IL: Charles C Thomas; 2014.
- Carter C, Vealé B. Digital Radiography and PACS. 2nd ed. Maryland Heights, MO: Elsevier; 2014.
- Chalazonitis AN, Koumarianos D, Tzovara J, Chronopoulos P. How to optimize radiological images captured from digital cameras, using the Adobe Photoshop 6.0 program. J Digit Imaging. 2003;16(2):216-229.

- Don S, Macdougall R, Strauss K, et al. Image Gently campaign back to basics initiative: ten steps to help manage radiation dose in pediatric digital radiography. AJR Am J Roentgenol. 2013;200(5):W431-W436. doi:10.2214/AJR.12.9895
- Fauber TL, Dempsey MC. X-ray field size and patient dosimetry. Radiol Technol. 2013;85(2):155-161.
- Fauber TL. Radiographic Imaging and Exposure. 5th ed. St Louis, MO: Elsevier; 2016.
- Goske MJ, Charkot E, Herrmann T, et al. Image Gently: challenges for radiologic technologists when performing digital radiography in children. Pediatr Radiol. 2011;41(5):611-619. doi:10.1007/s00247-010-1957-3
- Herrmann TL, Fauber TL, Gill J, et al; American Society of Radiologic Technologists. Best practices in digital radiography. Published 2012.
- Lo WY, Puchalski SM. Digital image processing. Vet Radiol Ultrasound. 2008;49(1 suppl 1):S42-S47. doi:10.1111/j.1740-8261.2007.00333.x
- Russell J, Burbridge BE, Duncan MD, Tynan J. Adult fingers visualized on neonatal intensive care unit chest radiographs: what you don't see. Can Assoc Radiol J. 2013;64(3):236-239. doi:10.1016/j.carj.2012.04.004
- Seeram E. Digital Radiography: An Introduction. Boston, MA: Cengage Learning; 2011.
- Uffmann M, Schaefer-Prokop C. Digital radiography: the balance between image quality and required radiation dose. Eur J Radiol. 2009;72(2):202-208. doi:10.1016/j.ejrad.2009.05.060
- Willis CE. Optimizing digital radiography of children. Eur J Radiol. 2009;72(2):266-273. doi:10.1016/j.ejrad.2009.03.003
- Zetterberg LG, Espeland A. Lumbar spine radiography—poor collimation practices after implementation of digital technology. Br J Radiol. 2011;84(1002):566-9. doi:10.1259/bjr/74571469

QUALITY OF EVIDENCE: High

Curricula
Not applicable

Certification Agency Content Specifications
Not applicable

Scopes of Practice and Practice Standards Reference

- Scope of Practice
  - Applying principles of ALARA to minimize exposure to patient, self and others.
- The ASRT Practice Standards for Medical Imaging and Radiation Therapy
  - Analyzes digital images to determine the use of appropriate imaging parameters. (Standard Two)
  - Optimizing technical factors in accordance with the principles of ALARA. (Standard Two)
  - Verifies that exposure indicator data for digital radiographic systems has not been altered or modified and is included in the DICOM header and on images exported to media. (Standard Two)
  - Employs proper radiation safety practices. (Standard Four)
  - Optimizes technical factors according to equipment specifications to meet the ALARA principle. (Standard Four)
  - Positions patient for anatomic area of interest, respecting patient ability and comfort. (Standard Four)
  - Uses pre-exposure collimation and proper field-of-view selection. (Standard Four)
  - Adheres to the established practice standards of the profession. (Standard Five)
  - Evaluates images for overall image quality of a specific area of anatomical interest based on limited education, training and licensure/certification within the scope of practice. (Standard Five, limited x-ray machine operator only)
  - Evaluates images for optimal technical exposure factors. (Standard Five, radiography only)
  - Evaluates images for positioning to demonstrate the anatomy of interest. (Standard Five, radiography only)

- Recognizes the need to adjust patient position or technical exposure factors to improve the quality of the procedure. (Standard Five, limited x-ray machine operator only)
- Reviews images to determine if additional images will enhance the diagnostic value of the procedure. (Standard Five, radiography only)
- Performs additional images that will produce the expected outcomes based upon patient condition and procedural variances. (Standard Six, radiography only)
- Performs additional images that will produce the expected outcome based on patient's condition and procedural variance under the direction of a licensed practitioner or radiographer. (Standard Six, limited x-ray machine operator only)

QUALITY OF EVIDENCE: High

Federal and State Statute References
Not applicable

Other
Not applicable

Approved: June 28, 2015
Adopted, Main Motion, C-15.23, 2015
Amended, Main Motion, C-18.10, 2018
ASRT House of Delegates

Blackhawk Technical College
Associate Degree Radiography Program
Agreement of Patient Privacy/Release of Responsibility

This Form must be Completed Prior to Attending the Clinical Observation Session
As well as at the Beginning of Each Clinical Semester

Patient Privacy

It shall be the policy of the Blackhawk Technical College Associate Degree Radiography Program that all information regarding care of the individual patient be maintained as confidential information. Patient care information is the property of the patient, and the Clinical Education Affiliate is the steward or caretaker of that information and the owner of the medium of storage.

By signing this document, I acknowledge that I have read the patient privacy policy as described in the Blackhawk Technical College Associate Degree Radiography Program and the syllabus of the current applied clinical education. I agree to treat all information with confidentiality.

I further understand that any inappropriate use of protected patient information or breach of patient confidentiality will jeopardize my standing in the Blackhawk Technical College Radiography Program.

Student Signature	Date
Program Faculty	Date

Injury or Illness

Should the student suffer an injury or illness during clinical education activities or the clinical observation, it is required that an Accident and Emergency Illness Report form be completed and returned to the radiography coordinator within 24 hours of the incident. Clinical Education center incident report forms may be required additionally at the discretion of the individual clinical education center.

As stated in the Blackhawk Technical College Associate Degree Radiography Program Student Handbook, neither the college, nor the clinical education centers are responsible for injuries suffered by students during the clinical education component of the program. BTC provides a basic Accident Insurance, assessed each semester in the form of a fee, and all BTC Health Science students are required to carry major medical insurance.

Student Signature	Date
Program Faculty	Date

Clinical Orientation Checklist

Student Name_____ Clinical Ed. Center _____

By obtaining initials for each of the following items below, students are confirming that they have received, read, and **understand** each item for the facility they are checking off at. Each item does not have to be initialed by the Clinical Preceptor, but the preceptor should sign the bottom indicating that the student has completed all of the items to their satisfaction.

_____ Parking/Entrance/Layout of facility
_____ Issued Student Badge if facility requires
_____ Explanation of how to call code
_____ Introduction to clinical Preceptor(s) and staff
_____ Orientation to the exam rooms and equipment
_____ Location of computer to login to Trajecsys
_____ Brief orientation to PACS system
_____ Location of radiologist reading rooms
_____ Break room/lockers, where to put belongings while in the clinical environment
_____ Front desk/radiology check-in
_____ Safety orientation, fire/electrical (fire extinguishers, fire exits, policies/procedures)
_____ Location of crash cart and related equipment for medical emergencies
_____ Location and use of oxygen and suction
_____ Location and use of transport equipment (wheelchair and stretcher)
_____ Radiography procedures (Department Protocols)
_____ HIPAA acknowledgement
_____ Location of MSDS
_____ Location of biohazard disposal
_____ Hospital policies on infection control (Standard Precautions)
_____ Discuss with Preceptor(s) homework policy and if personal tablet/laptop usage is allowed
_____ Phone number to use for reporting absences
_____ Special Requirements per Site (fit test, MRI video…..)

_____ _____
Clinical Preceptor Date

_____ _____
Student Date

Once this Checklist is completed and signed by a Clinical Preceptor and the student, please submit it to the appropriate DropBox in Blackboard. Failure to submit this document for **each facility** in your scheduled rotation will result in a grade of Incomplete.

Schedule Change Request

The following guidelines are to be followed when requesting changes to the clinical education schedule: All requests are subject to approval by program faculty.

- All requests will be considered prior to and during the time the schedule is being drafted.
- A preliminary draft of the schedule is provided to students for a one-week review prior to being finalized; students may again request changes during this time without potential negative grade impact. After one week the schedule is finalized.

After the schedule is finalized:

- Students may only request schedule changes in writing using the Schedule Change Request Form (attached), submitted electronically through Blackboard for the current clinical course.
  - *This form must be signed by the appropriate Clinical Preceptor documenting approval*
  - *Please email the course instructor to notify them of the request. The final approval will come from the Instructor of the course via email.*
- Request forms must be submitted minimally two weeks prior to the requested schedule change.
- Students may submit one schedule change request form per semester.
- Schedule changes must assure that students maintain appropriate clinical rotations to assure adequate clinical experiences.
- Following the single permitted schedule change students are to follow absence and make-up policies when clinical schedule requirements cannot be met.

<table>
<tr><th colspan="3">Blackhawk Technical College
Associate Degree Radiography Program
Schedule Change Request</th></tr>
<tr><td colspan="2"></td><td></td></tr>
<tr><td colspan="2">Student</td><td>Date Submitted to Blackboard/ Course Instructor Emailed</td></tr>
<tr><td colspan="2"></td><td></td></tr>
<tr><td colspan="2">Clinical Site</td><td>Rotation Affected by Change</td></tr>
<tr><td colspan="2"></td><td></td></tr>
<tr><td>Details of Request including all appropriate dates</td><td colspan="2">Reason for Request</td></tr>
<tr><td rowspan="2"></td><td></td><td>Request Approved</td></tr>
<tr><td></td><td>Request Denied</td></tr>
<tr><td colspan="3">Clinical Preceptor Signature</td></tr>
<tr><td colspan="3">All requests are subject to approval by program faculty. Final approval will come from the course instructor via email</td></tr>
</table>

This form is used only for schedule change as described in the Blackboard for Clinicals 2-4. Do not submit for use for Compensation Time.

BLACKHAWK TECHNICAL COLLEGE ASSOCIATE DEGREE RADIOGRAPHY PROGRAM CLINICAL COMPETENCY EXAMINATIONS		
Chest and Thorax: Total 8 (Mandatory: 4, Continued 4)		
Chest PA & Lateral-3	**Chest-Wheelchair-0 or 1**	**Chest-Stretcher-0 or 1**
Ribs		
Upper Extremity: Total 20 (Mandatory: 10, Continued: 10)		
Thumb or Finger-2	**Hand-2**	**Wrist-2**
Forearm-1	**Elbow-1**	Non-Trauma Shoulder-1
Trauma Shoulder-1	Humerus	Clavicle
Trauma Upper Ext. (non-shoulder)		
Lower Extremity: Total 14 (Mandatory: 6, Continued: 8)		
Foot-2	**Ankle-2**	**Knee-3**
Tib/Fib-1	Femur	**Trauma Lower Ext.**
Spine and Pelvis: Total 16 (Mandatory: 8, Continued: 8)		
Cervical Spine-2 (min 1 5-view)	Thoracic Spine	**Lumbosacral Spine-2 (min 1 5-v.)**
Swimmers	Cross-Table Lateral Spine	**Pelvis-2**
Pelvis/Translateral Hip-1	**Hip-1**	
Abdomen: Total 7 (Mandatory: 3 Continued: 4)		
KUB-3	Abdomen Series-1	Upright Abdomen-1
Mobile C-Arm Studies: Total 4 (Mandatory: 3 Continued: 1)		
C-Arm Ext. (non-hip)-1	C-Arm Hip Pinning/Femur Rod	C-Arm Non-Extremity (sterile field)
Mobile Radiographic Studies: Total 7 (Mandatory: 3, Continued: 4)		
Portable Chest-2	**Portable Abdomen-1**	**Portable Extremity-1**
Pediatrics Age 6 and Under: Total 3 (Mandatory: 2, Continued: 1)		
Pediatric PA & Lateral CXR-1	Pediatric Extremity	
Geriatrics Age 75 and Over: Total 6 (Mandatory: 3, Continued: 3)		
Geriatric Chest-1	**Geriatric Upper Extremity-1**	**Geriatric Lower Extremity-1**

Elective Procedures Total Exams Required: 22		
Fluoroscopy Studies: Minimum of 5 Can be done in RF Room or with C-Arm		
Esophagus Study	**UGI**	**Small Bowel**
Barium or Air Enema	**ERCP**	**Cystography/Cystourethrography**
Hysterosalpingography	**Myelogram/ESI**	**Arthrogram**
Head: Minimum of 2		
Skull	Sinuses	Facial Bones
Nasal Bones	Orbits	Zygomatic Arches
Mandible	TMJ's	
Remaining Electives: As many exams as needed to bring total number of Electives to 22		
Chest-Decubitus	Sternum	Soft Tissue Neck
Sternoclavicular Joints	Scapula	AC Joints
Toes	Patella	Calcaneus
Sacrum/Coccyx	Sacroiliac Joints	Scoliosis Series
Abdomen-Decub	**Intravenous Urogram (IVU)**	Pediatric Abdomen
Pediatric Mobile Study	**Geriatric Hip**	**Geriatric Spine**

Notes:

- **Exams Identified in Bold:** May not be simulated for completion of competency requirements.
- **Stretcher/Wheelchair CXR:** 1 continued competency required on either examination.
- **Cross-Table Lateral Spine:** Must be performed on a recumbent patient. Any portion of spine is acceptable.
- **Fluoroscopy Procedures:** 5 studies must be done minimally. 2 must be of the GI tract and 2 may be continued.
- **C-Arm Extremity (Non-Hip):** The 2 procedures required for completion of this competency must be different.
- **Portable Extremity:** The 2 procedures required for completion of this competency must be different.

BLACKHAWK TECHNICAL COLLEGE
ASSOCIATE DEGREE RADIOGRAPHY PROGRAM
CLINICAL COMPETENCY REQUIREMENTS

All procedures noted with a star (*) are Mandatory Clinical Competency Examinations and must be completed in order to be considered eligible for graduation. All mandatory competency examinations are identified with a number indicating the number of times clinical competency must be completed on the particular examination prior to graduation. Those mandatory examinations identified with a number other than one (1), indicate the number of continued competency examinations. Students may only perform continued competency on a particular examination one time per semester and may not perform continued competency on an examination in the same semester that the initial competency examination was performed.

In addition to the required mandatory and continued competency examination totals identified below, students must perform additional elective competency examinations to complete the requirements for each examination category. Elective competency examinations are non-starred examinations identified on the previous page, or miscellaneous examinations not specifically identified. Miscellaneous examinations are subject to review by program faculty.

The breakdown of the clinical competency examination requirements is as follows:

Clinical Competency Requirements by Category

Category	Mandatory	Continued	Elective	Total
Chest and Thorax	4	4		8
Upper Extremity	10	10		20
Lower Extremity	6	8		14
Head	0	0	2	2
Spine and Pelvis	8	8		16
Abdomen	3	4		7
Fluoroscopy Studies	0	0	5	5
Mobile C-Arm Studies	3	1		4
Mobile Radiographic Studies	3	4		7
Pediatrics	2	1		3
Geriatrics	3	3		6
Non-Specified Elective *(from list)*			15	15
Totals	**42**	**43**	**22**	**107**

Clinical Competency Requirements by Semester

Semester	Mandatory		Elective	Semester Total	Total
	New	*Continued*			
Clinical 1: Summer Year 1	0	0	0	**0**	**0**
Clinical 2 : Fall Year 1	10	0	2	**12**	**12**
Clinical 3: Spring Year 1	9	5	7	**21**	**33**
Clinical 4: Summer Year 2	8	8	5	**21**	**54**
Clinical 5: Fall Year 2	8	17	4	**29**	**83**
Clinical 6: Spring Year 2	7	13	4	**24**	**107**
Totals	**42**	**43**	**22**	**107**	

Blackhawk Technical College Radiography Program
Mandatory Clinical Competency Evaluation: PA & Lateral Chest

Student Name	Clinical Ed. Center	Date	Time

Lab		Clinical		**Preparation for Examination:**
Yes	No	Yes	No	The Student
				1. Ensures order and cleanliness of room.
				2. Obtains correct number and sizes of image receptors; orients to patient body habitus.
				3. Obtains necessary accessory devices.
				4. Properly orients tube and image receptor.
				5. Pre-sets technical factors.
Lab		**Clinical**		**Patient Preparation and History**
Yes	No	Yes	No	The Student
				1. Identifies correct patient and procedure to be performed.
				2. Performs a thorough patient history.
				3. Thoroughly explains examination to patient and communicates effectively.
				4. Assures that patient is properly prepared for examination.
				5. Assures that there are no contraindications to performing examination.
Lab		**Clinical**		**Radiation Safety**
Yes	No	Yes	No	The Student
				1. Assures no risk of patient pregnancy
				2. Selects appropriate technical factors that minimize dose, and makes adjustments as necessary.
				3. Shields patient in accordance with department policy.
				4. Collimates the radiation field as patient size dictates.
				5. Aligns CR, patient & IR to minimize dose to patient and others
				6. Utilizes immobilization devices and instructions to diminish need for patient to he held.
Lab		**Clinical**		**Radiographic Positioning**
Yes	No	Yes	No	PA Chest: The Student
				1. Places the patient's chest against the upright Bucky, without rotation.
				2. Adjusts the orientation of the image receptor in accordance with patient body habitus.
				3. Places the image receptor 2" above the shoulders CR centered to T7, IR, & MSP.
				4. Instructs/assists the patient to roll the shoulders forward.
				5. Makes exposure and end of 2nd full inspiration.
Yes	No	Yes	No	Lateral Chest: The Student
				1. Places the patient in a true lateral position, without rotation.
				2. Places the image receptor 2" above the shoulders, CR centered to T7, IR, & MCP.
				3. Instructs/assists the patient to raise the arms as high as possible.
				4. Makes exposure and end of 2nd full inspiration.
Lab		**Clinical**		**Other Positioning Criteria**
Yes	No	Yes	No	The Student
				1. Places lead marker with L/R and student ID correctly on the image receptor.
				2. Has finished images checked by staff technologist or instructor.
				3. Properly discharges the patient with any discharge instructions necessary.
				4. Completes all necessary computer/paperwork necessary to finish examination.
				5. Leaves the radiographic room in order.
Lab		**Clinical**		**Critical Thinking/Problem Solving and Affective Criteria**
Yes	No	Yes	No	The Student
				1. Demonstrates the ability to make adjustments for patient physical condition.
				2. Demonstrates the ability to make adjustments for age or other issues of diversity.
				3. Interacts professionally with patient, family and other staff.
				4. Completes the examination efficiently and within a reasonable length of time.
				5. Answers all patient/family questions appropriately.
				6. Accepts constructive criticism and uses information to improve positioning skills.

Evaluator Comments	Patient History

Evaluator Signature: Laboratory	Pass Lab Comp	Fail Lab Comp	Date
Evaluator Signature: Clinical	Pass Clin Comp	Fail Clin Comp	Date

Student Signature	Date

Final Determination of Pass/Failure of Clinical Competency Rests With Program Faculty
This Examination May Not Be Simulated for Completion of Competency Requirements

Blackhawk Technical College Radiography Program
Mandatory Clinical Competency Evaluation: PA & Lateral Chest

Technical Factors: Identify

CR or DR		Grid (Yes/No)		Focal Spot Size		SID	

Projection	kVp	mAs	AEC Used? Y/N	Backup mAs (AEC)	Ionization Chambers Used	S-Value EI or DEI (DI)	Exposure Indicator Target/Range

Radiographic Image Evaluation

Yes	No	The Student will:
		1. State the patient's pertinent history and how it impacted this examination.
		2. The routine projections for this institution were completed.
		3. All pertinent anatomy is included on the finished images.
		4. Projection shows proper anatomical demonstration.
		a. Minimal size distortion.
		b. Minimal shape distortion.
		c. Good image sharpness/clarity.
		d. Correct central ray location.
		5. State the technical factors employed and the appropriateness of those factors.
		6. Projections demonstrate proper exposure/exposure values
		a. Proper brightness/contrast
		b. Proper penetration.
		c. Proper scatter control.
		d. Proper beam restriction
		7. Identify the correct use of markers.
		8. Suggest corrective adjustments for any aspect of this examination.

Identification of Anatomical Structures

Yes	No	The Student Identifies	Yes	No	The Student Identifies
		Lung Apices			Lung Bases
		Trachea			Carina
		Hilum			All Mediastinal Structures
		Normal Lung Markings			Aortic Arch
		Costophrenic Angles			Cardiophrenic Angles
		Diaphragm			Retrocardiac Space
		Sternoclavicular Joints			Thoracic Vertebrae Components
		Scapulae			Ribs
		Sternum			Obvious Pathology

Pass	Fail	Comments

Faculty Signature	Date
Student Signature	Date

Continued Competency
The Student is Required to Demonstrate Continued Competency
On Routine Chest Radiography Three (3) Additional Times

1. Clinical Education Center	Date/Time	Technologist Signature	Faculty Signature
2. Clinical Education Center	Date/Time	Technologist Signature	Faculty Signature
3. Clinical Education Center	Date/Time	Technologist Signature	Faculty Signature

Blackhawk Technical College Radiography Program Elective Clinical Competency Evaluation: Upper GI							
Student Name				Clinical Ed. Center		Date	Time
Lab		**Clinical**		**Preparation for Examination:**			
Yes	No	Yes	No	The Student			
				1. Ensures order and cleanliness of room.			
				2. Obtains correct number and sizes of image receptors; orients to patient body habitus.			
				3. Obtains necessary accessory devices.			
				4. Properly orients tube and image receptor.			
				5. Pre-sets technical factors.			
Lab		**Clinical**		**Patient Preparation and History**			
Yes	No	Yes	No	The Student			
				1. Identifies correct patient and procedure to be performed.			
				2. Performs a thorough patient history.			
				3. Thoroughly explains examination to patient and communicates effectively.			
				4. Assures that patient is properly prepared for examination.			
				5. Assures that there are no contraindications to performing examination.			
Lab		**Clinical**		**Radiation Safety**			
Yes	No	Yes	No	The Student			
				1. Assures no risk of patient pregnancy			
				2. Selects appropriate technical factors that minimize dose, and makes adjustments as necessary.			
				3. Shields patient in accordance with department policy.			
				4. Collimates the radiation field as patient size dictates.			
				5. Aligns CR, patient & IR to minimize dose to patient and others			
				6. Utilizes immobilization devices and instructions to diminish need for patient to he held			
Lab		**Clinical**		**Radiographic Positioning**			
Yes	No	Yes	No	Fluoroscopy: The Student			
				1. Relays patient history information to radiologist.			
				2. Assists patient during fluoroscopy.			
				3. Monitors patient during fluoroscopy, assuring radiologist instructions are understood and followed.			
Yes	No	Yes	No	Post-Fluoroscopy Radiography RAO (LPO) Stomach: The Student			
				1. Places the patient in a true 45^{o} oblique position, adjusting degree of obliquity for body habitus.			
				2. Aligns IR parallel with long axis of stomach as dictated by body habitus.			
				3. Directs CR perpendicular to the level of the duodenal bulb (L2 for normal body habitus).			
Yes	No	Yes	No	Post-Fluoroscopy Radiography AP/PA Stomach: The Student			
				1. Places patient in true AP/PA position in accordance with departmental routine.			
				2. Aligns IR with the long axis of the body.			
				3. Directs the CR perpendicular to a point 2-3” superior to the iliac crests, on the MSP.			
Yes	No	Yes	No	Post-Fluoroscopy Radiography Right Lateral Stomach: The Student			
				1. Places the patient in a true right lateral position without rotation.			
				2. Aligns IR with the long axis of the body.			
				3. Directs the CR to the level of L2, midway between the mid coronal plane and the anterior surface.			
Lab		**Clinical**		**Other Positioning Criteria**			
Yes	No	Yes	No	The Student			
				1. Places lead marker with L/R and student ID correctly on the image receptor.			
				2. Has finished images checked by staff technologist or instructor.			
				3. Properly discharges the patient with any discharge instructions necessary.			
				4. Completes all necessary computer/paperwork necessary to finish examination.			
				5. Leaves the radiographic room in order.			
Lab		**Clinical**		**Critical Thinking/Problem Solving and Affective Criteria**			
Yes	No	Yes	No	The Student			
				1. Demonstrates the ability to make adjustments for patient physical condition.			
				2. Demonstrates the ability to make adjustments for age or other issues of diversity.			
				3. Interacts professionally with patient, family and other staff.			
				4. Completes the examination efficiently and within a reasonable length of time.			
				5. Answers all patient/family questions appropriately.			
				6. Accepts constructive criticism and uses information to improve positioning skills.			
Evaluator Comments						Patient History	
Evaluator Signature: Laboratory					Pass Lab Comp	Fail Lab Comp	Date
Final Determination of Pass/Failure of Clinical Competency Rests with Program Faculty ***This Examination May Not Be Simulated for Completion of Competency Requirements***							

Blackhawk Technical College Radiography Program
Elective Clinical Competency Evaluation: Upper GI

Technical Factors: Identify

CR or DR		Grid (Yes/No)		Fluoroscopic kVp		Total Fluoro Time	

Projection	kVp	mAs	AEC Used? Y/N	Backup mAs (AEC)	Ionization Chambers Used	S-Value EI or DEI (DI)	Exposure Indicator Target/Range
					□□□		
					□□□		
					□□□		
					□□□		
					□□□		

Radiographic Image Evaluation

Yes	No	The Student:
		1. State the patient's pertinent history and how it impacted this examination.
		2. The routine projections for this institution were completed.
		3. All pertinent anatomy is included on the finished images.
		4. Projection shows proper anatomical demonstration.
		a. Minimal size distortion.
		b. Minimal shape distortion.
		c. Good image sharpness/clarity.
		d. Correct central ray location.
		5. State the technical factors employed and the appropriateness of those factors.
		6. Projections demonstrate proper exposure/exposure values
		a. Proper brightness/contrast
		b. Proper penetration.
		c. Proper scatter control.
		d. Proper beam restriction
		7. Identify the correct use of markers.
		8. Suggest corrective adjustments for any aspect of this examination.

Identification of Anatomical Structures

Yes	No	The Student Identifies	Yes	No	The Student Identifies
		Stomach Fundus			Stomach Body
		Stomach Pyloric Portion			Esophagogastric Orifice
		Pyloric Orifice (Pylorus)			Incisura Cardiaca
		Diaphragmatic Hiatus			Incisura Angularis
		Rugae			Duodenal Bulb
		Greater Curvature			Lesser Curvature
		Descending Portion of Duodenum			Obvious Pathology

Pass	**Fail**	Comments

Faculty Signature	Date
Student Signature	Date

Continued Competency

The student is not **REQUIRED** to demonstrate Continued Competency on UGI, but may if they choose. Students can count two continued fluoroscopy exams towards their Elective total.

1. Clinical Education Center	Date/Time	Technologist Signature	Faculty Signature

BLACKHAWK TECHNICAL COLLEGE RADIOGRAPHY PROGRAM
MANDATORY CLINICAL COMPETENCY EVALUATION: OR HIP PINNING
CLINICAL COMPETENCY ON TRANSLATERAL HIP MUST BE COMPLETED PRIOR OF OR HIP PINNING COMPETENCY

Student Name	Patient ID	Clinical Ed. Center	Date/Clinical Semester

Lab		Clinical		
Yes	**No**	**Yes**	**No**	**Preparation for Examination: C-Arm Setup**
				The Student
				1. Correctly connects all c-arm components powers up unit.
				2. Demonstrates knowledge of all c-arm movements:
				▪ Vertical
				▪ Longitudinal
				▪ Rotation
				▪ Transverse
				2. Orients fluoroscopic image on monitor.
				3. Demonstrates use of c-arm controls:
				▪ Collimators
				▪ Fluoro timer/reset
				▪ Large/small field (image magnification)
				▪ Single/serial images
				▪ Static/dynamic imaging
Lab		**Clinical**		**Patient Preparation and History**
Yes	**No**	**Yes**	**No**	**The Student**
				1. Identifies correct patient and procedure to be performed.
				2. Communicates effectively with physician and other staff.
				3. Assures that patient is properly prepared for examination.
				4. Assures that there are no contraindications to performing examination.
Lab		**Clinical**		**Radiation Safety**
Yes	**No**	**Yes**	**No**	**The Student**
				1. Assures no risk of patient pregnancy
				2. Selects appropriate technical factors that minimize dose, and makes adjustments as necessary.
				3. Shields patient in accordance with department policy.
				4. Assures that there are an adequate number of shields/aprons for all persons involved in procedure.
				5. Aligns c-arm tube and image intensifier to minimize dose to patient and others
Lab		**Clinical**		**Radiographic Positioning/C-Arm Manipulation/Imaging**
Yes	**No**	**Yes**	**No**	**OR Hip Pinning: The Student**
				1. Remains centered over area of interest during fluoroscopy.
				2. Maneuvers c-arm between AP & lateral projections.
				3. Adjusts technical factors as necessary.
				4. Saves, recalls, and prints images as required.
Lab		**Clinical**		**Other Positioning Criteria**
Yes	**No**	**Yes**	**No**	**The Student**
				1. Identifies images properly
				2. Has finished images checked by physician, staff technologist or instructor.
				3. Completes all necessary computer/paperwork necessary to finish examination.
				4. Disassembles, cleans, and returns c-arm to proper storage area.
Lab		**Clinical**		**Critical Thinking/Problem Solving and Affective Criteria**
Yes	**No**	**Yes**	**No**	**The Student**
				1. Demonstrates the ability to make adjustments for patient physical condition.
				2. Demonstrates the ability to make adjustments for age or other issues of diversity.
				3. Interacts professionally with patient, family and other staff.
				4. Completes the examination efficiently and within a reasonable length of time.
				5. Answers all patient/family questions appropriately.
				6. Accepts constructive criticism and uses information to improve positioning skills.

Evaluator Comments	Patient History

Evaluator Signature: Laboratory	Pass Lab Comp	Fail Lab Comp	Date
Evaluator Signature: Clinical	Pass Clin Comp	Fail Clin Comp	Date

Final Determination of Pass/Failure of Clinical Competency Rests With Program Faculty

Blackhawk Technical College Radiography Program
Mandatory Clinical Competency Evaluation: OR Hip Pinning

Technical Factors: Identify

CR or DR		Grid (Yes/No)		Fluoroscopic kVp		Total Fluoro Time	

Projection	kVp	mAs	AEC Used? Y/N	Backup mAs (AEC)	Ionization Chambers Used	S-Value EI or DEI (DI)	Exposure Indicator Target/Range

Radiographic Image Evaluation

Yes	No	The Student:
		1. State the patient's pertinent history and how it impacted this examination.
		2. The routine projections for this institution were completed.
		3. All pertinent anatomy is included on the finished images.
		4. Projection shows proper anatomical demonstration.
		a. Minimal size distortion.
		b. Minimal shape distortion.
		c. Good image sharpness/clarity.
		d. Correct central ray location.
		5. State the technical factors employed and the appropriateness of those factors.
		6. Projections demonstrate proper exposure/exposure values
		a. Proper brightness/contrast
		b. Proper penetration.
		c. Proper scatter control.
		d. Proper beam restriction
		7. Identify the correct use of markers.
		8. Suggest corrective adjustments for any aspect of this examination.

Identification of Anatomical Structures

Yes	No	The Student Identifies	Yes	No	The Student Identifies
		Iliac Crest			ASIS
		Acetabulum			Femoral Head
		Femoral Neck			Greater Trochanter
		Lesser Trochanter			Intertrochanteric Crest
		Ischial/Pubic Rami			Pubic Symphysis
		Ischial Spine			Greater/Lesser Sciatic Notch
		Ischial Tuberosity			Sacroiliac Articulations
		Obturator Foramen			Orthopedic Device/Type
		Obvious Pathology			

Pass	Fail	Comments

Faculty Signature	**Date**
Student Signature	**Date**

Continued Competency
The Student is Not Required to Demonstrate Continued Competency
On OR Hip Radiography

BLACKHAWK TECHNICAL COLLEGE
ASSOCIATE DEGREE RADIOGRAPHY PROGRAM
STUDENT RADIOGRAPHIC EXAMINATION REPEAT RECORD

Name		**Clinical Semester**			

	Exam and Projection:	Facility:	Date:	Time:	Tech Initials:
1	Detailed reason for repeat and explanation of how to correct:				
	Exam and Projection:	Facility:	Date:	Time:	Tech Initials:
2	Detailed reason for repeat and explanation of how to correct:				
	Exam and Projection:	Facility:	Date:	Time:	Tech Initials:
3	Detailed reason for repeat and explanation of how to correct:				
	Exam and Projection:	Facility:	Date:	Time:	Tech Initials:
4	Detailed reason for repeat and explanation of how to correct:				
	Exam and Projection:	Facility:	Date:	Time:	Tech Initials:
5	Detailed reason for repeat and explanation of how to correct:				
	Exam and Projection:	Facility:	Date:	Time:	Tech Initials:
6	Detailed reason for repeat and explanation of how to correct:				

7	Exam and Projection:	Facility:	Date:	Time:	Tech Initials:
	Detailed reason for repeat and explanation of how to correct:				
8	Exam and Projection:	Facility:	Date:	Time:	Tech Initials:
	Detailed reason for repeat and explanation of how to correct:				
9	Exam and Projection:	Facility:	Date:	Time:	Tech Initials:
	Detailed reason for repeat and explanation of how to correct:				
10	Exam and Projection:	Facility:	Date:	Time:	Tech Initials:
	Detailed reason for repeat and explanation of how to correct:				
11	Exam and Projection:	Facility:	Date:	Time:	Tech Initials:
	Detailed reason for repeat and explanation of how to correct:				
12	Exam and Projection:	Facility:	Date:	Time:	Tech Initials:
	Detailed reason for repeat and explanation of how to correct:				
13	Exam and Projection:	Facility:	Date:	Time:	Tech Initials:
	Detailed reason for repeat and explanation of how to correct:				

Front Page

Blackhawk Technical College Associate Degree Radiography Program Unsuccessful Competency Attempt: Procedure Performance			
Student Name:		Date:	
Clinical Site:		Rotation:	
Attempted Competency Exam:			
Reason for Unsuccessful Performance: *Check all that apply*			
Preparation for Examination		Patient Preparation and History	
Radiation Safety		Radiographic Positioning	
Other Positioning Criteria		Critical Thinking/Problem Solving & Affective Criteria	
Comments: *Please be as Specific as Possible*			
Technologist:			

Back Page

Blackhawk Technical College Associate Degree Radiography Program Unsuccessful Competency Attempt: Image Evaluation			
Student Name:		Date:	
Clinical Site:		Rotation:	
Attempted Competency Exam:			
Reason for Unsuccessful Performance: *Check all that apply*			
Technical Factor Selection		Exposure Indicators	
Patient Preparation and History		Radiographic Positioning	
Identification of Anatomy		Identification of Pathology	
Comments: *Please be as Specific as Possible*			
Faculty:			

BLACKHAWK TECHNICAL COLLEGE RADIOGRAPHY PROGRAM RADIOGRAPHIC EQUIPMENT EVALUATION	
Student Name	**Clinical Placement 1: Identify**

Students must demonstrate competence in the use of any piece of radiography equipment and ancillary device in order to perform clinical competency evaluation on radiographic procedures utilizing that equipment. Using the criteria below, record on the back page of this document that the student has demonstrated competency using all equipment available at the clinical education placement.

Control Panel	**Overhead Tube**	**Image Intensifier**
Competently Utilizes	***Competently Utilizes***	***Competently Utilizes***
a. On/off switch	a. Tube mount type	a. Fluoro mA
b. Circuit breaker	b. Field light	b. Exposure Selector
c. Rotor/exposure switch	c. Collimation	c. Spot film/digital imaging
d. Exposure time selection	d. SID indicator	d. Last image save
e. kVp selection	e. Vertical tube movement	e. Park/unlock fluoro tower
f. mA/mAs selection	f. Transverse tube movement	f. Attach lead drape/foot board
g. Focal spot size selection	g. Longitudinal tube movement	**Mobile Equipment**
h. Fluoroscopy tube selection	h. Tube angulation/ indicator	a. Drive/manipulate mobile unit
i. Bucky/tabletop selection	i. Center tube to table	b. Operate all locks/movements
j. Fluoroscopy kVp selection	k. Center tube to Bucky	c. Set exposure factors
k. Fluoroscopy timer selection	l. Center tube to upright Bucky	d. Operate beam restriction
l. AEC selection	**Radiographic Table/Upright Bucky**	e. Operate rotor/ exposure switch
m. Ionization chamber selection	***Competently Utilizes***	f. Charge unit
n. Backup time selection	a. Floating table top	g. Connect c-arm components
o. AEC density control	b. Table tilt control	h. C-arm locks/ movements
p. Pt. ID input	c. Table height	i. C-arm lights/collimation
q. Pre-programmed techniques	d. Table Bucky movement	j. Pt. ID input
r. Set conventional technique	e. Remove/secure foot-board	k. Orient image on monitor
s. Set fluoroscopic technique	e. Upright Bucky height adjustment	l. Save/print images
t. Set AEC technique	f. Upright Bucky drawer	m. Magnify image
PACS and Image Processing		
a. Select patient & exam from work list	e. Append, edit & send studies	i. Zoom, rotate & flip images.
b. Modify, delete, & refresh work list	f. Select/modify correct exam tag	j. Feed cassettes into CR reader.
c. Utilize search filters	g. Identify S / EI value	k. Deep erase CR cassettes
d. Retrieve studies	h. Mask, crop, & annotate, images	
Miscellaneous		
Competently Utilizes	***Competently Utilizes***	***Competently Utilizes***
a. U-Arm radiographic unit	e. Oxygen tank/ supplies	i. Locate/prepare contrast supplies
b. Panorex unit	f. Suction device/supplies	j. Sharps disposal
c. Pigg-O-Stat device	g. Crash cart/ emergency box	k. Restock room supplies
d. Other patient immobilization	h. IV poles/supplies	l. Room lights/dimmers

Blackhawk Technical College Radiography Program Radiographic Equipment Evaluation			
ONE SHEET PER ROTATION – WHEN YOU MOVE TO A NEW GROUP OF SITES, START A NEW SHEET			
Clinical Affiliate	**Room (Include Type) or Equipment**	**Date**	**Tech Initials**

BLACKHAWK TECHNICAL COLLEGE
ASSOCIATE DEGREE RADIOGRAPHY PROGRAM
MANDATORY NON-PROCEDURAL COMPETENCY EVALUATION: PATIENT TRANSPORT

STUDENT NAME	**CLASS OF**

The Student:

1. Demonstrates a familiarity with the location of patient rooms, and the most direct route to them.
2. Informs the nursing staff that the patient is being taken from the room for a radiographic procedure.
3. Wash hands before and after patient contact.
4. Identifies the correct patient by interview and by checking armband.
5. Safely assists the patient to and from the stretcher or wheelchair, assuring that all locks are secure.
6. Asks for assistance when necessary to avoid injury to patient and/or self.
7. Utilized proper body mechanics when lifting or moving patient.
8. Correctly handles any IV's, EKG leads, catheters, or any other lines attached to the patient.
9. Correctly manipulates any oxygen supplies and equipment, assuring that oxygen administration is minimally interrupted.
10. Utilizes proper aseptic techniques, and adheres to any isolation requirements, utilizing barriers as necessary.
10. Informs radiology personnel that patient has arrived in department.
11. Returns patient to room, asking for assistance as necessary.
12. Assures that patient's linens are orderly and neat.

Placement 1 Clinical 2	Site:	Evaluator:	Date:
	Site:	Evaluator:	Date:
(Site Name)	Site:	Evaluator:	Date:
Placement 2 Clinical 4	Site:	Evaluator:	Date:
	Site:	Evaluator:	Date:
(Site Name)	Site:	Evaluator:	Date:
Placement 3 Clinical 6	Site:	Evaluator:	Date:
	Site:	Evaluator:	Date:
(Site Name)	Site:	Evaluator:	Date:

BLACKHAWK TECHNICAL COLLEGE RADIOGRAPHY PROGRAM MANDATORY CLINICAL COMPETENCY EVALUATION: VITAL SIGNS ASSESSMENT			
Student Name			Date
Yes	**No**	**Respirations**	
		1. Measure patient's respiration by observing the patient's chest or abdomen for a 60 second period.	
		2. Record the number of respirations per minute.	
Yes	**No**	**Pulse**	
		1. Measure a patient's pulse rate at the radial artery near the wrist and at the carotid artery near the neck for a 60 second period.	
		2. Record the pulse rate per minute.	
Yes	**No**	**Blood Pressure**	
		1. Place the cuff on the patient's upper arm midway between the elbow and the shoulder without interference of clothing.	
		2. Inflate the cuff above the systolic pressure to stop the blood flow to the arm.	
		3. With the stethoscope placed over the brachial artery in the antecubital fossa of the elbow, slowly release the cuff.	
		4. When the first sound of blood flow is heard, this is the systolic pressure reading. Record the reading.	
		5. When the sound of the blood flowing through the arm ceases, this is the diastolic pressure. Record the reading	
Yes	**No**	**Temperature**	
		1. "Zeroes" thermometer and inserts in sheath as necessary.	
		2. Oral: Places thermometer tip under tongue in posterior sublingual pocket and has patient keep lips closed during assessment.	
		3. Temporal Artery:	a. Places probe flush on forehead and depresses button. b. Slides probe straight across forehead to hairline c. Moves probe from forehead to neck behind ear on mastoid process
		3. Records reading	
Yes	**No**	**Pulse Oximetry**	
		1. Assures that patient's hand is clean and that nail polish/artificial nails are not present.	
		2. Places oximeter on appropriate digit	
		3. Records reading	

Evaluator (Print) in Clinical 2	Evaluator's Signature	Date
Evaluator (Print) in Clinical 4	Evaluator's Signature	Date
Evaluator (Print) in Clinical 4	Evaluator's Signature	Date

BLACKHAWK TECHNICAL COLLEGE RADIOGRAPHY PROGRAM MANDATORY CLINICAL COMPETENCY EVALUATION: STERILE/SURGICAL ASEPTIC TECHNIQUE	
Student Name	Date
Sterile Gloves: Application	
The Student Will	
1. Open the sterile glove package correctly.	
2. Pick up the cuff of the dominant hand glove with the non-dominant hand and pull on dominant hand glove.	
3. Pick up the other glove by reaching under the cuff, touch only the outside surface of the glove with the sterile gloved hand; pull on glove.	
4. Use protective devices as appropriate.	
Sterile Gloves: Removal	
1. Grasp the outside edge of the glove with the other gloved hand.	
2. Unroll the glove over the hand without letting the skin surface touch the outside of the glove.	
3. With the ungloved hand, grasp the opposite glove cuff, touching only the inside surface.	
4. Remove the glove by inverting it over the hand and discarding it.	
Sterile Tray/Field	
1. Place the sterile package in the center of the surface with the top flap of the wrapper set to open away from the student.	
2. Pinch the first flap on the outside of the wrapper by reaching, or moving, around the package; the flap is pulled open and laid flat on the far surface.	
3. Use the right hand to open the right flap, the left hand to open the left flap.	
4. Grasping the turned down corner, pull the fourth and final flap toward your body and down from the tray	
5. Place a sterile object on the sterile tray.	
6. Put a fluid on the sterile tray.	
7. Present a vial of liquid to the radiologist and hold it while it is being drawn up.	
8. Works around sterile field properly (e.g. does not turn back, maintains field above level of waist, etc.)	
9. Prepare the used tray to be discarded, including proper disposal of all sharps.	
Evaluator Comments	
Evaluator Signature: Laboratory	Date

BLACKHAWK TECHNICAL COLLEGE RADIOGRAPHY PROGRAM MANDATORY CLINICAL COMPETENCY EVALUATION: CLEAN/MEDICAL ASEPTIC TECHNIQUE	
Student Name	Date
Hand Washing:	
The Student Will:	
1. Turn on faucet with a clean paper towel.	
2. Adjust water to acceptable temperature.	
3. Put soap on hands and lather all areas of hands and wrists, rubbing vigorously for at least 60 seconds.	
4. Clean nails by rubbing them in palm of other hand.	
5. Rinse thoroughly, running water down from wrists to fingertips.	
6. Pat dry with paper towel.	
7. Turn off faucet with paper towel and discard towel immediately.	
Clean Equipment/Surfaces	
1. Put on gloves and other PPE's as appropriate	
2. Identify correct disinfecting material	
3. Apply disinfectant agent to soiled item/surface	
4. Disinfect objects from clean to dirty area	
Dispose of Soiled Items	
1. Put on gloves and other PPE's as appropriate	
2. Place contaminated linens in biohazard (typically red) linen bags.	
3. Place contaminated disposable items in biohazard garbage bags for incineration.	
4. Arrange for removal of contaminated items in accordance with institution policy	
Evaluator Comments	
Student Signature	Date

BLACKHAWK TECHNICAL COLLEGE RADIOGRAPHY PROGRAM MANDATORY CLINICAL COMPETENCY EVALUATION: VENIPUNCTURE/IV THERAPY	
Student Name	Date
Venipuncture/IV Therapy:	
The Student Will	
1. Collect and assemble proper equipment.	
2. Identify and gain consent from patient.	
3. Explain procedure to the patient and answer questions.	
4. Wash hands thoroughly.	
5. Use protective devices as appropriate (gloves).	
6. Apply tourniquet 3-4 inches above site.	
7. Palpate dilated veins.	
8. Select vein based on assessment.	
9. Clean site/Center to periphery/Allow the site to dry (minimum 30 sec.)	
10. Inform the patient of the puncture.	
11. Anchor the vein using non-dominant hand.	
12. Approach the vein at appropriate angle (20-45 degrees) and insert cannula bevel up.	
13. Ascertain blood return.	
14. Decrease the angle of the needle to run parallel with the vein and advance about ¼ inch.	
15. Advance catheter into the vein (over-the needle-catheter only) till hub is in contact with skin.	
16. Apply pressure to the vein about 1.5 inches above insertion site and deploy needle retraction device.	
17. Quickly attach IV tubing or adapter to the end of the hub of the catheter.	
18. Release tourniquet and secure catheter in place.	
19. Dispose of needle in sharps container.	
Removing IV	
1. Place sterile sponge over site.	
2. Quickly, smoothly remove cannula intact.	
3. Elevate and apply pressure to site/Apply dressing.	
4. Properly dispose of contaminates/Chart process.	
Evaluator Signature	Date

Subject:

Site:

Affective Evaluation

Comments are required for each item. To add a comment, click on the comment bubble to the right of each line item.

Scoring Criteria:

1 - Strongly Disagree
2 - Disagree
3 - Neutral
4 - Agree
5 - Strongly Agree

Demonstrate Critical Thinking - Assesses situations and adapts to patient's ability, Employs non-routine procedures and techniques appropriately, Uses equipment and positioning devices appropriately

◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5

Demonstrate Effective Communication - Acts as an agent through observation and communication, Concise in manner and instructions, Uses appropriate medical terminology, Communicates appropriate information

◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5

Demonstrate Professional Work Behavior - Responds to patient's needs, Continually strives to improve knowledge by participating in educational activities, Shares knowledge accepts constructive criticism and investigates new and all aspects of professional practice

◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5

Demonstrate Professional Use of Relevant Technology - Uses equipment and accessories appropriately, Demonstrates expertise in minimizing radiation to patient self and other members of healthcare, Initiates and participates in learning of all equipment and operations within the healthcare setting

◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5

Demonstrates Diverse and Inclusive Practices - Delivers patient care and services unrestricted by concerns of personal attributes or the nature of the disease or illness without discrimination on the basis of race, color, creed, religion, national origin, sex, marital status, disability, sexual orientation, gender, identity, veteran status, age, or any other legally protected basis.

◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5

Additional Comments:

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

Approved ◯ Not Approved ◯

Subject:

Site:

Clinical Instructor

Please rate your Clinical Instructor. Consider each item separately and rate each item independently of all others. Comments may be made by clicking comment bubble at right of item.

Availability and enthusiasm to assist you

◯ Poor ◯ Fair ◯ Good ◯ Excellent

Clinical skills and knowledge level

◯ Poor ◯ Fair ◯ Good ◯ Excellent

Discussion and timely review of evaluations with you

◯ Poor ◯ Fair ◯ Good ◯ Excellent

Discussion of clinical expectations

◯ Poor ◯ Fair ◯ Good ◯ Excellent

Effectiveness in teaching clinical skills

◯ Poor ◯ Fair ◯ Good ◯ Excellent

Encouragement in active student participation

◯ Poor ◯ Fair ◯ Good ◯ Excellent

Guidance in developing/improving your clinical skills

◯ Poor ◯ Fair ◯ Good ◯ Excellent

Consistency in clinical evaluations

◯ Poor ◯ Fair ◯ Good ◯ Excellent

Professional characteristics

◯ Poor ◯ Fair ◯ Good ◯ Excellent

Overall contribution to your clinical education

◯ Poor ◯ Fair ◯ Good ◯ Excellent

Approved ◯ Not Approved ◯

Subject

Site:

Clinical Affiliate

Please rate your assigned affiliate. Consider each item separately and rate each item independently of all others. Comments may be made by clicking comment bubble at right of item.

Ability in orienting and making student feel comfortable

◯ Poor ◯ Fair ◯ Good ◯ Excellent

Available resources

◯ Poor ◯ Fair ◯ Good ◯ Excellent

Equipment resources

◯ Poor ◯ Fair ◯ Good ◯ Excellent

Level of consistency in clinical education

◯ Poor ◯ Fair ◯ Good ◯ Excellent

Consistency of technologist's evaluation

◯ Poor ◯ Fair ◯ Good ◯ Excellent

Level of student independence allowed

◯ Poor ◯ Fair ◯ Good ◯ Excellent

Number of clinical procedures and experiences

◯ Poor ◯ Fair ◯ Good ◯ Excellent

Variety of clinical procedures

◯ Poor ◯ Fair ◯ Good ◯ Excellent

Practice teamwork

○ Poor ○ Fair ○ Good ○ Excellent

Professional environment

○ Poor ○ Fair ○ Good ○ Excellent

Overall benefit to students clinical education

○ Poor ○ Fair ○ Good ○ Excellent

Approved ○ Not Approved ○

6004 S County Rd G • PO Box 5009 • Janesville, WI 53547-5009 (608) 757-7670 • Student Engagement Office • blackhawk.edu

STUDENT TRAVEL CODE OF CONDUCT

The following rules and regulations apply to all Blackhawk Technical College students participating in co-curricular or extracurricular travel which is either sponsored or cosponsored by a recognized Blackhawk Technical College student organization, academic program, committee, or group in which the name of the college is used in conjunction with the event:

1. Participants' behavior traveling to, from, and during the event should be such that it reflects credit to the organization, program, group, institution and individual at all times.
2. At all times, participants should show respect and courtesy toward others.
3. Advisors or their delegate must be present at all off-campus functions. Students are not allowed to attend conferences or other off-campus events without the presence of an advisor or other designated Blackhawk Technical College staff member pre-approved by the Student Services office.
4. All individuals (students & staff) attending off-campus functions must sign and have on file with Student Engagement the Student Travel Conduct Code and Liability Waiver form.
5. Participants are to report any accidents, injuries, or illness to the advisor/staff member immediately.
6. Participants responsible for theft and/or vandalism to properties during the course of the event will be held financially liable and will be subject to disciplinary and/or legal action.
7. Any unauthorized charges, charges to the room, or other personal expenses will be the responsibility of the individual participant and cannot be paid using college funds.
8. The advisor(s) or their delegate who escorts the group shall have total authority over supervision of the event and participants and has the ability to implement additional rules, regulations, and expectations as they see fit.
9. Participants who disregard or violate these rules may be subject to disciplinary action through the Student Code of Conduct, in addition to any disciplinary actions acted upon by local, state or national law enforcement officials. See the Blackhawk Technical College Student Code of Conduct for more information. http://catalog.blackhawk.edu/student-code-of-conduct/code-procedures/

TRAVEL CODE OF CONDUCT SIGNATURE

I have read the BTC Student Travel Code of Conduct and agree to abide by these rules.

Print Name_____ Signature_____ Date_____

(Parent or Legal Guardian must sign if attendee is under 18)

6004 S County Rd G • PO Box 5009 • Janesville, WI 53547-5009
(608) 757-7670 • Student Engagement Office • blackhawk.edu

STUDENT TRAVEL LIABILITY WAIVER

I, _____, will be a participant in _____which is an activity that is associated with my involvement in _____ a recognized student organization/department in active standing at Blackhawk Technical College.
As a participant in this activity, I understand and acknowledge the following:

Participant understands that their involvement in this activity is strictly voluntary. Furthermore, the participant understands that Blackhawk Technical College does not assume any liability for injuries incurred traveling to, from and during the activity. The participant must be aware of and follow rules outlined in the Blackhawk Technical College Student Travel Code of Conduct. By execution of this agreement, the participant assumes full risk and responsibility for any injuries or damages which may occur to the participant. The participant further agrees that Blackhawk Technical College, its board, officers, employees, agents, and student organization advisors shall not be liable and are hereby forever released and discharged from any and all claims, demands, actions or causes, and damages present or future, whether the same be known and unknown, anticipated or unanticipated, to the participant or participant's property arising out of, or connected with the activity.

STUDENT TRAVEL WAIVER SIGNATURE

I have read the BTC Student Travel Liability Waiver and agree to abide by these rules.

Print Name | Signature | Date

(Parent or Legal Guardian must sign if attendee is under 18)

Form must be signed completely and submitted to Student Engagement Specialist.

Blackhawk Technical College Associate Degree Radiography Program Conduct Violation Investigation Form			
Person Completing Form		Date	Semester
Student Name	Student ID	Technologist	Clinical Affiliate
Incident Date		Violation	
Description of Conduct Violation: *Reference applicable program policy & attach any supporting documentation*			
Following discussion with student, faculty/staff member secures student signature below			
Student Signature		Date	
My signature indicates that the faculty staff member has the conduct violation allegation with me			
Faculty/staff recommendations; including any penalty			
Faculty/Staff Signature		Date	
Conclusion/Resolution			
	No conduct violation occurred based on investigation and all parties were notified accordingly		
	A conduct violation did occur based on investigation and the penalty described below was imposed.		
Description of penalty			
Student Signature		Date	
Program Director Signature		Date	

All violations of clinical education policy are categorized as Minor, Moderate and Severe:

- **Minor Violations** are not considered detrimental to patient safety and consequently have minimal impact on the clinical grade and as a rule will not result in clinical probation unless there are recurrent violations. Point deductions from the clinical grade for minor clinical infractions are identified in the chart below.
    - Examples of minor violations would include but are not limited to:
        - Dress code violations
        - Third missed clock-in/clock-out
        - Radiation monitor not exchanged/lost
        - Tardiness: Any 3rd tardiness absence ≤ 15 minutes or any tardiness > 15 minutes
        - Absence
        - Being out of the assigned area
- **Moderate Violations** include issues that negatively impact the relationship of the BTC radiography program and the clinical affiliate, or may have a negative impact on patient safety. As such, these infractions will typically result in placement on clinical probation minimally for the remainder of the current clinical semester and may include involvement of the BTC Behavior Intervention Team (BIT). Point deductions from the clinical grade for moderate clinical infractions are identified in the chart below.
    - Examples of moderate infractions would include but are not limited to:
        - Unexcused absence,
        - Imaging error,
        - Performing examination without appropriate supervision,
        - Unprofessional behavior,
        - Clock-in/clock-out falsification,
        - Falsification of any clinical documentation, including failure to disclose completed and/or competency evaluations to faculty,
        - A pattern of behaviors resulting in affective behavior evaluation scores lower than a 3 at midterm or final,
        - Inappropriate social media use.
- **Severe Violations** are typically related to issues of honesty, professionalism, or patient safety so egregious that they place BTC and/or the clinical affiliate at risk legally or risk affecting the accreditation of either the college or institution. These infractions will result in immediate removal from the clinical education setting while the situation is being investigated. If the investigation results in exoneration of the student, time missed during the investigation is not required to be made up and no occurrence of absence will be accrued. However if the violation is substantiated, the student will be dismissed from the BTC radiography program. These infractions will always include involvement of the BTC Behavior Intervention Team (BIT) and in the case of illegal activities, applicable law enforcement may be notified. Point deductions from the clinical grade for severe clinical infractions will be 30 percentage minimally.
    - Examples of severe clinical grade deductions include but are not limited to:
        - Patient privacy/HIPAA violations
        - Falsification of the patient record
        - Theft
        - Unprofessional behavior in the presence of patients
        - Intentional cover-up of any issue of patient safety
        - Gross Radiation Safety/ALARA breach
        - Any violation of the ARRT Rules of Ethics: https://www.arrt.org/docs/default-source/Governing-Documents/arrt-standards-of-ethics.pdf?sfvrsn=12

BTC Radiography Program Clinical Infractions				
Infraction Type	Occurrence	Impact on Clinical Grade	Maximum Grade	Notes
Minor	1	No Grade Deduction	100%: A	
	2	-4% from Clinical Grade	96%: A	
	3	-4% from Clinical Grade	92%: AB	
	4	-6% from Clinical Grade	86%: B	
	5	-6% from Clinical Grade	80%: BC	Clinical Probation
	6	*-10% from Clinical Grade*	*70%: C*	*Non-Passing Grade*
Moderate	1	-5% from Clinical Grade	95%: A	Clinical Probation
	2	-10% from Clinical Grade	85%: B	
	3	*-15% from Clinical Grade*	*70%: C*	*Non-Passing Grade*
Severe	*1*	*-30% from Clinical Grade*	*70%: C*	*Non Passing Grade/ Program Dismissal*

BLACKHAWK TECHNICAL COLLEGE **RADIOGRAPHY PROGRAM** **PLAN FOR SUCCESS**	
Student Name	Date
Please complete the following information in detail. Staff cannot assist you with writing this plan. Create, save, and submit this as a document by the due date. Answer each section fully and completely. *There will be a follow up meeting with the staff to review this plan. At that time the plan may require revision. Details and discussion of the plan will be provided at the meeting.*	
I. Provide 3 to 5 statements describing what you see as barriers to your success in the Radiography Program. What circumstances contributed to your problem(s)?	
II. Using the above information, list three goals that you will implement to improve your effectiveness in the Radiologic Technology program.	
• Goal 1	
• Goal 2	
• Goal 3	

III. Using the above information, list three goals that you will implement to improve your effectiveness in the Radiography Program.

- Goal 1

  I.

  ii.

  iii

- Goal 2

  I.

  ii.

  iii

- Goal 3

  I.

  ii.

  iii

IV. What problems do you anticipate would prevent you from reaching your goals in the Radiography Program?

V. What are some solutions you see that will assist in solving these problems?

a.

b.

VI. What type of support will you need to achieve these goals?

VII. How will your efforts be evaluated by the Radiologic Technology program staff?

Document Due Date	Document Reviewed By

Comments

Student Signature	Date
Radiography Faculty Signature	Date
Program Director Signature	Date

Progress Review Date	Progress Reports Reviewed By
Progress Meeting Notes	

Disposition: Identify One of the Following:					
End Probation		Extend Probation		Other	
Effective Date		Next Progress Review Date		Identify	

Student Signature	Date
Radiography Faculty Signature	Date
Program Director Signature	Date

For Use Only if Probation is Extended	
Progress Review Date	Progress Reports Reviewed By
Progress Meeting Notes	

Disposition: Identify One of the Following:					
End Probation		Extend Probation		Other	

Student Signature	Date
Radiography Faculty Signature	Date
Program Director Signature	Date

Blackhawk Technical College
Associate Degree Radiography Program
Radiation Monitor Report Advising Form

As stated in the Blackhawk Technical College Radiography Program Student Handbook, any radiography student receiving a quarterly radiation monitor report in excess of 50 mrem will be advised.

This is to document that _____; a student in the Blackhawk Technical College Radiography Program had a badge reading of _____ mrem (deep/shallow) for the _____ quarter of _____.

The Radiography Program cannot tolerate careless radiation hygiene. Repeated high film badge readings will result in disciplinary action, including dismissal from the program.

In the space below, discuss the possible reasons for the high badge reading, and possible strategies for the reduction of occupational dose.

Student Signature	Date
Faculty Signature	Date

KNOW YOUR RIGHTS
PREGNANT OR PARENTING? TITLE IX PROTECTS YOU FROM DISCRIMINATION AT SCHOOL

Title IX of the Education Amendments of 1972 ("Title IX"), 20 U.S.C. §1681 *et seq.,* is a Federal civil rights law that prohibits discrimination on the basis of sex-including pregnancy and parental status-in educational programs and activities.

All public and private schools, school districts, colleges, and universities receiving any Federal funds ("schools") must comply with Title IX*

Here are some things you should know about your rights:

Classes and School Activities - your school MUST:

- Allow you to continue participating in classes and extracurricular activities even though you are pregnant. This means that you can still participate in advanced placement and honors classes, school clubs, sports, honor societies, student leadership opportunities, and other activities, like after-school programs operated at the school.
- Allow you to choose whether you want to participate in special instructional programs or classes for pregnant students. You can participate if you want to, but your school cannot pressure you to do so. The alternative program must provide the same types of academic, extracurricular and enrichment opportunities as your school's regular program.
- Allow you to participate in classes and extracurricular activities even though you are pregnant and not require you to submit a doctor's note unless your school requires a doctor's note from all students who have a physical or emotional condition requiring treatment by a doctor. Your school also must not require a doctor's note from you after you have been hospitalized for childbirth unless it requires a doctor's note from all students who have been hospitalized for other conditions.
- Provide you with reasonable adjustments, like a larger desk, elevator access, or allowing you to make frequent trips to the restroom, when necessary because of your pregnancy.

Excused Absences and Medical Leave - your school MUST:

- Excuse absences due to pregnancy or childbirth for as long as your doctor says it is necessary.
- Allow you to return to the same academic and extracurricular status as before your medical leave began, which should include giving you the opportunity to make up any work missed while you were out.
- Ensure that teachers understand the Title IX requirements related to excused absences/medical leave. Your teacher may not refuse to allow you to submit work after a deadline you missed because of pregnancy or childbirth. If your teacher's grading is based in part on class participation or attendance and you missed class because of pregnancy or childbirth, you should be allowed to make up the participation or attendance credits you didn't have the chance to earn.
- Provide pregnant students with the same special services it provides to students with temporary medical conditions. This includes homebound instruction/ at-home tutoring/Independent study.

**A school that is controlled by a religious organization is exempt from Title IX when the law's requirements would conflict with the organization's religious tenets.*

Blackhawk Technical College
Associate Degree Radiography Program
Student Pregnancy Advising Form

As stated in the Blackhawk Technical College Radiography Program Student Handbook, should the radiography student, upon suspicion or confirmation of pregnancy, choose to declare pregnancy, a counseling session to discuss options would take place.

This form is to document that _____; a student in the Blackhawk Technical College Radiography Program has chosen to declare that she is pregnant.

Please Check after Each of the Following has been Completed:

	1. Student completes counseling session with program director and other program faculty as appropriate to discuss health risks, Title IX rights, and academic options.
	2. Student completes counseling session with the Radiography Program Medical Advisor to discuss health risks.
	3. Student reads and understands Nuclear Regulatory Commission (NRC) Regulatory Guide 8.13 Instruction Concerning Prenatal Radiation Exposure.

At This Time the Student's Options Are:

1. To withdraw from the program in good standing. The student understands that if she withdraws from the program, that she must return to the program at the beginning of the same semester of withdrawal the following year. In accordance with program withdrawal/re-entry policy, if the student does not re-enter the program the following year, she must reapply to the program as a new student.

2. To continue in the program after signing a release. The student understands that by choosing to remain in the program that it is her responsibility to maintain her academic and clinical standing. If she is unable to do so, she may choose to withdraw any time after signing this document.

   It is also stated that if the student chooses to remain in the program and delivery occurs during training, the Blackhawk Technical College Radiography Program cannot guarantee normal program completion and eligibility for the A.R.R.T. examination.

Continued on next page

One of the Two Following Areas Must be Signed By the Student and Radiography Program Director	
Part 1: Student Elects to Withdraw from Program	
By signing this document, I acknowledge that I have chosen to withdraw from the Blackhawk Technical College Radiography Program in good standing. I also acknowledge that my options, including all questions related to program re-entry, have been explained to me and that any questions have been answered to my satisfaction.	
Student Signature	Date
Program Director Signature	Date
Part 2: Student Elects to Remain in Program	
By signing this document, I acknowledge that I have chosen to remain in the Blackhawk Technical College Radiography Program after confirmation of pregnancy. I also acknowledge that it is my responsibility to maintain acceptable performance both academic and clinical. I further acknowledge that the risks of remaining in the program while pregnant have been explained to me to my fullest understanding and that all of my questions have been answered. I hereby release Blackhawk Technical College and the BTC Radiography Program of all liability for any damages that might occur to me or my child due to the decision to remain in the Radiography Program	
Student Signature	Date
Program Director Signature	Date
Part 3: Student Undeclares Pregnancy	
By signing below, I hereby withdraw my previous declaration of pregnancy to the Blackhawk Technical College Associate Degree Radiography Program.	
Student Signature	Date
Program Director Signature	Date

REGULATORY GUIDE 8.13
(Draft was issued as DG-8014)
INSTRUCTION CONCERNING PRENATAL RADIATION EXPOSURE

A. INTRODUCTION

The Code of Federal Regulations in 10 CFR Part 19, “Notices, Instructions and Reports to Workers: Inspection and Investigations,” in Section 19.12, “Instructions to Workers,” requires instruction in “the health protection problems associated with exposure to radiation and/or radioactive material, in precautions or procedures to minimize exposure, and in the purposes and functions of protective devices employed.” The instructions must be “commensurate with potential radiological health protection problems present in the work place.”

The Nuclear Regulatory Commission's (NRC's) regulations on radiation protection are specified in 10 CFR Part 20, “Standards for Protection Against Radiation”; and 10 CFR 20.1208, “Dose to an Embryo/Fetus,” requires licensees to “ensure that the dose to an embryo/fetus during the entire pregnancy, due to occupational exposure of a declared pregnant woman, does not exceed 0.5 rem (5 mSv).” Section 20.1208 also requires licensees to “make efforts to avoid substantial variation above a uniform monthly exposure rate to a declared pregnant woman.” A declared pregnant woman is defined in 10 CFR 20.1003 as a woman who has voluntarily informed her employer, in writing, of her pregnancy and the estimated date of conception.

This regulatory guide is intended to provide information to pregnant women, and other personnel, to help them make decisions regarding radiation exposure during pregnancy. This Regulatory Guide 8.13 supplements Regulatory Guide 8.29, “Instruction Concerning Risks from Occupational Radiation Exposure” (Ref. 1), which contains a broad discussion of the risks from exposure to ionizing radiation.

Other sections of the NRC's regulations also specify requirements for monitoring external and internal occupational dose to a declared pregnant woman. In 10 CFR 20.1502, “Conditions Requiring Individual Monitoring of External and Internal Occupational Dose,” licensees are required to monitor the occupational dose to a declared pregnant woman, using an individual monitoring device, if it is likely that the declared pregnant woman will receive, from external sources, a deep dose equivalent in excess of 0.1 rem (1 mSv). According to Paragraph (e) of 10 CFR 20.2106, “Records of Individual Monitoring Results,” the licensee must maintain records of dose to an embryo/fetus if monitoring was required, and the records of dose to the embryo/fetus must be kept with the records of dose to the declared pregnant woman. The declaration of pregnancy must be kept on file, but may be maintained separately from the dose records. The licensee must retain the required form or record until the Commission terminates each pertinent license requiring the record.

The information collections in this regulatory guide are covered by the requirements of 10 CFR Parts 19 or 20, which were approved by the Office of Management and Budget, approval numbers 3150-0044 and 3150-0014, respectively. The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

B. DISCUSSION

As discussed in Regulatory Guide 8.29 (Ref. 1), exposure to any level of radiation is assumed to carry with it a certain amount of risk. In the absence of scientific certainty regarding the relationship between low dose exposure and health effects, and as a conservative assumption for radiation protection purposes, the scientific community generally assumes that any exposure to ionizing radiation may cause undesirable biological effects and that the likelihood of these effects increases as the dose increases. At the occupational dose limit for the whole body of 5 rem (50 mSv) per year, the risk is believed to be very low.

The magnitude of risk of childhood cancer following in utero exposure is uncertain in that both negative and positive studies have been reported. The data from these studies "are consistent with a lifetime cancer risk resulting from exposure during gestation which is two to three times that for the adult" (NCRP Report No. 116, Ref. 2). The NRC has reviewed the available scientific literature and has concluded that the 0.5 rem (5 mSv) limit specified in 10 CFR 20.1208 provides an adequate margin of protection for the embryo/fetus. This dose limit reflects the desire to limit the total lifetime risk of leukemia and other cancers associated with radiation exposure during pregnancy.

In order for a pregnant worker to take advantage of the lower exposure limit and dose monitoring provisions specified in 10 CFR Part 20, the woman must declare her pregnancy in writing to the licensee. A form letter for declaring pregnancy is provided in this guide or the licensee may use its own form letter for declaring pregnancy. A separate written declaration should be submitted for each pregnancy.

C. REGULATORY POSITION

1. **Who Should Receive Instruction:** Female workers who require training under 10 CFR 19.12 should be provided with the information contained in this guide. In addition to the information contained in Regulatory Guide 8.29 (Ref. 1), this information may be included as part of the training required under 10 CFR 19.12.

2. **Providing Instruction:** The occupational worker may be given a copy of this guide with its Appendix, an explanation of the contents of the guide, and an opportunity to ask questions and request additional information. The information in this guide and Appendix should also be provided to any worker or supervisor who may be affected by a declaration of pregnancy or who may have to take some action in response to such a declaration.

   Classroom instruction may supplement the written information. If the licensee provides classroom instruction, the instructor should have some knowledge of the biological effects of radiation to be able to answer questions that may go beyond the information provided in this guide. Videotaped presentations may be used for classroom instruction. Regardless of whether the licensee provides classroom training, the licensee should give workers the opportunity to ask questions about information contained in this Regulatory Guide 8.13. The licensee may take credit for instruction that the worker has received within the past year at other licensed facilities or in other courses or training.

3. **Licensee's Policy on Declared Pregnant Women:** The instruction provided should describe the licensee's specific policy on declared pregnant women, including how those policies may affect a woman's work situation. In particular, the instruction should include a description of the licensee's policies, if any, that may affect the declared pregnant woman's work situation after she has filed a written declaration of pregnancy consistent with 10 CFR 20.1208.

   The instruction should also identify who to contact for additional information as well as identify who should receive the written declaration of pregnancy. The recipient of the woman's declaration may be identified by name (e.g., John Smith), position (e.g., immediate supervisor, the radiation safety officer), or department (e.g., the personnel department).

4. **Duration of Lower Dose Limits for the Embryo/Fetus:** The lower dose limit for the embryo/fetus should remain in effect until the woman withdraws the declaration in writing or the woman is no longer pregnant. If a declaration of pregnancy is withdrawn, the dose limit for the embryo/fetus would apply only to the time from the estimated date of conception until the time the declaration is withdrawn. If the declaration is not withdrawn, the written declaration may be considered expired one year after submission.

5. **Substantial Variations Above a Uniform Monthly Dose Rate:** According to 10 CFR 20.1208(b), "The licensee shall make efforts to avoid substantial variation above a uniform monthly exposure rate to a declared pregnant woman so as to satisfy the limit in paragraph (a) of this section," that is, 0.5 rem (5 mSv) to the embryo/fetus. The National Council on Radiation Protection and Measurements (NCRP) recommends a monthly equivalent dose limit of 0.05 rem (0.5 mSv) to the embryo/fetus once the pregnancy is known (Ref. 2). In view of the NCRP recommendation, any monthly dose of less than 0.1 rem (1 mSv) may be considered

as not a substantial variation above a uniform monthly dose rate and as such will not require licensee justification. However, a monthly dose greater than 0.1 rem (1 mSv) should be justified by the licensee.

D. IMPLEMENTATION

The purpose of this section is to provide information to licensees and applicants regarding the NRC staff's plans for using this regulatory guide.
Unless a licensee or an applicant proposes an acceptable alternative method for complying with the specified portions of the NRC's regulations, the methods described in this guide will be used by the NRC staff in the evaluation of instructions to workers on the radiation exposure of pregnant women.

REFERENCES

1. USNRC, “Instruction Concerning Risks from Occupational Radiation Exposure,” Regulatory Guide 8.29, Revision 1, February 1996.
2. National Council on Radiation Protection and Measurements, *Limitation of Exposure to Ionizing Radiatio*n, NCRP Report No. 116, Bethesda, MD, 1993.8.13-8.13-5

APPENDIX

QUESTIONS AND ANSWERS CONCERNING PRENATAL RADIATION EXPOSURE

1. **Why am I receiving this information?** The NRC's regulations (in 10 CFR 19.12, “Instructions to Workers”) require that licensees instruct individuals working with licensed radioactive materials in radiation protection as appropriate for the situation. The instruction below describes information that occupational workers and their supervisors should know about the radiation exposure of the embryo/fetus of pregnant women. The regulations allow a pregnant woman to decide whether she wants to formally declare her pregnancy to take advantage of lower dose limits for the embryo/fetus. This instruction provides information to help women make an informed decision whether to declare a pregnancy.

2. **If I become pregnant, am I required to declare my pregnancy?** No. The choice whether to declare your pregnancy is completely voluntary. If you choose to declare your pregnancy, you must do so in writing and a lower radiation dose limit will apply to your embryo/fetus. If you choose not to declare your pregnancy, you and your embryo/fetus will continue to be subject to the same radiation dose limits that apply to other occupational workers.

3. **If I declare my pregnancy in writing, what happens?** If you choose to declare your pregnancy in writing, the licensee must take measures to limit the dose to your embryo/fetus to 0.5 rem (5 mSv) during the entire pregnancy. This is one-tenth of the dose that an occupational worker may receive in a year. If you have already received a dose exceeding 0.5 rem (5 mSv) in the period between conception and the declaration of your pregnancy, an additional dose of 0.05 rem (0.5 mSv) is allowed during the remainder of the pregnancy. In addition, 10 CFR 20.1208, “Dose to an Embryo/Fetus,” requires licensees to make efforts to avoid substantial variation above a uniform monthly dose rate so that all the 0.5 rem (5 mSv) allowed dose does not occur in a short period during the pregnancy. This may mean that, if you declare your pregnancy, the licensee may not permit you to do some of your normal job functions if those functions would have allowed you to receive more than 0.5 rem, and you may not be able to have some emergency response responsibilities.

4. **Why do the regulations have a lower dose limit for the embryo/fetus of a declared pregnant woman than for a pregnant worker who has not declared?** A lower dose limit for the embryo/fetus of a declared pregnant woman is based on a consideration of greater sensitivity to radiation of the embryo/fetus and the involuntary nature of the exposure. Several scientific advisory groups have recommended (References 1 and 2) that the dose to the embryo/fetus be limited to a fraction of the occupational dose limit.

5. **What are the potentially harmful effects of radiation exposure to my embryo/fetus?** The occurrence and severity of health effects caused by ionizing radiation are dependent upon the type and total dose of radiation received, as well as the time period over which the exposure was received. See Regulatory Guide 8.29, “Instruction Concerning Risks from Occupational Exposure” (Ref. 3), for more information. The main concern is embryo/fetal susceptibility to the harmful effects of radiation such as cancer.

6. **Are there any risks of genetic defects?** Although radiation injury has been induced experimentally in rodents and insects, and in the experiments was transmitted and became manifest as hereditary disorders in their offspring, radiation has not been identified as a cause of such effect in humans. Therefore, the risk of genetic effects attributable to radiation exposure is speculative. For example, no genetic effects have been documented in any of the Japanese atomic bomb survivors, their children, or their grandchildren.

7. **What if I decide that I do not want any radiation exposure at all during my pregnancy?** You may ask your employer for a job that does not involve any exposure at all to occupational radiation dose, but your employer is not obligated to provide you with a job involving no radiation exposure. Even if you receive no occupational exposure at all, your embryo/fetus will receive some radiation dose (on average 75 mrem (0.75 mSv)) during your pregnancy from natural background radiation. The NRC has reviewed the available scientific literature and concluded that the 0.5 rem (5 mSv) limit provides an adequate margin of protection for the embryo/fetus. This dose limit reflects the desire to limit the total lifetime risk of leukemia and other cancers. If this dose limit is exceeded, the total lifetime risk of cancer to the embryo/fetus may increase incrementally. However, the decision on what level of risk to accept is yours. More detailed information on potential risk to the embryo/fetus from radiation exposure can be found in References 2-10.

8. **What effect will formally declaring my pregnancy have on my job status?** Only the licensee can tell you what effect a written declaration of pregnancy will have on your job status. As part of your radiation safety training, the licensee should tell you the company's policies with respect to the job status of declared pregnant women. In addition, before you declare your pregnancy, you may want to talk to your supervisor or your radiation safety officer and ask what a declaration of pregnancy would mean specifically for you and your job status.

   In many cases you can continue in your present job with no change and still meet the dose limit for the embryo/fetus. For example, most commercial power reactor workers (approximately 93%) receive, in 12 months, occupational radiation doses that are less than 0.5 rem (5 mSv) (Ref. 11). The licensee may also consider the likelihood of increased radiation exposures from accidents and abnormal events before making a decision to allow you to continue in your present job.

   If your current work might cause the dose to your embryo/fetus to exceed 0.5 rem (5 mSv), the licensee has various options. It is possible that the licensee can and will make a reasonable accommodation that will allow you to continue performing your current job, for example, by having another qualified employee do a small part of the job that accounts for some of your radiation exposure.

9. **What information must I provide in my written declaration of pregnancy?** You should provide, in writing, your name, a declaration that you are pregnant, the estimated date of conception (only the month and year need be given), and the date that you give the letter to the licensee. A form letter that you can use is included at the end of these questions and answers. You may use that letter, use a form letter the licensee has provided to you, or write your own letter.

10. **To declare my pregnancy, do I have to have documented medical proof that I am pregnant?** NRC regulations do not require that you provide medical proof of your pregnancy. However, NRC regulations do not preclude the licensee from requesting medical documentation of your pregnancy, especially if a change in your duties is necessary in order to comply with the 0.5 rem (5 mSv) dose limit.

11. **Can I tell the licensee orally rather than in writing that I am pregnant?** No. The regulations require that the declaration must be in writing.

12. **If I have not declared my pregnancy in writing, but the licensee suspects that I am pregnant, do the lower dose limits apply?** No. The lower dose limits for pregnant women apply only if you have declared your pregnancy in writing. The United States Supreme Court has ruled (in *United Automobile Workers International Union v. Johnson Controls, In*c., 1991) that "Decisions about the welfare of future children must be left to the parents who conceive, bear, support, and raise them rather than to the employers who hire those parents" (Reference 7). The Supreme Court also ruled that your employer may not restrict you from a specific job "because of concerns about the next generation." Thus, the lower limits apply only if you choose to declare your pregnancy in writing.

13. **If I am planning to become pregnant but am not yet pregnant and I inform the licensee of that in writing, do the lower dose limits apply?** No. The requirement for lower limits applies only if you declare in writing that you are already pregnant.

14. **What if I have a miscarriage or find out that I am not pregnant?** If you have declared your pregnancy in writing, you should promptly inform the licensee in writing that you are no longer pregnant. However, if you have not formally declared your pregnancy in writing, you need not inform the licensee of your nonpregnant status.

15. **How long is the lower dose limit in effect?** The dose to the embryo/fetus must be limited until you withdraw your declaration in writing or you inform the licensee in writing that you are no longer pregnant. If the declaration is not withdrawn, the written declaration may be considered expired one year after submission.

16. **If I have declared my pregnancy in writing, can I revoke my declaration of pregnancy even if I am still pregnant?** Yes, you may. The choice is entirely yours. If you revoke your declaration of pregnancy, the lower dose limit for the embryo/fetus no longer applies.

17. **What if I work under contract at a licensed facility?** The regulations state that you should formally declare your pregnancy to the licensee in writing. The licensee has the responsibility to limit the dose to the embryo/fetus.

18. **Where can I get additional information?** The references to this Appendix contain helpful information, especially Reference 3, NRC's Regulatory Guide 8.29, “Instruction Concerning Risks from Occupational Radiation Exposure,” for general information on radiation risks. The licensee should be able to give this document to you

For information on legal aspects, see Reference 7, “The Rock and the Hard Place: Employer Liability to Fertile or Pregnant Employees and Their Unborn Children—What Can the Employer Do?” which is an article in the journal *Radiation Protection Managemen*t.

You may telephone the NRC Headquarters at (301) 415-7000. Legal questions should be directed to the Office of the General Counsel, and technical questions should be directed to the Division of Industrial and Medical Nuclear Safety.

You may also telephone the NRC Regional Offices at the following numbers: Region I, (610)
337-5000; Region II, (404) 562-4400; Region III, (630) 829-9500; and Region IV, (817) 860-8100. Legal questions should be directed to the Regional Counsel, and technical questions should be directed to the Division of Nuclear Materials Safety

---

[1]Single copies of regulatory guides, both active and draft, and draft NUREG documents may be obtained free of charge by writing the Reproduction and Distribution Services Section, OCIO, USNRC, Washington, DC 20555-0001, or by fax to (301) 415-2289, or by email to DISTRIBUTION@NRC.GOV. Active guides may also be purchased from the National Technical Information Service on a standing order basis. Details on this service may be obtained by writing NTIS, 5285 Port Royal Road, Springfield, VA 22161. Copies of active and draft guides are available for inspection or copying for a fee from the NRC Public Document Room at 2120 L Street NW., Washington, DC; the PDR's mailing address is Mail Stop LL-6, Washington, DC 20555; telephone (202) 634-3273; fax (202) 634-3343.

[2]Copies are available at current rates from the U.S. Government Printing Office, P.O. Box 37082, Washington, DC 20402-9328 (telephone (202) 512-1800); or from the National Technical Information Service by writing NTIS at 5285 Port Royal Road, Springfield, VA 22161. Copies are available for inspection or copying for a fee from the NRC Public Document Room at 2120 L Street NW., Washington, DC; the PDR's mailing address is Mail Stop LL-6, Washington, DC 20555; telephone (202) 634-3273; fax (202) 634-3343.

REFERENCES FOR APPENDIX

1. National Council on Radiation Protection and Measurements, *Limitation of Exposure to Ionizing Radiatio*n, NCRP Report No. 116, Bethesda, MD, 1993.
2. International Commission on Radiological Protection, *1990 Recommendations of the International Commission on Radiological Protectio*n, ICRP Publication 60, Ann. ICRP 21: No. 1-3, Pergamon Press, Oxford, UK, 1991.
3. USNRC, "Instruction Concerning Risks from Occupational Radiation Exposure," Regulatory Guide 8.29, Revision 1, February 1996. 11 (Electronically available at www.nrc.gov/NRC/RG/index.html)
4. Committee on the Biological Effects of Ionizing Radiations, National Research Council, *Health Effects of Exposure to Low Levels of Ionizing Radiation* (BEIR V), National Academy Press, Washington, DC, 1990.
5. United Nations Scientific Committee on the Effects of Atomic Radiation, *Sources and Effects of Ionizing Radiatio*n, United Nations, New York, 1993.
6. R. Doll and R. Wakeford, "Risk of Childhood Cancer from Fetal Irradiation," *The British Journal of Radiology*, 70, 130-139, 1997.
7. David Wiedis, Donald E. Jose, and Timm O. Phoebe, "The Rock and the Hard Place: Employer Liability to Fertile or Pregnant Employees and Their Unborn Children—What Can the Employer Do?" *Radiation Protection Managemen*t, *11,* 41-49, January/February 1994.
8. National Council on Radiation Protection and Measurements, *Considerations Regarding the Unintended Radiation Exposure of the Embryo, Fetus, or Nursing Chil*d, NCRP Commentary No. 9, Bethesda, MD, 1994.
9. National Council on Radiation Protection and Measurements, *Risk Estimates for Radiation Protectio*n, NCRP Report No. 115, Bethesda, MD, 1993.2 National Radiological Protection Board, *Advice on Exposure to Ionising Radiation During Pregnancy*, National Radiological Protection Board, Chilton, Didcot, UK, 1998.
10. M.L. Thomas and D. Hagemeyer, "Occupational Radiation Exposure at Commercial Nuclear Power Reactors and Other Facilities, 1996," Twenty-Ninth Annual Report, NUREG-0713, Vol. 18, USNRC, 1998. 22.8.13-8.13-11

REGULATORY ANALYSIS

A separate regulatory analysis was not prepared for this regulatory guide. A regulatory analysis prepared for 10 CFR Part 20, "Standards for Protection Against Radiation" (56 FR 23360), provides the regulatory basis for this guide and examines the costs and benefits of the rule as implemented by the guide. A copy of the "Regulatory Analysis for the Revision of 10 CFR Part 20" (PNL-6712, November 1988) is available for inspection and copying for a fee at the NRC Public Document Room, 2120 L Street NW, Washington, DC, as an enclosure to Part 20 (56 FR 23360).

Blackhawk Technical College Radiography Program MRI Screening Form			
Name			Date
Sex	Age	Height	Weight

The following items may be harmful to you during your MR scan or may interfere with the MR examination. Please provide a "yes" or "no" answer for every item

Yes	No	
		1. Cardiac pacemaker or implanted cardioverter defibrillator/ICD
		2. Internal electrodes or wires (pacing wires, DBS or VNS wires)
		3. Artificial heart value, coil, filter and/or stent (Gianturco coil, IVC filter) Aneurysm clip(s)
		4. Neurostimulator-TENS Unit, Biostimulator, bone growth stimulator, deep brain stimulator
		5. VNS Implanted drug pump (for chemotherapy medicine, pain medicine)
		6. External drug pump (for Insulin or other medicine)
		7. IV access port (Port-a-Cath, Broviac, PICC line, Swan-Gantz, Thermodilution)
		8. Implanted post-surgical hardware (pins, rods, screws, plates, wires)
		9. Artificial joint and /or limb
		10. Artificial eye and/or eyelid spring
		11. Eye injury from a metal object (metal shavings, metal slivers)
		12. Ear (Cochlear) implant, middle ear implant
		13. Hearing aid(s)
		14. False teeth/dentures, metallic removable dental work, braces, retainers
		15. Any type of implant held in place by a magnet
		16. Injured by a metal object (shrapnel, bullet, BB) and required medical attention
		17. Medication patch (nitroglycerine, nicotine, contraceptive, estrogen)
		18. Shunt or Sophy adjustable and programmable pressure valve
		19. Spinal fixation device, spinal fusion and/or halo vest, spinal cord stimulator
		20. Surgical clips, staples or surgical mesh
		21. Tissue expander (breast)
		22. Penile implant
		23. Pessary, IUD, Diaphragm
		24. Radiation seeds (cancer treatment)
		25. Body piercing, tattoo or permanent makeup
		26. Wig, hair implants
Yes	No	Do you have a history of:
		1. Kidney disease
		2. Diabetes
		3. Liver disease
		4. Claustrophobia
		5. Latex allergy
		6. Allergy of MRI contrast (Gadolinium based)
		7. Drug Allergy, identify:
Yes	No	Female Patients
		1. Is there any chance of pregnancy?
		2. Are you breast feeding?
		3. Are you still menstruating? If yes, provide date of your last period:

If you answered YES to any of the questions on the front page, please discuss any concerns and/or issues you may have, with your MR Technologist, MR Assistant or Radiology Nurse.

Health Sciences
6004 South County Road G; PO Box 5009
Janesville WI 53547-5009

Student Name _____

Student ID # _____

Date of birth _____

Address

_____

City _____State _____Zip _____

TO THE PHYSICIAN/PROVIDER: My signature below shows that I have examined this applicant. This form is to be completed prior to the start of classes in the Health & Public Safety division of Blackhawk Technical College. All programs have agreements with affiliating clinical agencies/practicum sites which require verification of compliance with the employee health standards. Your cooperation in completing this form will be beneficial to all concerned. Thank you.

Health Examiner's

Name and Title (please print) _____

Clinic or Office _____ Address _____

City _____ State _____ Zip _____

Phone _____ Date of physical Exam _____

THIS FORM IS FOR ALL HEALTH SCIENCE PROGRAMS WITH THE EXCEPTION OF EMT

TB & IMMUNIZATION REFERENCE PAGE

Health Sciences
6004 South County Road G;
PO Box 5009
Janesville WI 53547-5009

Please obtain official documentation for the following mandatory tests and immunizations. For each requirement, you must upload official verification/documentation from your healthcare provider, facility, or immunization registry to ViewPoint.

TB TESTING

Option A; 2-step TB skin testing within 90 days of start of clinical/externship			
	Date Given	**Date Read**	**Results**
1st TB skin test			
2nd TB skin test			
Option B; 1-step TB skin testing within 90 days of start of clinical, if screening is done annually (proof is required)			
	Date Given	**Date Read**	**Results**
Proof of Annual			
1st TB skin test			
Option C; QuantiFeron TB Gold blood testing good for one (1) year but, check with your insurance prior to test for determination of coverage. (proof is required)			

If you test positive for TB, give date of follow-up chest x-ray with documentation of x-ray results from health care provider.

Immunizations	**Date**	**OR**	**Date of Titer**	**Titer Results**
Varicella (Chicken Pox)				
M.M.R. 1				
M.M.R. 2				
Tdap (tetanus, diphtheria, pertussis)				
Flu shot				
Hepatitis B Vaccine	**Date**			
Series 1				
Series 2				
Series 3				

Students born prior to January 1st, 1954 must provide documentation of 1 MMR.
-Tetanus/Diphtheria/Pertussis immunization is required to be within the last 10 years.

For Tracking/Informational Purposes Only; This Form Is Not To Be Used For Uploading To Viewpoint.

ACKNOWLEDGMENT OF RISKS / ACCEPTANCE OF RESPONSIBILITY
AGREEMENT AND RELEASE

This Acknowledgment of Risks /Acceptance of Responsibility Agreement and Release ("Agreement and Release") is Executed by _____ ("Student") and is issued to Blackhawk Technical College ("BTC").

Name of Program/Training: **RADIOGRAPHY**

PLEASE READ CAREFULLY

Student's desire to participate in the Program

Student acknowledges that he/she is participating in the **RADIOGRAPHY** Program. Student expressly acknowledges that he/she has freely and voluntarily decided to participate in this Program. Student acknowledges receiving the following written materials regarding the Program in which Student intends to participate: **Functional Abilities Release and Acknowledgement of Risks/Acceptance of Responsibility Agreement and Release**.

Health and Safety

Student understands and acknowledges that:

Student has consulted with a medical doctor with regard to any personal medical needs. Further, Student represents that he/she has no health-related reasons or problems which preclude or restrict his/her participation in the Program.

Student is aware of all applicable personal medical needs, and has arranged, through comprehensive health and medical insurance, to meet any and all needs for payment of medical costs while he/she participates in the Program.

Student understands and acknowledges that the College may, but is not obligated to take any actions it considers to be warranted under the circumstances regarding the Student's health and safety. Further, Student agrees to pay all expenses relating thereto and releases Blackhawk Technical College from any liability for any actions taken.

Acceptable conduct by Student

Student is aware of the behavior expected while participating in the Program. There is certain behavior that is unacceptable and could lead to possible disruption or discontinuation of Student's participation in the Program, including, but not limited to loud, boisterous, offensive or otherwise inappropriate conduct, the improper use of alcohol or other drugs affecting student's participation in the Program, as well as, carrying any firearms or other weapons while participating in the Program. Student shall abide by all policies, rules and regulations established by Blackhawk Technical College and the Program. Student shall also abide by the rules, policies and procedures of any practicum placement. Student assures Blackhawk Technical College that he/she shall act in an appropriate manner at all times. If Blackhawk Technical College finds it necessary to expel Student from participation in the Program, he/she will not receive any refund of Program fees.

Waiver of Blackhawk Technical College's Liability and Indemnification of Blackhawk Technical College for Risks and Dangers

As a condition precedent to Student's participation in the Program, Student agrees to exercise reasonable care at all times with respect to the safety of Student's own person and personal property, and with respect to the safety of other Students and their personal property. Student understands, however, that there are certain dangers, hazards, and risks inherent in the activities included in the Program. Student acknowledges that participation in the Program may involve the risk of damage to property, bodily injury, and, in some cases, even death. Neither Blackhawk Technical College, nor the Program's Educational Coordinator, assumes any responsibility for such personal injuries or property damage. Student further acknowledges that he/she is at least eighteen (18) years of age, and is competent to sign this document. If Student is a minor under the age of eighteen (18) years of age, the parent and/or guardian acknowledges they are competent to sign this document on behalf of the Student.

Accordingly, Student, for him/herself and the Student's spouse (if applicable), heirs, assigns, related individuals and related entities, does hereby waive, release, absolve, discharge and agree to hold harmless Blackhawk Technical College and its Board of Trustees, directors, officers, employees, teachers, agents and insurers, and the Program's Coordinator (collectively, the "Released Parties"), from and against any and all rights, claims, demands, causes of action, obligations, suits, liens, damages, or liabilities of any kind and character whatsoever, whether known or unknown, suspected or claimed, which the Student shall, or may have, in the future against the Released Parties arising out of, based on, related to, or connected with, the Student's enrollment and participation in the Program. Student also agrees to indemnify and hold the Released Parties harmless from the payment of any and all judgments, settlements, costs, disbursements and attorneys' fees that are associated with the Released Parties having to defend or investigate any claim, action or proceeding of any type whatsoever arising out of the Student's enrollment or participation in the Program, including, but not limited to, claims for breach of contract, negligence, strict liability, or otherwise. This indemnification obligation and Agreement and Release does not, however, absolve the Released Parties from any liabilities, damages, costs, disbursements and attorneys' fees incurred due to its intentional or reckless conduct.

Student understands that if any fact with respect to which this Agreement and Release is executed is found hereafter to be other than or different from any fact now believed by Student to be true, Student expressly accepts and assumes the risk of such a possible difference and agrees that this Agreement and Release shall be and remains effective not withstanding such difference in facts.

Governing Law: Forum

Student agrees that this Agreement and Release shall be construed in accordance with the laws of the State of Wisconsin, which shall be the forum for any lawsuits filed under, or incident to, this Agreement and Release. The terms and provisions of this Agreement and Release shall be severable, such that if a court of competent jurisdiction holds any term to be illegal, unenforceable, or in conflict with any law governing this Agreement and Release, the validity of the remaining portions shall not be affected.

Other Provisions

The Released Parties are granted permission to authorize emergency medical treatment, if necessary, and that such action by the Released Parties will cause them to assume no responsibility for any injury, damage or medical expense which might arise out of, or in connection with, such emergency medical treatment.

It is the Student's express intent that this Agreement and Release shall bind the members of the Student's family and spouse (if applicable); and if the Student is deceased, it shall be deemed as a release, waiver, discharge, and covenant not to sue the Released Parties by the Student's family and spouse (if applicable), for any matter arising out of Student's participation in the Program.

By signing this document, Student acknowledges and represents that he/she is fully informed of the contents of this Agreement and Release. By reading it before signing it, and by signing this document as the Student's own free act, Student confirms that no oral representations, statements or inducements, apart from those made herein, have been made.

This Agreement and Release requires you to give up substantial legal rights.
Please read and understand this document before you sign it.

_____ _____
Student Date

_____ _____
Parent/Legal Guardian Date
(Signature required if Student is under age)

BLACKHAWK TECHNICAL COLLEGE
General Incident Report Form

(The General Incident Report Form should be used to report all non-injury/illness incidents. Examples include property damage, bomb threats, chemical spills, gas leaks, disorderly persons, etc.)

Name of Person Reporting the Incident:	**Date and Time of the Incident:**
Address of Person Reporting the Incident:	**Telephone # of Person Reporting the Incident:**
Location of the Incident:	**Witnesses to Incident (Names and Phone Numbers):**

Description of Incident: *Explain as fully as possible the facts of the incident. Include as many details as possible. If more space is needed, please attach another page to the form.*

Action Taken:

Were Local Authorities (i.e. police, sheriff) Contacted, if yes, please specify who was contacted:

_____Yes _____No

Signature of Person Preparing Report:	**Date of Report:**
Print Name and Title of Person Preparing Report:	**Telephone # of Person Preparing the Report:**
Signature of Vice President, Administrative and Student Services:	**Date Received:**

Copies of this form should be prepared and submitted to the Vice President, Administrative and Student Services within 24 hours.
The person preparing the form should retain a copy.

BLACKHAWK TECHNICAL COLLEGE
Personal Injury/Illness Report Form

Name of INJURED/ILL person:	**Date and Time of Incident:**
Address of INJURED/ILL Person:	**Telephone # of INJURED/ILL Person:**
Location of Incident:	**Witnesses to Incident (Names and Phone Numbers):**

Description of Incident: *This section should be completed by the most senior BTC staff member available at the time of the incident. It should not be completed by the injured/ill party. Explain as fully as possible the facts of the incident. Include as many details as possible. If more space is needed, please attach another page to the form.*

Additional Comments from INJURED/ILL person:

Action Taken:

Was Treatment Recommended: _____Yes _____No	**Did the Ill/Injured Person Refuse Treatment:** _____Yes _____No
Was Emergency Medical Services Contacted, if yes, list the EMS provider: _____Yes _____No	
Was Ill/Injured Person Transported for Treatment: _____Yes _____No	**Name of Person/Service Transporting Person for Treatment:**

Where was the Ill/Injured Person Treated:

Signature of INJURED/ILL Person (if available):	
Signature of Person Preparing Report:	**Date of Report:**
Signature of Vice President, Administrative and Student Services:	**Date Received:**

Copies of this form should be prepared and submitted to the Vice President, Administrative and Student Services within 24 hours.
The person preparing the form should retain a copy

BLACKHAWK TECHNICAL COLLEGE RADIOGRAPHY PROGRAM RELEASE TO RETURN TO EDUCATIONAL ACTIVITIES	
The Blackhawk Technical College Radiography Program requires that students returning to clinical education following extended health-related absence requires a release from a medical provider stating that the student may return to educational activities without restrictions or with reasonable accommodation. Listed below are the Functional Abilities identified by the BTC Radiography Program deemed essential for the practice of clinical radiography. Please review and consider the following as you complete the document, determining release to return to clinical activities.	
STUDENT NAME: PRINTED	**ACADEMIC SEMESTER**
PROGRAM SKILL LEVEL	**APPLICATION TO CLINICAL RADIOGRAPHY**
GROSS MOTOR COORDINATION	
• Move within confined spaces • Maintain balance in multiple positions • Reach above shoulders • Reach below waist • Reach out front	• Perform radiography in small rooms/mobile radiography • Work with overhead x-ray tube/mobile equipment • Position patients for radiographic procedures • Move/transport patients
FINE MOTOR COORDINATION	
• Grasp/pick up objects with hands • Write with pen or pencil • Key/type • Twist/turn adjustment dials • Good eye hand & foot coordination • Simultaneous hand/wrist & finger movement	• Utilize radiographic ancillary devices • Obtain patient history/report • Utilize computers/digital radiographic equipment • Select technical factors • Perform exposures • Manipulate radiographic tube/table
PHYSICAL ENDURANCE	
• Stand up for several hours • Sustain repetitive motions • Maintain same position for long period of time • Function in a fast paced environment	• Work in radiographic department • Perform radiographic procedures • Perform fluoroscopic procedures • Perform trauma/emergency radiography
Physical Strength	
• Push and pull 50 pounds • Support 50 pounds of weight • Lift/carry 50 pounds • Use upper body strength • Use lower body strength • Squeeze with hands	• Manipulate fixed/mobile radiographic equipment • Transport/transfer patients • Carry image receptors/ancillary radiographic equipment • Manipulate/transport fixed/mobile radiographic equipment
MOBILITY	
• Twist • Bend • Stoop/squat • Move quickly • Walk	• Perform routine radiographic examinations • Manipulate/transport fixed/mobile radiographic equipment • React to emergency situations • Transport/transfer patients
VISION	
• See objects up to 20 inches away • See objects up to 20 feet away • Use depth perception • Use peripheral vision • Distinguish colors and gray scale • See in darkened room	• Observe/monitor patients during radiographic procedures • Visualize structures on radiographic images • Perform fluoroscopic procedures
HEARING	
• Hear and discriminate speech at normal conversation levels • Hear faint voices • Hear faint body sounds • Discriminate speech with background noise • Hear when unable to see	• Hear patients during conversations • Detect patient issues from a distance • Assess vital signs • Identify problems in darkened room
SMELL	
• Detect odors	• Identify changing/abnormal smells
ENVIRONMENT	
• Tolerate exposure to allergens, strong odors, soaps, temperature changes, safety equipment, and confined environments for extended periods of time	• Work with soaps/chemicals routinely used in healthcare/radiography

TACTILE	
• Feel differences in size and shape • Feel differences in surface characteristics • Feel Vibrations • Detect hot and cold temperatures	• Palpate patients during normal radiographic positioning • Feel for objects/structures in darkened environment Assess vital signs
READING	
• Read and understand written documents • Read digital displays and computer monitors	• Interpret orders for radiographic examinations • View information/images on computer monitor
MATH	
• Add, subtract , multiply, divide and count • Compute fractions and decimals • Comprehend and interpret graphical data • Tell and measure time • Read and interpret measurement marks • Document numbers in records	• Calculate/manipulate technical factors • Calculate dose administration (contrast media) • Interpret digital image histogram • Time radiographic examinations • Record technical factors/vital signs
INTERPERSONAL SKILLS	
• Establish rapport with individuals	• Interact professionally and clearly with patients/families/other healthcare professionals
COMMUNICATION SKILLS	
• Speak English • Read English • Write English • Listen and comprehend spoken and written English • Exhibit and comprehend nonverbal cues • Collaborate with others	**COMMUNICATE EFFECTIVELY AND PROFESSIONALLY WITH PATIENT, FAMILY MEMBERS, AND ALL OTHER MEMBERS OF THE HEALTHCARE TEAM.**
EMOTIONAL STABILITY	
• Establish professional relationships • Adapt to changing environments • Deal with the unexpected • Focus attention on tasks • Accept feedback appropriately • Accept responsibility for own actions	• Interact appropriately and professionally in all situations.
CRITICAL THINKING	
• Comprehend and follow instructions • Identify cause and effect relationships • Follow processes from start to finish • Sequence information	• Adapt to non-routine and changing situations. • React appropriately to emergency situations.
ANALYTICAL THINKING	
• Solve problems • Transfer knowledge between situations • Process and interpret information from multiple sources • Apply math concepts • Analyze and interpret abstract and concrete data • Prioritize tasks • Evaluate outcomes • Use short and long term memory • Sequence information	• Adapt to non-routine situations • Calculate technical factor changes • Prioritize duties in stressful/emergency situations
RETURN TO EDUCATIONAL ACTIVITIES **HEALTHCARE PROVIDER: PLEASE IDENTIFY ONE OF THE TWO OPTIONS**	
STUDENT MAY RETURN WITHOUT RESTRICTIONS	**STUDENT MAY RETURN WITH RESTRICTIONS**
[ ] I have reviewed the functional abilities of the Blackhawk Technical College Radiography Program. The student may return to educational activities without restrictions.	[ ] I have reviewed the functional abilities of the Blackhawk Technical College Radiography Program. The student is able to return to educational activities with the following restrictions. *Please include medical documentation listing restrictions.*
Students are to return this form and all other documentation to the BTC Access and Accommodations Coordinator. Clinical supervisor will be notified that form was returned and what, if any, accommodations will be necessary for return to clinical setting.	
Student Signature	Date
Provider Signature	Date
Printed Name	Healthcare Facility

Blackhawk Technical College
Associate Degree School of Radiologic Technology
Acknowledgment of Student Handbook

I have received and read the Blackhawk Technical College Associate Degree Radiography Program Student Handbook for the class of 2023-2025. I understand all policies and regulations contained therein and my responsibilities as a student in the Blackhawk Technical College Radiography Program. I acknowledge that I have been given the opportunity to ask for clarification of any policies or procedures contained in this document, and that any questions I had were answered to my satisfaction.

I acknowledge that program policy is subject to change, and that any changes in program policy will be communicated to me in writing. I acknowledge that I am required to comply with any changes in program policy.

I acknowledge that failure to comply with the established policies may result in disciplinary actions as outlined in the policy and may include probation, suspension, or dismissal from the Blackhawk Technical College Associate Degree Radiography Program.

I therefore agree to comply with all policies as written.

Student Signature	Date
Program Director Signature	Date