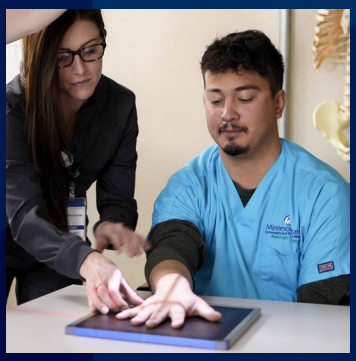




SCHOOL OF HEALTH SCIENCES, HUMAN SERVICES AND NURSING

LIMITED SCOPE RADIOGRAPHY PROGRAM HANDBOOK 2024-2025

Minnesota State Community and Technical College

Minnesota State
Community and Technical College

MISSION

Minnesota State Community and Technical College specializes in affordable and exceptional education, service, and workforce training. We welcome all students and engage them in shaping their futures and their communities.

VISION

A success story for every student.

VALUES

Integrity

As dedicated professionals, we act with purpose in everything we do. We are sincere and honest in our relationships and communications and hold ourselves accountable to doing the right thing even when no one is watching.

Inclusion

We welcome, respect, and accept people for who they are and celebrate the power of our collective differences in creating and shaping more robust, energized communities.

Innovation

Through the power of our four campuses, strategic partnerships and creative problem-solving, we enhance communities. We incorporate technology to improve the student experience, and se wee continuous improvement as constant.

PILLARS OF SUCCESS

i. Student Success
ii. Equity and Inclusion
iii. Financial sustainability

The School of Health Sciences, Human Services and Nursing

Mission Statement

The School of Health Sciences, Human Services and Nursing at Minnesota State Community and Technical College is dedicated to fostering excellence in education, professional development, and community engagement in health and human services professions. Our mission is to prepare compassionate and highly skilled individuals who contribute to the well-being of individuals and the communities we serve.

Vision Statement

We aspire to provide exceptional education to meet the evolving human service and healthcare needs of the communities we serve.

Limited Scope Radiography Program

Mission Statement

The Limited Scope Radiography program at Minnesota State Community and Technical College is designed to provide high quality didactic and clinical education to individuals who aspire to become competent and compassionate Limited Scope Radiographers.

WELCOME to the Minnesota State Community and Technical College (M State) Limited Scope Radiography Program! We are excited that you have chosen to pursue your health care career with us.

This **M State Limited Scope Radiography Program Policies and Procedures Manual** has been prepared to help you learn about the structure and expectations of our program. It also provides the framework for the academic and clinical laboratory policies and requirements we have instituted to maintain an effective and efficient limited scope radiography program.

The **M State Student College Handbook** addresses the policies for all students enrolled in the college. Limited Scope Radiography students are to refer to the M State College Student Handbook, located on the Student Handbook page of the M State College website, for all information that is not specific to the limited scope radiography program and contained in the Program Policies and Procedures Manual.

Please take the time to read and familiarize yourself with the Limited Scope Radiography Policies and Procedures Manual, as well as the College Student Handbook. It is your responsibility to know the content of both.

Again, I want to say welcome to Minnesota State Community and Technical College Limited Scope Radiography Program. We look forward to partnering with you throughout your educational journey.

Warmest Regards,

Dr. Ken Kompelien
Academic Dean for the School of Health Sciences,
Human Services, and Nursing.

Table of Contents

I. College and Program Officials

M State Administrative Personnel

Dr. Carrie Brimhall
President Minnesota State Community and Technical College

Dr. Ken Kompelien
Dean of Health Sciences, Human Services and Nursing
Detroit Lakes Campus

Limited Scope Radiography Program Faculty

Ann Bell-Pfeifer M.S. R.T. (R)(M)(QM) Program Director/Faculty
Amy Coley B.S. R.T.(R)(T) Clinical Coordinator/Faculty
Colleen Brady-Santwire M.S. R.T. (R)(M) Faculty

M State - Detroit Lakes, MN

II. Mission Statement, Philosophy, Goals and Student Learner Outcomes

MISSION STATEMENT

The Limited Scope Radiography program at Minnesota State Community and Technical College is designed to provide high quality didactic and clinical education to individuals who aspire to become competent and compassionate Limited Scope Radiographers.

PHILOSOPHY

Radiologic Technology is a healthcare profession that incorporates both scientific and artistic principles in the creation of diagnostic quality images of the human body. The profession can provide the practitioner with a great sense of pride, knowing the images they create were a direct result of their education and skill. Imaging practitioners know the images they create can be the gateway to improved health and well-being of the individuals they serve.

The Limited Scope Radiography (LSR) program at M State provides students with robust classroom, laboratory, and clinical experiences. Graduates of the Limited Scope Radiography program will gain the knowledge, skills, and experiences desired by employers.

The Limited Scope Radiographer assists Radiologic Technologists and other medical practitioners in achieving diagnostic quality images of the human body. The LSR professional has the knowledge and skills to perform a variety of imaging procedures. The scope of practice for a LSR is narrow in comparison to the Radiologic Technologist

GOAL 1

Graduates will have entry-level skills for employment as a Limited Scope Radiographer.

- Manipulate radiographic equipment and accessories in the pursuit of quality radiographic images.
- Demonstrate appropriate image acquisition and positioning techniques to obtain quality radiographic images.
- Apply radiation protection and safety practices to patients, self and others.
- Use patient care skills and monitoring techniques.

GOAL 2

Graduate students who use problem solving and critical thinking skills to produce quality images.

- Demonstrate use of critical thinking and independent judgment.
- Conduct and participate in quality improvement and quality control tasks.
- Evaluate images for image quality and determine quality improvement methods.

GOAL 3

Graduate students with professional and life-long learning attitudes.

- Model professional behaviors and perform duties within the ethical and legal boundaries of a limited scope radiographer.
- Participate in lifelong learning activities as required by the profession.

GOAL 4

Graduate students who possess and demonstrate effective communication skills.

- Use compassion and interpersonal communication skills with patients, members of the health care team and others.

Program Effectiveness Goals

- Possess the knowledge and skills employers seek to hire.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE LIMITED SCOPE RADIOGRAPHY PROGRAM

LEARNER OUTCOMES - DETROIT LAKES CAMPUS

The following student learning outcomes are specific program outcomes which are expressed in the program goals. These outcomes are assessed through graduate and employer surveys on an annual basis. These outcomes are specific to the courses taught within the program.

Graduates of the Limited Scope Radiography program will:

1. **Model professional behaviors and perform duties within the ethical and legal boundaries of a limited scope radiographer.**
2. **Demonstrate use of critical thinking and independent judgment.**
3. **Conduct and participate in quality improvement and quality control tasks.**
4. **Use compassion and interpersonal communication skills with patients, members of the health care team and others.**
5. **Manipulate radiographic equipment and accessories in the pursuit of quality radiographic images.**
6. **Demonstrate appropriate image acquisition and positioning techniques to obtain quality radiographic images.**
7. **Evaluate images for image quality and determine quality improvement methods.**
8. **Apply radiation protection and safety practices to patients, self and others.**

9. **Use patient care skills and monitoring techniques.**

10. **Participate in lifelong learning activities as required by the profession.**

AMERICAN SOCIETY OF RADIOLOGIC TECHNOLOGISTS

CODE OF ETHICS

- The radiologic technologist conducts himself or herself in a professional manner, responds to patient needs and supports colleagues and associates in providing quality patient care.
- 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.
- The radiologic technologist delivers patient care and service unrestricted by concerns of personal attributes or the nature of the disease or illness, and without discrimination on the basis of sex, race, creed, religion or socio-economic status.
- The radiologic technologist practices technology founded upon theoretical knowledge and concepts, uses equipment and accessories consistent with the purpose for which they were designed, and employs procedures and techniques appropriately.
- The radiologic technologist assesses situations; exercises care, discretion and judgment; assumes responsibility for professional decisions; and acts in the best interest of the patient.
- 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 of the patient and recognizes that interpretation and diagnosis are outside the scope of practice for the profession.
- The radiologic technologist uses equipment and accessories, employs techniques and procedures, performs services in accordance with an accepted standard of practice and demonstrates expertise in minimizing radiation exposure to the patient, self and other members of the health care team.
- The radiologic technologist practices ethical conduct appropriate to the profession and protects the patient's right to quality radiologic technology care.
- 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.
- The radiologic technologist continually strives to improve knowledge and skills by participating in continuing education and professional activities, sharing knowledge with colleagues and investigating new aspects of professional practice.

ARRT® STANDARDS OF ETHICS

Last Revised: September 1, 2022
Published: September 1, 2022

PREAMBLE

The *Standards of Ethics* of The American Registry of Radiologic Technologists (ARRT) shall apply solely to persons that are either currently certified and registered by ARRT or that were formerly certified and registered by ARRT, and to persons applying for certification and registration by ARRT (including persons who submit an Ethics Review Preapplication) in order to become Candidates. Radiologic Technology is an umbrella term that is inclusive of the disciplines of radiography, nuclear medicine technology, radiation therapy, cardiovascular-interventional radiography, mammography, computed tomography, magnetic resonance imaging, quality management, sonography, bone densitometry, vascular sonography, cardiac-interventional radiography, vascular-interventional radiography, breast sonography, and radiologist assistant. The *Standards of Ethics* are intended to be consistent with the Mission Statement of ARRT, and to promote the goals set forth in the Mission Statement.

STATEMENT OF PURPOSE

The purpose of the ethics requirements is to identify individuals who have internalized a set of professional values that cause one to act in the best interests of patients. This internalization of professional values and the resulting behavior is one element of ARRT's definition of what it means to be qualified. Exhibiting certain behaviors as documented in the *Standards of Ethics* is evidence of the possible lack of appropriate professional values.

The *Standards of Ethics* provides proactive guidance on what it means to be qualified and to motivate and promote a culture of ethical behavior within the profession. The ethics requirements support ARRT's mission of promoting high standards of patient care by removing or restricting the use of the credential by those who exhibit behavior inconsistent with the requirements.

A. 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 Candidates may evaluate their professional conduct as it relates to patients, healthcare consumers, employers, colleagues, and other members of the healthcare team. The Code of Ethics is intended to assist Registered Technologists and Candidates 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 Registered Technologist acts in a professional manner, responds to patient needs, and supports colleagues and associates in providing quality patient care.
2. The Registered 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 Registered Technologist delivers patient care and service unrestricted by the concerns of personal attributes or the nature of the disease or illness, and without discrimination on the basis of race, color, creed, religion, national origin, sex, marital status, status with regard to public assistance, familial status, disability, sexual orientation, gender identity, veteran status, age, or any other legally protected basis.
4. The Registered Technologist practices technology founded upon theoretical knowledge and concepts, uses equipment and accessories consistent with the purposes for which they were designed, and employs procedures and techniques appropriately.
5. The Registered Technologist assesses situations; exercises care, discretion, and judgment; assumes responsibility for professional decisions; and acts in the best interest of the patient.
6. The Registered Technologist acts as an agent through observation and communication to obtain pertinent information for the

physician to aid in the diagnosis and treatment of the patient and recognizes that interpretation and diagnosis are outside the scope of practice for the profession.

7. The Registered Technologist uses equipment and accessories, employs techniques and procedures, performs services in accordance with an accepted standard of practice, and demonstrates expertise in minimizing radiation exposure to the patient, self, and other members of the healthcare team.
8. The Registered Technologist practices ethical conduct appropriate to the profession and protects the patient's right to quality radiologic technology care.
9. The Registered 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 Registered Technologist continually strives to improve knowledge and skills by participating in continuing education and professional activities, sharing knowledge with colleagues, and investigating new aspects of professional practice.
11. The Registered Technologist refrains from the use of illegal drugs and/or any legally controlled substances which result in impairment of professional judgment and/or ability to practice radiologic technology with reasonable skill and safety to patients.

B. RULES OF ETHICS

The Rules of Ethics form the second part of the *Standards of Ethics*. They are mandatory standards of minimally acceptable professional conduct for all Registered Technologists and Candidates. ARRT certification and registration demonstrates to the medical community and the public that an individual is qualified to practice within the profession. The Rules of Ethics are intended to promote the protection, safety, and comfort of patients. Accordingly, it is essential that Registered Technologists and Candidates act consistently with these Rules.

The Rules of Ethics are enforceable. Registered Technologists are required to notify ARRT of any ethics violation, including state licensing issues and criminal charges and convictions, within 30 days of the occurrence or during their annual renewal of certification and registration, whichever comes first. Applicants for certification and registration are required to notify ARRT of any ethics violation, including state licensing issues and criminal charges and convictions, within 30 days of the occurrence.

Registered Technologists and Candidates engaging in any of the following conduct or activities, or who permit the occurrence of the following conduct or activities with respect to them, have violated the Rules of Ethics and are subject to sanctions as described here under:

The titles and headings are for convenience only, and shall not be used to limit, alter or interpret the language of any Rule.

Fraud or Deceptive Practices

Fraud Involving Certification and Registration

1. Employing fraud or deceit in procuring or attempting to procure, maintain, renew, or obtain or reinstate certification and registration as issued by ARRT; employment in radiologic technology; or a state permit, license, or registration certificate to practice radiologic technology. This includes altering in any respect any document issued by ARRT or any state or federal agency, or by indicating in writing certification and registration with ARRT when that is not the case.

Fraudulent Communication Regarding Credentials

2. Engaging in false, fraudulent, deceptive, or misleading communications to any person regarding any individual's education, training, credentials, experience, or qualifications, or the status of any individual's state permit, license, or registration certificate in radiologic technology or certification and registration with ARRT.

Fraudulent Billing Practices

3. Knowingly engaging or assisting any person to engage in, or otherwise participating in, abusive or fraudulent billing practices, including violations of federal Medicare and Medicaid laws or state medical assistance laws.

Subversion

Examination / CQR Subversion

4. Subverting or attempting to subvert ARRT's examination process, and/or ARRT's Education Requirements, including the Structured

Self-Assessments (SSA) that are part of the Continuing Qualifications Requirements (CQR) process. Conduct that subverts or attempts to subvert ARRT's examination, Education Requirements and/or CQR or SSA processes, includes but is not limited to:

Failure to Cooperate with ARRT Investigation

5. Subverting or attempting to subvert ARRT's certification and registration processes by:
   i. making a false statement or knowingly providing false information to ARRT; or
   ii. failing to cooperate with any investigation by ARRT in full or in part.

Unprofessional Conduct

Failure to Conform to Minimal Acceptable Standards

6. Engaging in unprofessional conduct, including, but not limited to:
   i. a departure from or failure to conform to applicable federal, state, or local governmental rules regarding radiologic technology practice or scope of practice; or, if no such rule exists, to the minimal standards of acceptable and prevailing radiologic technology practice.
   ii. any radiologic technology practice that may create unnecessary danger to a patient's life, health, or safety.

   Actual injury to a patient or the public need not be established under this clause.

Sexual Misconduct

7. Engaging in conduct with a patient that is sexual or may reasonably be interpreted by the patient as sexual, or in any verbal behavior that is seductive or sexually demeaning to a patient; or engaging in sexual exploitation of a patient or former patient. This also applies to any unwanted sexual behavior, verbal or otherwise.

Unethical Conduct

8. Engaging in any unethical conduct, including, but not limited to, conduct likely to deceive, defraud, or harm the public; or demonstrating a willful or careless disregard for the health, welfare, or safety of a patient. Actual injury need not be established under this clause.

Scope ofPractice

Technical Incompetence

9. Performing procedures which the individual is not competent to perform through appropriate training and/or education or experience unless assisted or personally supervised by someone who is competent (through training and/or education or experience).

Improper Supervision in Practice

10. Knowingly assisting, advising, or allowing a person without a current and appropriate state permit, license, registration, or ARRT certification and registration to engage in the practice of radiologic technology, in a jurisdiction that mandates such requirements.

Improper Delegation or Acceptance of a Function

11. Delegating or accepting the delegation of a radiologic technology function or any other prescribed healthcare function when the delegation or acceptance could reasonably be expected to create an unnecessary danger to a patient's life, health, or safety. Actual injury to a patient need not be established under this clause.

Fitness to Practice

Actual or Potential Inability to Practice

12. Actual or potential inability to practice radiologic technology with reasonable skill and safety to patients by reason of illness; use of alcohol, drugs, chemicals, or any other material; or as a result of any mental or physical condition.

Inability to Practice by Judicial Determination

13. Adjudication as mentally incompetent, mentally ill, chemically dependent, or dangerous to the public, by a court of competent jurisdiction

Improper Management of Patient Records

False or Deceptive Entries

14. Improper management of records, including failure to maintain adequate patient records or to furnish a patient record or report required by law; or making, causing, or permitting anyone to make false, deceptive, or misleading entry in any patient record and/or any quality control record.

Failure to Protect Confidential Patient Information

15. Revealing a privileged communication from or relating to a former or current patient, except when otherwise required or permitted by law, or viewing, using, releasing, or otherwise failing to adequately protect the security or privacy of confidential patient information.

Knowingly Providing False Information

16. Knowingly providing false or misleading information that is directly related to the care of a former or current patient.

Violation of State or Federal Law or Regulatory Rule

Narcotics or Controlled Substances Law

17. Violating a state or federal narcotics or controlled substance law, even if not charged or convicted of a violation of law.

Regulatory Authority or Certification Board Rule

18. Violating a rule adopted by a state or federal regulatory authority or certification board resulting in the individual's professional license, permit, registration or certification being denied, revoked, suspended, placed on probation or a consent agreement or order, voluntarily surrendered, subjected to any conditions, or failing to report to ARRT any of the violations or actions identified in this Rule.

Criminal Proceedings

19. Convictions, criminal proceedings, or military courts-martial as described below:
    i. conviction of a crime, including, but not limited to, a felony, a gross misdemeanor, or a misdemeanor; and/or
    ii. criminal proceeding where a finding or verdict of guilt is made or returned but the adjudication of guilt is either withheld, deferred, or not entered or the sentence is suspended or stayed; or a criminal proceeding where the individual enters an Alford plea, a plea of guilty or nolo contendere (no contest); or where the individual enters into a pre-trial diversion activity; and/or
    iii. military courts-martial related to any offense identified in these Rules of Ethics; and/or
    iv. required sex offender registration.

Duty to Report

Failure to Report Violation

20. Knowing of a violation or a probable violation of any Rule of Ethics by any Registered Technologist or Candidate and failing to promptly report in writing the same to ARRT.

Failure to Report Error

21. Failing to immediately report to the Registered Technologist's or Candidate's supervisor information concerning an error made in connection with imaging, treating, or caring for a patient. For purposes of this rule, errors include any departure from the standard of care that reasonably may be considered to be potentially harmful, unethical, or improper (commission). Errors also include behavior that is negligent or should have occurred in connection with a patient's care, but did not (omission). The duty to report under this rule exists whether or not the patient suffered any injury.

C. ADMINISTRATIVE PROCEDURES

These Administrative Procedures provide for the structure and operation of the Ethics Committee; they detail procedures followed by the Ethics Committee and by the Board of Trustees of ARRT in administering challenges raised under the Rules of Ethics, and in handling matters relating to the denial of an application for certification and registration (for reasons other than failure to meet the criteria as stated in Article II, Sections 2.03 and 2.04 of the *Rules and Regulations* of ARRT, in which case, there is no right to a hearing) or the denial of renewal or reinstatement of certification and registration. All Registered Technologists and Candidates are required to comply with these Administrative Procedures. All Registered Technologists and Candidates are expected to conduct themselves in a professional and respectful manner in their interactions with the ARRT Board of Trustees, Ethics Committee and/or staff. Failure to cooperate with the Ethics Committee or the Board of Trustees may be considered by the Ethics Committee and by the Board of Trustees according to the same procedures and with the same sanctions as failure to observe the Rules of Ethics.

1. Ethics Committee

(a) Membership and Responsibilities of the Ethics Committee

The President, with the approval of the Board of Trustees, appoints three Trustees to serve as members of the Ethics Committee, each such person to serve on the Committee until removed and replaced by the President, with the approval of the Board of Trustees, at any time, with or without cause. The President, with the approval of the Board of Trustees, will also appoint a fourth, alternate member to the Committee. In the event that the full Committee is not available for a meeting, an alternate member may participate on the Committee. If an alternate member is not available, the remaining members of the Committee will hold the meeting and act irrespective of the composition of the Committee. The Ethics Committee is responsible for: (1) investigating and reviewing each alleged violation of the Rules of Ethics and determining whether a Registered Technologist or Candidate has failed to observe the Rules of Ethics and determining an appropriate sanction; and (2) periodically assessing the Code of Ethics, Rules of Ethics, and Administrative Procedures and recommending any amendments to the Board of Trustees.

(b) The Chair of the Ethics Committee

The President, with the approval of the Board of Trustees, appoints one member of the Ethics Committee as the Committee's Chair to serve for a maximum term of two years as the principal administrative officer responsible for management of the promulgation, interpretation, and enforcement of the *Standards of Ethics*. In the event that the Chair is not available for a meeting, the Chair may appoint any remaining member to act as Chair. The President may remove and replace the Chair of the Committee, with the approval of the Board of Trustees, at any time, with or without cause. The Chair presides at and participates in meetings of the Ethics Committee and is responsible directly and exclusively to the Board of Trustees, using staff, legal counsel, and other resources necessary to fulfill the responsibilities of administering the *Standards of Ethics*.

(c) Preliminary Screening of Potential Violations of the Rules of Ethics

The Chair of the Ethics Committee shall review each alleged violation of the Rules of Ethics that is brought to the attention of the Ethics Committee. If, in the sole discretion of the Chair: (1) there is insufficient information upon which to base a charge of a violation of the Rules of Ethics; or (2) the allegations against the Registered Technologist or Candidate are patently frivolous or inconsequential; or (3) the allegations, if true, would not constitute a violation of the Rules of Ethics, the Chair may summarily dismiss the matter. The Chair may be assisted by staff and/or legal counsel of ARRT. The Chair shall report each such summary dismissal to the Ethics Committee.

At the Chair's direction and upon request, the Chief Executive Officer of ARRT shall have the power to investigate allegations regarding the possible settlement of an alleged violation of the Rules of Ethics. The Chief Executive Officer may be assisted by staff members and/or legal counsel of ARRT. The Chief Executive Officer is not empowered to enter into a binding settlement, but rather may convey and/or recommend proposed settlements to the Ethics Committee. The Ethics Committee may accept the proposed settlement, make a counterproposal to the Certificate Holder or Candidate, or reject the proposed settlement and proceed under these Administrative Procedures.

2. Hearings

Whenever ARRT proposes to take action in respect to the denial of an application for certification and registration (for reasons other than failure to meet the criteria as stated in Article II, Sections 2.03 and 2.04 of the *Rules and Regulations* of ARRT, in which case there is no right to a hearing) or of an application for renewal or reinstatement of certification and registration, or in connection with the

revocation or suspension of certification and registration, or the censure of a Registered Technologist or Candidate for an alleged violation of the Rules of Ethics, it shall give written notice thereof to such person, specifying the reasons for such proposed action. A Registered Technologist or Candidate to whom such notice is given shall have 30 days from the date the notice of such proposed action is mailed to make a written request for a hearing. The written request for a hearing must be accompanied by a nonrefundable hearing fee in an amount to be determined by ARRT. In rare cases, the hearing fee may be waived, in whole or in part, at the sole discretion of ARRT.

Failure to make a written request for a hearing and to remit the hearing fee (unless the hearing fee is waived in writing by ARRT) within such period or submission of a properly executed Hearing Waiver form within such period shall constitute consent to the action taken by the Ethics Committee or the Board of Trustees pursuant to such notice. A Registered Technologist or Candidate who requests a hearing in the manner prescribed above shall advise the Ethics Committee of the intention to appear at the hearing. A Registered Technologist or Candidate who requests a hearing may elect to appear in person, via teleconference, videoconference, or by a written submission which shall be verified or acknowledged under oath.

A Registered Technologist or Candidate may waive the 30-day timeframe to request a hearing. To request a waiver of the 30 day timeframe, the Registered Technologist or Candidate must complete a Hearing Waiver form that is available on the ARRT website at www.arrt.org. The Hearing Waiver form must be signed by the Registered Technologist or Candidate, notarized, and submitted to ARRT. The Chief Executive Officer of ARRT shall have the authority to receive, administer, and grant the Hearing Waiver form and may be assisted by staff members and/or legal counsel of ARRT. Any sanction proposed by the Ethics Committee would become effective on the date the hearing waiver is processed.

Failure to appear at the hearing in person or via teleconference, videoconference, or to supply a written submission in response to the charges shall be deemed a default on the merits and shall be deemed consent to whatever action or disciplinary measures that the Ethics Committee determines to take. Hearings shall be held at such date, time, and place as shall be designated by the Ethics Committee or the Chief Executive Officer. The Registered Technologist or Candidate shall be given at least 30 days' notice of the date, time, and place of the hearing. The hearing is conducted by Ethics Committee members other than any members of the Ethics Committee who believe for any reason that they would be unable to render an objective and unbiased decision. In the event of such disqualification, the President may appoint Trustees to serve on the Ethics Committee for the sole purpose of participating in the hearing and rendering a decision. At the hearing, ARRT shall present the charges against the Registered Technologist or Candidate in question, and the facts and evidence of ARRT in respect to the basis or bases for the proposed action or disciplinary measure. The Ethics Committee may be assisted by legal counsel. The Registered Technologist or Candidate in question, by legal counsel or other representative (at the sole expense of the Registered Technologist or Candidate in question), shall have up to 30 minutes to present testimony, and be heard in the Registered Technologist's or Candidate's own defense; to call witnesses; hear the testimony of and to cross-examine any witnesses appearing at such hearing; and to present such other evidence or testimony as the Ethics Committee shall deem appropriate to do substantial justice. Any information may be considered that is relevant or potentially relevant. The Ethics Committee will be afforded 15 minutes in addition to any unused time remaining from the Registered Technologist's or Candidate's time allotment, to ask questions and shall not be bound by any state or federal rules of evidence. The Registered Technologist or Candidate in question shall have the right to make a closing statement before the close of the hearing. A transcript or an audio recording of the hearing testimony is made for in person, teleconference, and videoconference hearings only. Ethics Committee deliberations are not recorded.

In the case where ARRT proposes to take action in respect to the denial of an application for certification and registration (for reasons other than failure to meet the criteria as stated in Article II, Sections 2.03 and 2.04 of the *Rules and Regulations* of ARRT) or the denial of renewal or reinstatement of certification and registration, the Ethics Committee shall assess the evidence presented at the hearing, or continue the matter and request the Registered Technologist or Candidate provide additional evidentiary information prior to making its decision, and shall subsequently prepare written findings of fact and its determination as to whether grounds exist for the denial of an application for certification and registration or renewal or reinstatement of certification and registration, and shall promptly transmit the same to the Registered Technologist or Candidate in question and to the Board of Trustees at the next Board of Trustees meeting.

In the case of alleged violations of the Rules of Ethics by a Registered Technologist or Candidate, the Ethics Committee shall assess the evidence presented at the hearing, or continue the matter and request the Certificate Holder or Candidate provide additional evidentiary information prior to making its decision, and shall subsequently prepare written findings of fact and its determination as to whether there has been a violation of the Rules of Ethics and, if so, the appropriate sanction, and shall promptly transmit the same to the Registered Technologist or Candidate in question and to the Board of Trustees at the next Board of Trustees meeting.

Potential actions available to the Ethics Committee are set forth in Section 4 (Range of Actions). Unless a timely appeal from any findings of fact and determination by the Ethics Committee is taken to the Board of Trustees in accordance with Section 3 below (Appeals), the Ethics Committee's findings of fact and determination in any matter (including the specified sanction) shall be final and binding upon the

Registered Technologist or Candidate in question.

3. Appeals

Except as otherwise noted in these Administrative Procedures, the Registered Technologist or Candidate may appeal any decision of the Ethics Committee to the Board of Trustees by submitting a written request for an appeal within 30 days after the decision of the Ethics Committee is mailed. The written request for an appeal must be accompanied by a nonrefundable appeal fee in an amount to be determined by ARRT. In rare cases, the appeal fee may be waived, in whole or in part, at the sole discretion of ARRT.

Failure to make a written request for an appeal and to remit the appeal fee (unless the appeal fee is waived in writing by ARRT) within such period or submission of a properly executed Appeal Waiver form within such period shall constitute consent to the action taken by the Ethics Committee or Board of Trustees pursuant to such notice.

A Registered Technologist or Candidate may waive the 30-day timeframe to request an appeal. To request a waiver of the 30 day timeframe, the Registered Technologist or Candidate must complete an Appeal Waiver form that is available on the ARRT website at www.arrt.org. The Appeal Waiver form must be signed by the Registered Technologist or Candidate, notarized, and submitted to ARRT. The Chief Executive Officer of ARRT shall have the authority to receive, administer, and grant the Appeal Waiver form and may be assisted by staff members and/or legal counsel of ARRT. Any sanction proposed by the Ethics Committee would become effective on the date the appeal waiver is processed.

In the event of an appeal, those Trustees who participated in the hearing of the Ethics Committee shall not participate in the appeal. The remaining members of the Board of Trustees, other than any members who believe for any reason that they would be unable to render an objective and unbiased decision, shall consider the decision of the Ethics Committee, the files and records of ARRT applicable to the case at issue, and any written appellate submission of the Registered Technologist or Candidate in question, and shall determine whether to affirm or to modify the decision of the Ethics Committee or to remand the matter to the Ethics Committee for further consideration. In making such determination to affirm or to modify, findings of fact made by the Ethics Committee shall be conclusive if supported by any evidence. The Board of Trustees may grant re-hearings, hear additional evidence, or request that ARRT or the Registered Technologist or Candidate in question provide additional information in such manner, on such issues, and within such time as it may prescribe.
All hearings and appeals provided for herein shall be private at all stages. It shall be considered an act of professional misconduct for any Registered Technologist or Candidate to make an unauthorized publication or revelation of the same, except to the Registered Technologist's or Candidate's attorney or other representative, immediate superior, or employer.

4. Range of Actions

(a) No Action

A determination of no action means that there is little or no evidence to substantiate that a violation even occurred. In a situation lacking even a preponderance of evidence, the complaint is determined to be unsubstantiated.

(b) Clear

A determination that there was a violation of the Rules of Ethics but that no further action will be taken against a person's eligibility for certification and registration or for continued certification and registration. The determination of cleared/eligible can be made administratively by staff, by the Chair, or by the Committee depending on the nature of the violation and existing policies addressing authority for taking action. After a violation has been cleared, the applicant or registrant will not be required to report the violation in the future.

(c) Private Reprimands

A private reprimand is a reprimand that is between the individual and ARRT and is not reported to the public. Private reprimands allow for continued certification and registration.

(d) Public Reprimands

A public reprimand is a sanction that is published on ARRT's website for a period of one year. Public reprimands allow for continued certification and registration.

(e) Conditional

Conditional status may be given for continued certification and registration in those cases where there are additional requirements that need to be met before the ethics file can be closed (e.g., conditions mandated by the court, regulatory authority and/or Ethics Committee.

Suspensions

Suspension is the temporary removal of an individual's certification and registration in all categories for up to one year.

(f) Summary Suspensions

Summary suspension is an immediate suspension of an individual's certification and registration in all categories. If an alleged violation of the Rules of Ethics involves the occurrence, with respect to a Registered Technologist, of an event described in the Rules of Ethics, or any other event that the Ethics Committee determines would, if true, potentially pose harm to the health, safety, or well-being of any patient or the public, then, notwithstanding anything apparently or expressly to the contrary contained in these Administrative Procedures, the Ethics Committee may, without prior notice to the Registered Technologist and without a prior hearing, summarily suspend the certification and registration of the individual pending a final determination under these Administrative Procedures with respect to whether the alleged violation of the Rules of Ethics in fact occurred. Within five working days after the Ethics Committee summarily suspends the certification and registration of an individual in accordance with this provision, the Ethics Committee shall, by expedited delivery or certified mail, return receipt requested, give to the individual written notice that describes: (1) the summary suspension; (2) the reason or reasons for it; and (3) the right of the individual to request a hearing with respect to the summary suspension by written notice to the Ethics Committee, which written notice must be received by the Ethics Committee not later than 15 days after the date of the written notice of summary suspension by the Ethics Committee to the individual. If the individual requests a hearing in a timely manner with respect to the summary suspension, the hearing shall be held before the Ethics Committee or a panel comprised of no fewer than two members of the Ethics Committee as promptly as practicable, but in any event within 30 days after the Ethics Committee's receipt of the individual's request for the hearing, unless both the individual and the Ethics Committee agree to a postponement beyond the 30 day period. The Ethics Committee has the absolute discretion to deny any request for a postponement and to proceed to a hearing with or without the participation of the individual. The applicable provisions of Section 2 (Hearings) of these Administrative Procedures shall govern all hearings with respect to summary suspensions, except that neither a determination of the Ethics Committee, in the absence of a timely request for a hearing by the affected individual, nor a determination by the Ethics Committee or a panel, following a timely requested hearing, is appealable to the Board of Trustees.

(g) Ineligible

An individual may be determined ineligible to obtain or renew certification and registration or ineligible for reinstatement of certification and registration. The time frame may be time limited or permanent.

(h)Revocation

Revocation removes the individual's certification and registration in all categories. The time frame may be time limited or permanent.

(i) Alternative Dispositions

An Alternative Disposition ("AD") is a contract between an individual and the ARRT (as represented by the Ethics Committee) that allows for continued certification and registration in lieu of revocation, provided the individual performs certain requirements, including, but not limited to, providing documentation, attending counseling and/or submitting to random drug and/or alcohol screening. A Registered Technologist or Candidate who voluntarily enters into an Alternative Disposition Agreement agrees to waive all rights set forth in these Administrative Procedures.

(j) Deny Removal of a Sanction

After a predetermined time, an individual may request removal of a sanction that had been previously imposed by the Committee. Sufficient compelling evidence must be provided to convince the Committee the sanction should be removed or modified. If evidence is not provided, the Committee may deny removal of the sanction. Situations that may result in denial of a sanction removal request include: additional violations of the Rules of Ethics after the sanction was imposed, failure to demonstrate that there has been adequate rehabilitation, and/or continued denial of responsibility.

(k)Civil or Criminal Penalties

Conduct that violates ARRT's Rules of Ethics may also violate applicable state or federal law. In addition to the potential sanctions under the *Standards of Ethics*, ARRT may, without giving prior notice, pursue civil and/or criminal penalties.

5. Publication of Adverse Decisions

Summary suspensions and final decisions (other than private reprimands, Alternative Dispositions and conditional statuses) that are adverse to a Registered Technologist or Candidate will be communicated to the appropriate authorities of certification organizations and state licensing agencies and provided in response to written inquiries into an individual's certification and registration status. The ARRT shall also have the right to publish any final adverse decisions and summary suspensions and the reasons therefore. For purposes of this paragraph, a "final decision" means and includes: a determination of the Ethics Committee relating to an adverse decision if the affected individual did not request a hearing in a timely manner; a non-appealable decision of the Ethics Committee; an appealable decision of the Ethics Committee from which no timely appeal is taken; and, the decision of the Board of Trustees in a case involving an appeal of an appealable decision of the Ethics Committee.

6. Procedure to Request Removal of a Sanction

A sanction imposed by ARRT, including a sanction specified in a Settlement Agreement, specifically provides a sanction time frame and it shall be presumed that a sanction may only be reconsidered after the time frame has elapsed. At any point after a sanction first becomes eligible for reconsideration, the individual may submit a written request ("Request") to ARRT asking the Ethics Committee to remove the sanction. The Request must be accompanied by a nonrefundable fee in an amount to be determined by ARRT. A Request that is not accompanied by the fee will be returned to the individual and will not be considered. In rare cases, the fee may be waived, in whole or in part, at the sole discretion of ARRT. The individual is not entitled to make a personal appearance before the Ethics Committee in connection with a Request to remove a sanction or to modify a Settlement Agreement.

Although there is no required format, Requests for both sanction removal and Settlement Agreement modification must include compelling reasons justifying the removal of the sanction or modification of the Settlement Agreement. It is recommended that the individual demonstrate at least the following: (1) an understanding of the reasons for the sanction; (2) an understanding of why the action leading to the sanction was felt to warrant the sanction imposed; and (3) detailed information demonstrating that the individual's behavior has improved and similar activities will not be repeated. Letters of recommendation from individuals, who are knowledgeable about the person's sanction imposed; and current character and behavior, including efforts at rehabilitation, are advised. If a letter of recommendation is not on original letterhead or is not duly notarized, the Ethics Committee shall have the discretion to ignore that letter of recommendation.

Removal of the sanction is a prerequisite to apply for certification and registration. If, at the sole discretion of the Ethics Committee, the sanction is removed, the individual will be allowed to pursue certification and registration via the policies and procedures in place at that time as stated in Section 6.05 of the *ARRT Rules and Regulations*.

If the Ethics Committee denies a Request for removal of the sanction or modification of a Settlement Agreement, the decision is not subject to a hearing or to an appeal, and the Committee will not reconsider removal of the sanction or modification of the Settlement Agreement for as long as is directed by the Committee.

7. Amendments to the Standards of Ethics

The ARRT reserves the right to amend the *Standards of Ethics* following the procedures under Article XII, Section 12.02 of the *ARRT Rules and Regulations.*

III. PROGRAM OVERVIEW

The Limited Scope Radiography (LSR) program is four semesters or 14 months in length. A diploma with a major in Limited Scope Radiography is awarded upon successful (with a C or better) completion of the 46-semester credit curriculum. Near the end of the program students are required to take the Limited X-ray Machine Operator exam offered by the Minnesota or North Dakota State Health Departments. Successful completion of this exam qualifies the student to practice as a Limited X-ray Machine Operator in the state the exam was taken in.

Limited Scope Radiography didactic classes begin in the fall semester and clinical instruction begins in the spring semester. Students are given a didactic/clinical schedule at the beginning of each semester.

Graduation (Degree) Requirements:

Upon successful completion of the program requirements, the graduate will be awarded a diploma. The program requirements for graduation are as follows:

1. The student must achieve a grade of 2.0 or above in each course comprising the curriculum of the program.
2. The student must obtain a satisfactory rating on all semester clinical weekly behavioral evaluations.
3. The student must achieve a satisfactory rating on all clinical competency evaluations.
4. The student must complete an average of 450 clinical hours. This is subject to slight variation.
5. The student must successfully complete clinical performance objectives.

The competencies required of each graduate of the Limited Scope Radiography program are designed to comply with the didactic and clinical Competency Requirements of the Limited X-ray Machine Operator exam content specifications set forth by the Minnesota Department of Health (MDH) and the North Dakota Medical Imaging and Radiation Therapy (NDMIRT) Board.

The program plan is listed on the following page.

LIMITED SCOPE RADIOGRAPHY
DIPLOMA – 46 CREDITS

Program Plan — "Limited Scope Radiographer"
Locations: Detroit Lakes

1st Fall Term (15 credits)

Courses

Course	Crds
LSR1100 - Introduction to Limited Scope Radiography and Patient Care	3
LSR1120 - Image Production I	4
LSR1140 - Radiation Protection	3
LSR1160 - Radiographic Procedures I	5

1st Spring Term (16 credits)

Courses

Course	Crds
LSR1220 - Image Production II	3
LSR1230 - Imaging Equipment and Quality Control	3
LSR1240 - Radiobiology	2
LSR1260 - Radiographic Procedures II	4
LSR1280 - Radiographic Clinical I	4

1st Summer Term (8 credits)

Courses

Course	Crds
BIOL2260 - Human Anatomy and Physiology I	3
COMM1140 - Interpersonal Communication	3
RADT1102 - Fundamental Concepts of Radiologic Technology	2

2nd Summer Term (7 credits)

Courses

Course	Crds
LSR1380 - Radiographic Clinical II	7

IV. CURRICULUM DESIGN

A. Correlation between didactic and clinical instruction

The primary clinical affiliates of this program are listed in this handbook. These facilities have an adequate number of radiographic rooms and registered technologists on site who ensure students acquire expertise and proficiency in a wide variety of diagnostic radiographic procedures. The application of classroom theory to the actual practice of technical skills is applied to specified levels of competency.

The didactic component of radiographic procedures is taught through lecture, laboratory demonstration and practice. The lecture portion reinforces the anatomy involved with a particular exam and instructs the student in the proper methods of carrying out a particular exam (i.e. the various positions used) and the theory applicable to those positions. The laboratory portion of instruction is used to demonstrate proper methods and positioning, allowing students to practice positioning through role playing and to demonstrate an acceptable level of competence to the instructor in these procedures.

After the student learns a new exam category through didactic instruction and an acceptable level of competence is demonstrated in the lab setting, clinical affiliates are informed that the students can perform the exams in that category under ***direct supervision.*** The Registered Technologist assigned to a room in which a student is assigned monitors that student's conduct. The technologist evaluates the student's clinical competency when an exam is done under his or her supervision. Most exams require a minimum of four competency evaluations before the student can perform those exams under ***indirect supervision.*** The final exam must be error-free to establish clinical competence for that exam. A list of exam categories and the date by which they must be successfully completed is provided in the Clinical Evaluation section of this handbook.

Radiographic imaging is instructed both by lecture and by laboratory demonstration and practice. The lecture component of instruction is used to teach the correct theories and formulas for determining correct exposure factors and for correcting sub-optimal exposure factors. Laboratory instruction is used to demonstrate these theories and formulas as they would apply to clinical situations and to provide students with actual practice and experimentation in the use of these theories and formulas. In the clinical setting, there is virtually constant supervision by the technologists so that image critique and evaluation of the students' performance is continuous and noted. It is a requirement of the clinical affiliation sites that the technologists monitor the exam and review the images produced.

Basic radiation protection measures are taught early in the program as part of Introduction to Limited Scope Radiography and Patient Care. This is designed to give the students an adequate understanding of the principles for protecting the patient and him/herself and other staff, which allows them to be functional in the clinical setting. Classes devoted to radiation protection and biology are included in the curriculum and are instructed in the fall and spring semesters of the program.

B. Competency Development

a. A method of competency-based education is utilized. The method is based on cognitive, psychomotor and affective (behavioral) domain instruction.
b. Students are assigned clinical competency categories of radiographic exams, which are intended to be completed in a prescribed period of time. The clinical competency categories are those clinical competency requirements prescribed by the ARRT.
c. Competency achievement is noted when a student completes the set number of exams under direct supervision, with the final exam being error-free.
d. Verification of completion of a category will be by an assigned supervisor in the particular area. Competency verification forms used for this purpose are located electronically at www.Trajecsys.com.
e. Prior to completing any clinical category, the student must have completed the anatomy and positioning laboratory and lecture classes associated with the particular category and have attained a minimum grade of C (minimum of 77 percent).
f. The student will perform the designated number of examinations in each competency category under the supervision of a registered technologist.

V. CLINICAL EDUCATION PLAN

A. Rotations

Students rotate on a weekly basis between a variety of radiographic rooms (i.e. diagnostic, orthopedic, etc.) and portables. Students also rotate between the clinical affiliates to ensure a wide variety of clinical experiences. The clinical coordinator makes the schedule of clinical site rotations for all students in the program. These rotations generally consist of four-week intervals spent in various clinical sites determined by site type (i.e. hospital or clinic) and exam counts. During the final summer semester students may also spend a four-week rotation consisting of two weeks of a PM (i.e. 1-9 p.m.) rotation and two weeks of a weekend (i.e. Friday, Saturday and Sunday) rotation. Students are provided with a schedule of clinical site rotations approximately one month prior to the start of each semester of the program. The clinical instructors design the student weekly rotations.

B. Objectives

The main clinical objective is for the student to be able to develop job entry-level competencies in the performance of radiographic procedures and to apply the appropriate theory to the various clinical situations that might be encountered. Clinical objectives are listed in course outlines for each clinical radiography class.

VI. EVALUATION METHODS

A. **Didactic**

The student's progress in didactic instruction is evaluated with the use of various methods (i.e. written tests, group and individual projects, presentations, etc.) and by laboratory demonstration. Testing is done periodically through the length of each course to determine if students are progressing satisfactorily and at the end of each course to determine terminal competencies. A minimum grade of C (77-84 percent) is required to pass each course and to continue in the program.

B. **Clinical**

The Limited Scope Radiography (LSR) program has established core clinical competencies that all students must demonstrate to meet the requirements of the clinical courses and establish eligibility for admission into the M State Radiologic Technology program. The ARRT Limited Scope of Practice in Radiography exam Content Specifications document outlines the radiographic positions and projections examinees may be assessed on during the Limited Scope exam. The LSR program used the ARRT document to guide the selection of required clinical competencies. The ARRT encourages individuals to obtain education and experience beyond these core requirements, which is also the intent of the program.

The students must demonstrate competency in the radiologic procedures identified by the program. Some procedures will be identified as mandatory procedures and while others will be identified as elective procedures. The majority of mandatory procedures must be demonstrated on patients in the clinical setting. Students can simulate 8 mandatory procedures to complete the LSR program requirements. Procedures identified as elective should be performed on patients in the clinical setting when possible. All elective procedures can be simulated. Simulated exams can be performed with a patient volunteer (i.e. fellow classmate, technologist, friend, etc.) or on a phantom in a clinical setting or lab environment under the direction of a registered technologist. All competency demonstrations should incorporate patient-specific variations such as age and pathology. Simulations will be done at the end of the last clinical rotation (last week) of the program. In addition to the Radiological Procedure competencies, there are ten mandatory General Patient Care competencies. These competencies may be simulated. Lists of these patient care competencies are included with the procedure competency requirements.

Clinical testing of previously learned procedures will be done in the form of announced and unannounced "spot checks." The purpose of the spot check is to assure that once competency is attained for a particular procedure, it is maintained throughout the educational process and taken with the student into the entry-level position. Students may also be spot checked on exams they have not yet met competency on. This allows students to practice or review the procedure to better assure performance when performing the exam with patients.

The student must realize that, even though becoming competent in producing quality radiographs is crucial, radiographic procedure competence is not the only aspect of the clinical experience that will be evaluated. The student's grade will also be based on total points received on weekly

behavioral evaluations. Refer to the evaluation section of this handbook to review the list of behavioral attributes evaluated during clinical courses.

C. **Summary of Clinical Grade Components**
   1. Semester competency assignments
   2. Behavioral Anchor Rating Scale (BARS) weekly evaluations
   3. Clinical competency spot checks

VII. PROGRESSION STANDARDS

Failure of the student to attain, maintain and abide by any one or more of the following criteria will cause the student to be placed on probation for a period of four weeks. If at the end of this time the student shows no improvement, he/she will be dismissed from the Minnesota State Community and Technical College Limited Scope Radiography program.

1. Must achieve a grade of 2.0 (C) or above in each and every course required in the program in order to progress.

2. If a student fails to achieve this level in a general education course, the student can repeat the course prior to the August start date, or the student will forfeit his or her spot in the program and will be encouraged to reapply to the program for the next year.

3. Limited Scope Radiography courses can be repeated if a student receives less than a 2.0 or letter of C. However, the student will be removed from the program at the point where he or she fails to receive a C, and the student has the option of being readmitted the following year at the beginning of the semester in which the course needs to be repeated.

4. The student must obtain a satisfactory rating on all weekly behavioral evaluations.

5. The student must obtain a satisfactory rating on all clinical competency evaluations.

6. The student must be able to perform all motor skills necessary to execute all radiologic examinations.

7. The student must exhibit ethical and professional conduct at all times as outlined in the professional code of ethics.

8. The following violations of ethical and professional conduct by the student will constitute **reason for dismissal:**
   a. Release of confidential information regarding patients and/or personnel from the clinical education settings.
   b. Discourteous treatment of patients, the public, employees or fellow students.
   c. Insubordination which would include disrespect for program officials, affiliated personnel, other students in the program and patients.
   d. Repeated tardiness and/or absenteeism.

e. Falsification of sick time.
f. Falsification of any clinical documents including but not limited to timecards, weekly evaluations and clinical competencies.
g. Dishonesty.
h. Neglect of duties.
i. Intoxication.

The administration of the Minnesota State Community and Technical College and the faculty of the Limited Scope Radiography program will enforce the above criteria. Students do have the right to appeal decisions as outlined in the College's Student Handbook.

VIII. POLICIES

A. Student Discipline/Termination Policy - 1001

Approved By	Program Faculty	**Written By:**	M State Radiology Program Officials
Origination Date:	7-01	**Effective Date:**	7-01
Review Date:	5-08, 8-09,6-10, 6-11,7-12, 5-13, 12-14, 4-16, 2-18, 6-19, 5-22, 5-23, 07-24	**Revised Date:**	6-08, 12-14, 6-19, 5-2020, 04-2021

Policy:

Minnesota State Community and Technical College (M State) Radiologic Technology and Limited Scope Radiography Program recognizes the need for high standards, ethical and appropriate behavior demonstrated by the students enrolled in the program. The program requires students to meet minimum grade requirements, academic standards, abide by the American Society of Radiologic Technologists (ASRT) code of ethics, American Registry of Radiologic Technologists (ARRT) standards of ethics, and specific code of conduct standards as outlined by M State.

Purpose:

To outline the substandard, unethical and inappropriate conduct that may result in immediate termination from the program.

General Information:

Gross misconduct is defined as behavior which violates the ASRT code of ethics, ARRT standard of ethics, or any behavior which causes harm to patients, fellow students, technologists or faculty.

In preparation for a career in radiologic technology/health care, the program recognizes the success of program graduates will rely on their ability to adhere to the strict standards of health care facilities. The standards the program embraces reflect the values of the ASRT, ARRT, and associated health care clinical sites. The student disciplinary procedure will be initiated due to substandard, unethical or inappropriate student conduct by the program director and/or the clinical coordinator. Failure to adhere to criteria can result in probation, suspension or immediate termination from the program. Immediate termination may result for any one of the following reasons:

1. Any grade lower than a C that prohibits progress into the next course. Future enrollment in that course would follow the program re-entry process on a space available basis.

2. Receiving unsatisfactory rating on student clinical competency evaluations.
3. Receiving unsatisfactory rating on all clinical performance evaluations (weekly evaluations), which are in the form of a behavioral anchor rating system (BARS).
4. Possession or use of alcohol or any mood-altering chemicals on the premises or reporting for class/clinical intoxicated. Random drug and alcohol testing may be done at the student's expense.
5. Repeated tardiness.
6. Unexcused absenteeism (including failure to follow notification of absence procedure as outlined in the attendance policy) and/or falsification of sick time. Weather related absences are addressed in the limited scope radiography handbook. Students removed from the program for reasons for gross unsafe practice are ineligible to reapply to the Limited Scope Radiography Program or the Radiologic Technology Program. Students are encouraged to work with an academic advisor to explore other M State Programs.
7. Insubordination in class or clinical setting.
8. Grossly unethical or unprofessional conduct in class or clinical setting.
9. Gross carelessness in regard to safety of patients or colleagues.
10. Discourteous, unprofessional treatment of patients, public and staff.
11. Dishonesty/cheating/theft.
12. Release of confidential information regarding patients and/or hospital or clinic personnel or activities.

Procedure:

1. **Termination:** Dismissal from the program.
    a. If the situation results in immediate termination from the program the student will be given the opportunity to appeal that decision through the college appeal process outlined in the college student handbook.

2. **Suspension:** Dismissal from the program for a specified time.
    a. If the situation results in suspension from the program the student will be placed on suspension for a specified amount of time. If at the end of this time satisfactory improvement is not demonstrated, the student will be terminated from the program. Students who are suspended will be placed on probation. See the probation policy or readmission policy for reference.

3. **Probation:** Continued enrollment in the program is dependent upon improvement in behavior during a specified period.

    a. If the situation results in the student being placed on probation the student will be required to demonstrate satisfactory improvement. A performance plan will be implemented to monitor improvement. If satisfactory improvement is not demonstrated during this specified time frame further disciplinary actions will be taken.

Radiography/Limited Scope Radiography Program Probation

Program probation is disciplinary action that may be taken when a student breaches policies of M State, a radiologic technology/limited scope radiography course, the radiography/limited scope radiography program, college or industry standards; engages in a critical incident in any radiography/limited scope radiography course; or demonstrates insubordinate behavior. If the alleged violation occurred in a clinical setting, the Clinical Instructor has the option of removing the student from the clinical setting immediately.

Examples of breach of standards may include, but are not limited to:

- Failure to identify a patient prior to any invasive procedures or high-risk patient care activities.
- Breach of patient confidentiality or HIPAA guidelines.
- Unprofessional behavior, plagiarism, or integrity misconduct.
- Violation of the American Registry of Radiologic Technologists (ARRT) code of ethics.

Examples of critical incidents may include, but are not limited to:

- Unsafe practice.
- Practicing without supervision. Practicing outside of the American Society of Radiologic Technologists (ASRT) scope of practice or the ASRT student curriculum.
- Behavior that puts self or others at risk while participating in academic and clinical rotation related activities.

Examples of insubordinate behavior may include, but are not limited to:

- Unruly behavior.
- Noncompliance with any of the following, course or program rules, M State or program policies.
- Tardiness and absenteeism.

Probation Procedure Instructor Responsibilities

1. Instructor includes: (M State faculty or clinical instructor); promptly discusses the incident with the student privately, and determines if the student will be permitted to remain in the classroom, lab, or clinical area.

2. Instructor will communicate expectations to student, document the incident and communication using the Notice of Probation form.

3. Instructor reviews the Notice of Probation with the student, and gives the student the opportunity to provide a description of the situation in an electronic document format that will be attached to the Notice of Probation.

4. Instructor and student sign the Notice of Probation, indicating they have discussed the incident and resulting probationary status including the probationary plan and consequences associated with the student's failure to comply. A copy of the document will be saved in the program archive and given to the student.

5. Faculty will forward the electronic Notice of Probation to the Director of Radiologic Technology/Limited Scope Radiography for review. Based upon the severity of the incident, the Program Director may request to meet with the student. If changes are made to the document, the Program Director will return a copy of the signed Notice of Probation to the instructor and student. These records will be saved indefinitely in the Program files.

6. Terms of the Notice of Probation remain in effect until the student graduates.

7. Probation is also included as part of the readmission process. Refer to the radiologic technology/Limited Scope Radiography program readmission policy.

Probation Procedure Student Responsibilities

1. Student includes any person enrolled at M State in the Radiography/Limited Scope Radiography program.
2. Student reviews the probation form with the instructor/director who has been notified of a violation.
3. Student has the opportunity to add a description of the event in an electronic document.
4. Student signs the completed Notice of Probation form, indicating they understand the violation. An electronic copy of the violation will be received by the student.
5. Student has the right to appeal any violation.

Probation Consequences

1. **First Incident**
    a. The **Notice of Probation** form is completed.
    b. The student will be assigned a letter grade of "F" on the exam, assignment, or clinical evaluation, which *may* affect the student's ability to successfully meet course or program outcomes.
    c. The student may continue in the other courses in which (s)he is enrolled, but will be required to submit a Revised Plan of Study.

2. **Second Incident**

    a. The **Notice of Termination** form is completed.

    b. The student will be assigned a letter grade of "F" for the course associated with the incident. The student will be terminated from the program and is ineligible to reapply to the Radiography/Limited Scope Radiography Program at M State.

Gross Unsafe Practice

Depending on the nature of the incident(s), the student may be immediately removed from the learning environment, awarded a letter grade of "F" for the associated course and possibly dismissed from the program. Examples of incidents that may be cause for immediate removal, course failure, and program dismissal include, but are not limited to:

- Incidents where the patient is placed at undue risk and/or experiences a catastrophic injury or sentinel event.
- Incidents where the student breaks the law while engaged in activities related to his/her M State academic endeavors.
- Any incident listed under the critical incidents or insubordinate behavior based on the discretion of the Radiologic Technology/Limited Scope Radiography program director and Associate Academic Dean.

Students removed from the program for these reasons are ineligible to reapply to the Radiography/Limited Scope Radiography Program. Students are encouraged to work with an academic advisor to explore other M State programs.

References:

ASRT Scope of Practice:

https://www.asrt.org/docs/default-source/practice-standards-published/ps_rad.pdf?sfvrsn=13e176d0_18

ARRT Code of Ethics: https://www.arrt.org/docs/default-source/Governing-Documents/code-of-ethics.pdf? sfvrsn=10

Minnesota State Community and Technical College
Radiologic Technology/Limited Scope Radiography Program
Plan of Action for Written Probation

Refer to the Radiologic Technology/Limited Scope Radiography Student Handbook disciplinary action policy and probation policy for probation criteria.

This form serves as Plan of Action documentation regarding probation for:

Student Name: _____ Date: _____

The Plan of Action will be in effect for one semester or until deemed necessary by the Radiologic Technology/Limited Scope Radiography Program Director. All records will be part of the student's permanent record at M State.

Any future violations may result in further disciplinary action up to and including suspension and/or termination.

_____ _____
(Student signature) (Date)

_____ _____
(Program Director signature) (Date)

Minnesota State Community and Technical College
Radiologic Technology/Limited Scope Radiography Program
Notice of Probation

Refer to the Radiologic Technology/Limited Scope Radiography Student Handbook disciplinary action policy and probation policy for probation criteria.

Student Name: _____ Date: _____

This form provides documentation of a written warning from the Radiologic Technology/Limited Scope Radiography program for the following violation:

Any future violations may result in further disciplinary action up to and including suspension and/or termination.

_____ _____
(Student signature) (Date)

_____ _____
(Program Director signature) (Date)

Minnesota State Community and Technical College
Radiologic Technology/Limited Scope Radiography Program
Notice of Termination

Refer to the Radiologic Technology/Limited Scope Radiography Student Handbook disciplinary action policy and probation policy for probation criteria.

Student Name: _____ Date: _____

This form provides documentation of termination from the Radiologic Technology/Limited Scope Radiography Program for the following violation:

_____ _____
(Student signature) (Date)

_____ _____
(Program Director signature) (Date)

B. **Student Readmission Policy – 1002**

Approved By	Program Faculty	Written By:	M State Radiology Program Officials
Origination Date:	02-03-2019	Effective Date:	02-03-2019
Review Date:	6-19,5-22, 5-23, 7-24	Revised Date:	6-19,05-20, 04-2021

Policy:
Readmission into the Radiologic Technology/Limited Scope Radiography Program following student withdrawal.

Purpose:
To guide students, faculty and program officials in the process for the potential of readmitting a radiography/Limited Scope Radiography student.

General Information:
Minnesota State Community and Technical College (M State) Radiologic Technology/Limited Scope Radiography Program recognizes the need for students to demonstrate high standards, ethical and appropriate behavior, high academic performance, and commitment to didactic and clinical studies.

Procedure:
A candidate for readmission must have successfully completed at least one full semester in the M State Radiologic Technology/Limited Scope radiography Program. Students who have not successfully completed a semester must reapply to the program.

1. Re-admission of a student, regardless of reason for withdrawal, is dependent on space availability in the program and cannot be guaranteed to any student unless the withdrawal falls under Title IX of the Education Amendments of 1972 or any withdrawal that falls under a federally or state protected reason.
2. No student who has a cumulative GPA of less than 2.0 will be readmitted to the Radiologic Technology/Limited Scope Radiography program.
3. Students who have completed less than one semester should reapply to the program. Students will be required to follow current application guidelines and will be selected based on current application guidelines. Requests for readmission are evaluated on an individual basis based on the following:
    a. The reason for their withdrawal.
    b. Length of time since their withdrawal (must be within 1 year), unless the withdrawal falls under Title IX of the Education Amendments of 1972 or any withdrawal that falls under a federally or state protected reason. Or if the student experiences extraordinary life events

beyond their control. In all circumstances students must meet the ARRT criteria. ARRT criteria determines program didactic and clinical components.

c. Any program related experiences or activities the individual has participated in after withdrawal from the program.

4. The Radiologic Technology/Limited Scope Radiography Program director and Dean of Health Sciences, Human Services and Nursing or designee reviews appeals related to the radiology program, radiology program policies and program eligibility.
5. The Radiologic Technology/ Limited Scope Radiography Program director and the Dean of Health Sciences, Human Services and Nursing or designee meet during the academic year and may review appeals as needed.
6. Students wishing to present their appeal to the Radiologic Technology/ Limited Scope Radiography program director and Dean of HSHSN will be scheduled according to the student availability within 2 weeks of receiving the appeal request. Meetings may occur on campus or online, as needed, to facilitate the meeting promptly.
7. Students wishing to submit an appeal to the Radiologic Technology/ Limited Scope Radiography Program Director and Dean of HSHSN will complete the most applicable College Appeal Form. Emails will not be accepted as appeals.
8. Students are encouraged to review the entire program progression policy outlined in the Radiology/Limited Scope Radiography Program Policies and Procedures manual. Decisions are communicated in writing to students using their M State student email account within 10 working days of the scheduled meeting.
9. Appeals must include:
    a. A request for readmission with semester and year of anticipated return to the Radiologic Technology/Limited Scope Radiography program.
    b. A statement of progress toward degree completion for the M State Radiologic Technology/Limited Scope Radiography curriculum requirements.
    c. Official transcripts from all significant schools.
    d. A completed M State application to the Radiologic Technology/Limited Scope Radiography program.
    e. If difficulties were encountered while in the Radiologic Technology/Limited Scope Radiography program:
    f. Identification of reason(s) why the student withdrew, the changes which have occurred since withdrawing, and applicable documentation which provides evidence of positive change.
        i. A detailed plan that will support the student's successful completion of the program may include:
            1. Tutoring
            2. Employment in health care
            3. Remedial courses
            4. Recovery program education
            5. Counseling

10. Readmitted students must follow the core admission guidelines (health records, CPR, background checks, etc.) for the Radiologic Technology/Limited Scope Radiography program.
11. Candidates for readmission may be given a written or psychomotor skill exam to ensure that previous learned knowledge and skills (to include, but not limited to, clinical competencies) were retained. Students who do not pass the skill assessment exams may not be eligible for readmission into the program.
12. Application for readmission does not guarantee student acceptance back into the program. Readmission decisions are based at the discretion of the Radiologic Technology/Limited Scope Radiography Program Director and Dean of Health Sciences, Human Services and Nursing.
13. Specific guidelines and expectations will be established by the program director to ensure student success and student compliance. Students are considered for readmission only once.
14. Students can appeal decision by following the M State Level II appeals process.

Date: _____ Name: _____

Last semester enrolled: _____ Semester requesting readmission: _____

Radiologic Technology/Limited Scope Radiography Program Director: _____

Radiologic Technology/Limited Scope Radiography Program Clinical Coordinator: _____

Program Advisor: _____

Dean of the Radiologic Technology/Limited Scope Radiography Program: _____

Decision: GRANTED _____ NOT GRANTED _____

Statement of Results:

_____

Minnesota State Community and Technical College
Radiologic Technology/Limited Scope Radiography Program
Voluntary Withdrawal Form

Student Name: _____ Date: _____

This form provides documentation of voluntary withdrawal from the Radiologic Technology (RT)/Limited Scope Radiography (LSR) program at Minnesota State Community and Technical College-Detroit Lakes. Students who withdraw from the program must follow the readmission policy to be considered for continuing education in the RT/LSR program. Readmission is not guaranteed.

_____ _____

(Student signature) (Date)

_____ _____

(Program Director signature) (Date)

C. **Student Pregnancy Policy - 1101**

Approved By	Program Faculty	**Written By:**	M State Radiology Program Officials
Origination Date:	7-01	**Effective Date:**	7-01
Review Date:	5-08, 10-08, 8-09 6-10, 6-11,7-12, 5-13, 12-14, 4-16, 3-17, 4 -18, 08-19, 5-22, 5-23, 7-24	**Revised Date:**	6-08, 10-08, 5-2020

Policy:

Minnesota State Community and Technical College (M State) Radiologic Technology/Limited Scope Radiography program recognizes ionizing radiation has been determined to be harmful to the developing embryo/fetus. Therefore, in keeping with the ALARA principle, M State shall strive to minimize exposure to the unborn embryo/fetus of pregnant student radiographers.

Purpose:

To describe the actions to be taken by employees, program officials and radiation safety officer to ensure that exposure does not exceed regulatory limits.

General Information:

In accordance with the NRC's regulations at 10 CFR 20.1208 (http://www.nrc.gov/reading-rm/doc-collections/cfr/part020/part020-1208.html) "Dose to an Embryo/Fetus," radiation dose to an embryo/fetus during entire pregnancy will not be allowed to exceed 0.5 rem (5 millisievert) (unless that dose has already been exceeded between the time of conception and submitting letter of declaration).

If the student chooses to disclose her pregnancy, she may do so by informing the program director or clinical coordinator in writing. The form used to disclose pregnancy is located in the program handbook or can be obtained from any program official.

The student and program officials will discuss possible modifications in clinical assignments, leave of absence from clinical assignments, and/or leave of absence from the program. The student also will have the option of continuing the educational program without modification or interruption. The student will be allowed to make an informed decision based on her individual needs and preferences.

The student may withdraw declaration of pregnancy at any time in a written format.

Procedure:

1. In the event the student chooses to disclose her pregnancy in writing:

a. The student will be given information regarding the effects of radiation on developing embryo/fetus.

b. The student will also be instructed how to effectively protect herself and the developing embryo/fetus using basic radiation protection principles of time, distance and shielding.

c. The student will be provided with a fetal monitor throughout the pregnancy term.

    i. The fetal monitor will be worn at the waist level at all times

    ii. The fetal monitor will be worn underneath lead apparel when appropriate

2. If a student chooses to take a leave of absence from the program, she will be allowed back into the program at the start of the academic semester she was in when she left.

    a. The student may request a leave of absence when either she or her physician feels she is no longer able to function in a manner conducive to learning. Each case will be reviewed individually taking into account not only radiation protection/safety issues, but educational issues as well (for instance loss of clinical experience in fluoroscopy and/or lost class time).

3. If the student chooses to continue in the program without modification, she will be required to use CTO for all clinical days missed and she will be required to make up any time missed over the allotted 20-hour CTO. A make-up schedule will be developed through a joint effort between program officials, the student and effected clinical instructors.

Minnesota State
Community and Technical College

DECLARATION OF PREGNANCY

To:

In accordance with the NRC's regulations at 10 CFR 20.1208, "Dose to an Embryo/Fetus," I am declaring that I am pregnant. I believe I became pregnant in_____ (only the month and year need be provided).

I understand the radiation dose to my embryo/fetus during my entire pregnancy will not be allowed to exceed 0.5 rem (5 millisievert) (unless that dose has already been exceeded between the time of conception and submitting this letter). I also understand that meeting the lower dose limit may require a change in scheduled clinical location or semester competency requirements during my pregnancy.

_____

(Student signature)

_____

(Student name printed)

_____

(Date)

D. **Clinical Dress Policy - 1201**

Approved By	Program Faculty	**Written By:**	M State Radiology Program Officials
Origination Date:	7-01	**Effective Date:**	7-01
Review Date:	5-08, 8-09, 6-10, 6-11,7-12, 5-13, 4-16, 3-18, 5-22, 5-23,	**Revised Date:** 08-19	6-08, 12-14, 5-2020 04-2021, 7-24

Policy:

Minnesota State Community and Technical College (M State) Radiologic Technology/Limited Scope Radiography Program recognizes a professional image must be portrayed in the clinical setting.

Purpose:

To describe the actions to be taken by students, program officials and clinical site officials to ensure a professional image is maintained by adherence of the dress code standards.

General Information:

The M State Radiologic Technology/Limited Scope Radiography Program strongly believes a student's professional image impacts technologists' and patients' perceptions of quality and overall experience with M State Radiologic Technology/Limited Scope Radiography students. As a student of the program, you are an integral part of the image of M State, the clinical site and the radiologic technology profession.

Procedure:

1. Personal hygiene is of the utmost importance. Students will:

    a. Have neatly trimmed fingernails. Artificial nails and gel nail polish are prohibited.
    b. Hair longer than shoulder length must be pulled back, secured and well kept. Refrain from using extreme hair styles, colors and products. By following clinical site approval.
    c. Be free and aware of strong and offensive odors such as perfumes, colognes, smoke, and body odor.
    d. Wear a limited number of rings.
    e. Ear and facial piercings with visible jewelry must be minimal. Clear plugs can be worn to maintain the piercing (to include tongue piercing). Refrain from showing visible body piercings at the affiliated clinical education sites other than conservative earrings for men and women.
    f. Offensive tattoos must be covered while taking part in program required activities (e.g. clinical assignment, conferences, etc.). The offensiveness of the tattoo will be

determined by program and/or clinical officials according to M State policies.

g. Beards and mustaches must be neatly trimmed.

2. Professional and acceptable attire must be worn. Students:

   a. Will wear clean closed foot, predominately white shoes or tennis shoes in good condition. . Shoes should be worn inside the facility only during clinical rotations.
   b. Will wear the M State designated color and Cherokee brand scrub uniform, whites or a combination there of. Will wear current M State photo ID and/or clinical facility ID badge attached on the chest area of the uniform. Name and picture must be facing forward and visible to patients, families, and staff at all times.
   c. May wear a uniform jacket. The Cherokee brand is required to establish standardized color and style choices.
   d. Will refrain from wearing any clothing with inappropriate or offensive lettering or logos.
   e. May wear a solid-colored top under a uniform top or lab coat.
   f. May not wear sweatshirts, hoodies or sweatpants.
   g. May not wear tank tops, short crop tops (midriff must be covered), low cut or revealing attire.

3. Corrective action for inappropriate attire and poor personal hygiene.

   If a student is not dressed appropriately or has poor personal hygiene as identified above, he/she will be sent home to resolve the issue. The time away from clinical will result in a loss of clinical time and the student's CTO will be used to replace this lost time. If the student does not have adequate CTO to replace the lost time the lost clinical time will be made up and the clinical grade will be changed according to the Clinical Absence Grade Status policy.

4. One set of Radiographic Markers will be ordered for each student. Replacement markers must meet the standard of the program and an additional order is the responsibility of the student.

E. **Class Dress Policy - 1202**

Approved By	Program Faculty	**Written By:**	M State Radiology Program Officials
Origination Date:	7-01	**Effective Date:**	7-01
Review Date:	5-08, 8-09, 6-10,	**Revised Date:**	6-08, 12-14, 5-2020

	6-11,7-12, 5-13, 12-14, 4-16, 3-18, 08-19, 07-24		

Policy:

Minnesota State Community and Technical College (M State) Radiologic Technology/Limited Scope Radiography program recognizes the learning process is more effective when students feel comfortable in the educational environment.

Procedure:

Students will dress appropriately for class. Clothing should be clean and comfortable. Shoes must be worn at all times. May not wear tank tops, short crop tops (midriff must be covered), low cut or revealing attire.

F. **Smoking Policy – 1251**

Approved By	Program Faculty	**Written By:**	M State Radiology Program Officials
Origination Date:	5-08	**Effective Date:**	6-08
Review Date:	8-09, 6-10, 6-11,7-12, 5-13, 4-16, 3-18, 08-19, 5-22, 07-24	**Revised Date:**	5-2020

Policy:

Minnesota State Community and Technical College (M State) Radiologic Technology/Limited Scope Radiography Program and its affiliated health care partners are committed to improving the health and well-being for people of all ages and strive to be leaders in health promotion. Establishment of tobacco-free environments at the affiliated health care partner locations clearly states the commitment to promoting healthy lifestyles.

Purpose:

Health care employees and students need to set an example for good health practices, including disease prevention and treatment, as well as support a healthy and safe atmosphere.

General Information:

M State Radiologic Technology students are not allowed to smoke or use other forms of tobacco on affiliated health care partner grounds. Students who do smoke must do so off these grounds and in locations not visible to the public.

Procedure:

Students who arrive at the health care partner facility smelling of smoke will be asked to change into suitable alternate clothing or will be sent home to change into odor-free clothes. Clinical time off (CTO) will be used to cover the hours absent from the health care partner facility to change clothes. Guidelines for CTO usage can be found in the Student Absence Policy and the Clinical Absence - Grade Status Policy located in this handbook. Students who do not comply with this policy will be subject to the student discipline/termination policy.

G. **Cell Phone Use Policy – 1252**

Approved By	Program Faculty	**Written By:**	M State Radiology Program Officials
Origination Date:	6-08	**Effective Date:**	7-08
Review Date:	8-09, 6-10, 6-11,7-12, 5-13, 12-14, 4-16, 3-17, 3-18, 08-19, 5-22, 5-23, 7-24	**Revised Date:**	5-2020

Policy:

Cellular phones may not be used or carried in "on" position in patient care areas in the affiliated health care partner facilities. Students may use cellular phones on scheduled breaks and at lunch time in the areas designated by the facility.

Purpose:

Cellular phones transmit radio frequency signals and may create electromagnetic interference in electronic health care equipment; therefore cellular phones may only be powered on or used in designated areas of the affiliated health care facility.

General Information:

Personal phone calls should be made on the student's break time. However, the program recognizes that occasionally students must place or receive personal calls during scheduled clinical hours. If the student is anticipating a call the student is expected to distribute the contact information of the affiliated clinical site and alert the person answering phones at that facility of the need to receive the call. If the student needs to make a call, the student must inform the clinical instructor or supervising technologist of that need and follow the facility procedure on outgoing phone calls or cell phone usage areas.

Procedure:

All students must have cellular phones powered off when in patient care or restricted cellular phone areas. Any student not abiding by this policy will be subject to disciplinary actions outlined in the student discipline/termination policy.

H. **Student Health and Bloodborne Pathogen Exposure Control Policy - 1301**

Approved By	Program Faculty	**Written By:**	M State Radiology Program Officials
Origination Date:	7-01	**Effective Date:**	7-01
Review Date:	5-08, 8-09, 6-10, 7-12, 5-13, 12-14, 4-16, 3-17, 3-18, 5-22, 5-23	**Revised Date:**	6-08, 8-19, 5-2020, 04-2021, 7-24

Policy:

In order to protect the health of the student as well as those that the student comes into contact with (i.e., patients, family, friends, fellow students, faculty, co-workers, etc.), the program and the College require that each student provide the College with proof of immunization to mumps, measles, rubella (MMR), diphtheria, tetanus, whooping cough (Tdap) and hepatitis B (3 step), varicella and flu vaccine. In addition, a two-step tuberculin skin test or TB blood test is required prior to beginning clinical assignments (as part of the pre-enrollment physical exam). The TB skin test or TB blood test result is kept on file with the other health information, and in the event of a positive result documented follow-up (including recommendation concerning return to work) by a physician must be provided. as well as infection control in-service education as required by OSHA.

Information concerning health services, health service fees, immunization requirements and the College's AIDS policy are all published in the College's Student Handbook. (Available online: http://www.minnesota.edu/handbook/)

Purpose:

The purpose of this policy is to eliminate or minimize exposure of the student and those that the student comes into contact with (i.e., patients, family, friends, fellow students, faculty, co-workers, etc.) from exposure to blood, body fluids or infectious/contagious diseases.

General Information:

Conditions requiring removal from the clinical assignment are as follows:

1. **Open draining lesions:** The program director will remove a student from clinical until seen by a physician, diagnosed, treated and determined by the physician to be non-contagious.
2. **Streptococcal infection:** Any student with a sore throat, especially accompanied by fever, should request to have a throat culture. These can be done by the student's personal physician.

** If group A streptococci are found, the student will be removed from his/her clinical assignment until 24 hours after antibiotic therapy is started and is afebrile (without fever); the student is to be treated for 10 full days with a suitable antibiotic.**

3. Staphylococcal infection:

    a. Because of the ubiquitous nature of staph aureus, asymptomatic carriers are not isolated or treated.

    b. Students with active staph aureus infections may not attend clinical. If a student relates a diagnosis of staph aureus infection, the program director will require written verification from the student's physician stating the circumstances under which the student may work to avoid transmitting infection.

4. Students with the following diagnosed conditions shall not be permitted to carry out their clinical assignment.

    a. Respiratory tract infections: i.e. group A strep, any pneumonia, active pulmonary TB, influenza, mumps.

    b. Active exanthems (rashes): chicken pox, herpes zoster, measles or rubella.

    c. Enteric infections: hepatitis, salmonellosis, shigellosis, amebiasis, giardiasis, pink eye, vomiting and diarrhea of unknown etiology until etiology is determined (and treated if appropriate) or symptoms abate.

    d. Herpes simplex: shall not care for immunosuppressed patients, including newborns, as per clinical affiliate's policy.

    e. COVID-19. Must follow current guidelines based on state or federal recommendations or mandates. Students must be free of COVID symptoms.

5. The clinical education center(s) infection control officer(s) will be consulted whenever a concern exists regarding the transmission of any infectious agent and will direct surveillance, follow-up and prophylactic activities.

6. Standard/universal precautions: All students are provided with initial education and in-service education regarding the practice of universal precautions and are expected to adhere to these procedures in order to prevent acquiring or transmitting infectious agents.

PLEASE REFER TO THE BLOODBORNE PATHOGENS EXPOSURE CONTROL POLICY ON THE NEXT PAGE.

Procedure:

In order to assure proper infection control, infectious/contagious diseases require that the student be removed from his/her clinical assignment until he/she is determined by a physician to be noninfectious. The student is required to use clinical time off (CTO) for any clinical time missed. Guidelines for CTO usage can be found in the Student Absence Policy and the Clinical Absence-Grade Status Policy located in this handbook. Exceptions regarding students taking CTO may be considered based on college, state, and program consideration.

Additional Information:

Student Accident and Health Insurance Plans

Please be aware and understand that Minnesota State Community and Technical College does not carry accident and health insurance for students enrolled. If the student does not have personal coverage through some insurance plan/carrier, he/she will not be covered by a policy for health or accident during attendance at Minnesota State Community and Technical College. Questions and further information regarding student accident and health coverage may be directed to the Student Development Services Department. However, Health Science, Human Services and Nursing students are covered by liability insurance when serving clinical portions of required classes.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE

Policy Name: Bloodborne Pathogens Exposure Control

Policy:

It is the policy of Minnesota State Community and Technical College that all employee job duties and academic programs will be reviewed to determine which employees and students may reasonably expect to incur exposure to blood or other potentially infectious materials as a result of their employment or participation in an academic program.

For occupationally exposed employees, the College will implement and enforce a written set of protective procedures, the Exposure Control Plan. The College will provide training within 10 days of hire on bloodborne pathogens and the Exposure Control Plan. Refresher training will be provided annually. Vaccinations for hepatitis B virus and all personal protective equipment needed for protection from bloodborne pathogens will be provided at no cost to the employee. In addition, all medical follow-up after an exposure will be provided at no cost to the employee. All confidentiality rules will be followed regarding medical records of employees.

For students participating in academic programs in which exposure may be expected, the College will provide information and training on bloodborne pathogens and exposure control procedures as a part of the curriculum of the program. Students will be issued and expected to use all necessary personal protective equipment when working on campus. Vaccinations will be encouraged but will be considered the financial responsibility of the student. Also, medical follow-up after exposure incident will be encouraged by the College but will be considered the financial responsibility of the student. All confidentiality rules will be followed regarding medical records of students.

Purpose:

It is the purpose of this policy to establish an exposure control plan, implement training and provide for personal protective equipment and vaccinations in an effort to protect the health of employees and students who may be exposed to bloodborne pathogens as a result of their job duties or participation in a College academic program.

Campus Contact Person for the Bloodborne Pathogens Program	Participates in identifying occupationally exposed employees or academic programs in which students may expect exposure. Ensures training is offered to all occupationally exposed employees, initially after hire and annually thereafter. Initiates medical follow-up after report of an exposure incident.
Human Resources Department	Ensures occupationally exposed employees are offered the hepatitis B vaccination. Maintains the hepatitis B consent/declination forms.

Faculty and Staff identified as occupationally exposed	Participates in training and follows all the rules as described in the Exposure Control Plan. Reports any exposure incident immediately to the Campus Contact Person(s).
Deans	Ensures that students are given information on bloodborne pathogens, the College's bloodborne pathogens policy and exposure control as a part of the curriculum.
Students participating in a curriculum that may incur exposure to blood	Participates in training and follows all the rules as described in the exposure control portion of the academic program. Reports any exposure incident immediately to their academic supervisor.

References:

OSHA Regulation 29 CFR 1910.1030

Steward: Chief Financial Officer

Approval Date: March 1, 2005

Implementation Date: March 1, 2005

Revised Policy Format Only: July 31, 2012

I. **Attendance Policy - 1401**

Approved By	Program Faculty	**Written By:**	M State Radiology Program Officials
Origination Date:	7-01	**Effective Date:**	7-01
Review Date:	5-08, 8-09, 6-10, 6-11, 7-12, 5-13, 12-14, 4-16, 3-17, 3-18, 08-19, 5-22, 5-23	**Revised Date:**	6-08, 5-2020, 7-24

Policy:

Students are expected to be present and punctual every scheduled day of the program. Class and clinical courses begin promptly at the time scheduled. Students are expected to arrive a few minutes early and assume their class or clinical responsibilities on time. Students arriving after scheduled times will be marked tardy for official records.

Purpose:

The purpose of this policy is to ensure equal, quality educational experiences for all students.

General Information:

Students are required to complete a timecard each week of clinical rotations throughout each semester. The timecard is to be approved at the end of each week by a technologist electronically in the Trajecsys system. The timecard is visible to the clinical course instructor.

If the student is unable to attend a scheduled clinical time the student must contact the clinical site and the clinical course instructor prior to the scheduled time of arrival. The student will also complete a clinical time-off form indicating the day and time missed from the clinical schedule. The student must also include documentation, when appropriate, from a physician stating the student can return to his/her clinical assignment as listed in the student health policy above. The responsibility for initiating completion of the clinical time off form is the student's responsibility and should be completed immediately the following clinical day present.

Procedure:

When illness or emergency dictates a student’s absence, he/she will:

1. Call the clinical instructor or supervisor at his/her assigned clinical site before the start of his/her shift to report absence from clinical. This will be documented at the clinical site

Clinical Education Sites as well as program officials are listed in a separate document for reference. The list is posted in Trajecsys.

2. Contact the appropriate program official by leaving a message via voice mail or email if they are not immediately available.
3. Complete a clinical time off form in Trajecys.

Additional Information:

Student Maximum Hours

Students in the Limited Scope Radiography program at no time will be scheduled more than 40 hours per week of combined clinical and didactic hours.

Students will be scheduled evening and weekend rotations while enrolled in the program. The evening hours will be 1 p.m. to 9 p.m. with weekend hours varying per clinical site. To ensure the student does not exceed the 40-hour maximum while scheduled for evening and weekend rotations, appropriate time off will be designated.

J. **Student Absence Policy - 1402**

Approved By	Program Faculty	**Written By:**	M State Radiology Program Officials
Origination Date:	7-01	**Effective Date:**	7-01
Review Date:	5-08, 8-09, 6-10, 6-11, 5-13, 12-14, 4-16, 3-17, 3-18, 08-19- 5-23	**Revised Date:**	6-08, 5-2020, 5-22, 7-24

Policy:
Students will be allowed 20 hours per year as clinical time off (CTO). These 20 hours will be used for any and all time not present at a scheduled clinical site (sick days, personal leave, maternity leave, etc.)

Purpose:

The Limited Scope Radiography program recognizes students will occasionally need to be absent from clinical rotations and have found 20 hours a year of clinical time off to be an adequate amount.

General Information:

Students must take CTO in no less than ½ hour increments. Students with repeated tardiness are subject to disciplinary action as stated in the Student Discipline/Termination policy in this manual.

Students can take available CTO at any time in the program.

Students are required to make up any clinical hours missed above and beyond the allotted 20 hours and the clinical grade will be affected as indicated in the Clinical Absence-Grade Status Policy.

Using CTO for evening and weekend shifts is highly discouraged.

In addition to these 20 hours, students will be allowed one day designated as an "interview" day and **must be pre-approved** as indicated on the student absent forms. Any days absent that were not approved prior to interview will be sited as a clinical absent day and the student will be required to make up the lost clinical hours if this time exceeds the 20-hour CTO allotment. This day is to be used only for the purpose in which is stated; that being for interviews including travel time.

There is no banking of additional time. If a student stays late to complete an exam, credit for this time must be taken the following clinical day with permission from the clinical instructor. STUDENTS CANNOT "COLLECT" TIME TO BE USED AT A LATER DATE.

Limited Scope Students that bridge: Limited Scope Radiography (LSR) students must graduate from the program before being accepted to bridge into the Radiologic Technology Program. Limited Scope Radiography Students are allotted 20 hours of CTO to complete their clinical internships. Any amount of CTO time not used in the LSR program does not carry over to the LSR Bridge to RT program.

Procedure:

1. The student will notify the clinical site and the clinical course instructor by a means mutually agreed upon (usually by phone or email) prior to the time of the scheduled shift. If the student does not contact the site and clinical course instructor prior to the scheduled clinical shift, that student could be subject to disciplinary action as outlined in the Student Disciplinary/Termination policy.
2. The student will fill out and complete the CTO document listed on Trajecsys and submit the form as soon as possible, or within a day of the absence.
3. If the clinical day to be absent is preplanned the student must complete the CTO Trajecsys form prior to the anticipated day off.

K. **Bereavement Policy - 1403**

Approved By	Program Faculty	**Written By:**	M State Radiology Program Officials
Origination Date:	9-19	**Effective Date:**	9-19

Review Date:	5-22, 7-24	**Revised Date:**	5-2020

Policy:

A student shall be granted up to five(5) days of approved leave as necessary for bereavement purposes. Bereavement leave up to 5 days shall not be deducted from clinical time off (CTO) in the event of death in the immediate family. The term "immediate family" shall mean: spouse, parents, parents of spouse, guardian, children, grandchildren, brothers, sisters, grandparents or wards of the household. If additional bereavement leave is requested beyond the (five) 5 days for an "immediate family" member, that approved bereavement leave shall be deducted from CTO. Upon consultation with the program faculty, bereavement leave for a student for a person of a close relationship may also be approved and deducted from CTO. The use of future CTO will be handled on a case-by-case basis.

Purpose:

To promote the general mental health of Minnesota State Community and Technical College students by allowing them the opportunity to grieve and be available for the families during times of death and grief.

Missed Academic Work:

The Radiologic Technology/Limited Scope program faculty suggest that the student who is mourning be given a reasonable amount of days to make up any missed academic work. This will be determined by the instructor of the class and outlined in the course syllabus. It is the responsibility of the student to discuss with individual faculty a plan for completing any missing work.

Proof of Death:

Any students who wish to use the Bereavement Policy should have proof of death for the individual(s) who is/are being mourned. Proof of the individual(s) death(s) should be submitted to program faculty by the end of the allotted days. Documentation of the death or funeral service attended should suffice as evidence of the death. Documentation can include but is not limited to:

- An obituary
- A copy of death certificate
- Program from funeral/services
- Signed letter of funeral service from the funeral home

L. **Clinical Absence-Grade Status Policy - 1404**

Approved By	Program Faculty	**Written By:**	M State Radiology Program Officials

Origination Date:	7-01	**Effective Date:**	7-01
Review Date:	5-08, 8-09, 6-10, 6-11, 7-12, 5-13, 12-14, 4-16, 3-17, 3-18, 08-19	**Revised Date:**	6-08, 5-2020, 5-22, 7-24

Policy:

There will be a drop of one letter grade for any amount of time absent beyond the LSR student's 20 hours of CTO for unexcused absence. A grade deduction occurs per semester and does not carry over to the next clinical semester. Repeated absences may result in student termination from the program.

Purpose:

The purpose of this policy is to ensure equal and adequate time to obtain necessary clinical experience and competencies mandated by the American Registry of Radiologic Technologists (ARRT).

General Information:

Days absent above and beyond the annual allotted 20 hours CTO will be cumulative for that given year in the program. Students receiving a letter grade below "C" due to absence will be terminated from the program. Students must take CTO in no less than ½ hour increments. Those students with repeated tardiness are subject to disciplinary action as stated in the Student Discipline/Termination policy in this manual.

Procedure:

All required clinical time missed beyond the 20 hours CTO will be made up. If a student must be absent from clinical, it will be his/her responsibility to schedule make-up clinical time with the course instructor. Notification should also be provided to the Clinical Coordinator. The days and times the clinical hours will be made up will be determined and scheduled by the course instructor. Clinical time will be made up based on an equal ratio of time missed. Example: Student missed 8 hours clinical - student makes up 8 hours clinical time. If a student misses clinicals due to weather related closures of campus, roads or clinical site, the absence is considered excused. There will not be a requirement to make up this type of excused absence. However, if a student misses any amount of time over 20 hours without an excused absence (for instance 15 minutes late) there will be a grade deduction of one letter grade. All unexcused absences must be made up.

Special circumstances may be considered in situations of extended illness, but a doctor's note may be required for all illnesses resulting in two or more clinical days. A note from a physician will be required

for absences of more than two days, or as listed previously in the student health policy. THIS WILL BE ENFORCED.

M. **Student Employment Policy - 1501**

Approved By	Program Faculty	**Written By:**	M State Radiology Program Officials
Origination Date:	7-01	**Effective Date:**	7-01
Review Date:	5-08, 8-09, 6-10, 6-11, 7-12, 12-14, 4-16, 3-18, 08-19, 5-22, 07-24	**Revised Date:**	6-08, 5/2020

Policy:

It is the policy of the Minnesota State Community and Technical College that students enrolled in the Radiologic Technology/Limited Scope Radiography Program do not accept or engage in paid employment as a Radiologic Technologist/Limited Scope Radiographer.

Purpose:

The purpose of this policy is to clearly identify the difference between being a student radiographer and a limited scope radiographer and radiologic technologist. As one must realize that a student who engages in employment as a limited scope radiographer or radiologic technologist is presenting him/herself to patients and to co-workers as a fully qualified limited scope radiographer or radiologic technologist. Since such a student may not be able to perform up to the accepted "standards of practice," the student would be demonstrating a lack of concern for the patient, co-workers, employing agency, etc., by being unable to provide competent radiological services.

Subsequently, the individual student's ethical standards would be viewed as questionable.

General Information:

Should a student choose not to comply with this policy, the Minnesota State Community and Technical College, the Radiologic Technology/Limited Scope Radiography program, the clinical affiliates of the program, all of the respective administrative personnel and program officials will not accept any legal obligation for any liability arising out of the actions of said student(s).

Procedure:

If a student chooses to be employed by a clinical affiliated site, this employment is outside of all program didactic and clinical education time. AT NO TIME WILL A STUDENT BE "STAFFED" DURING HIS/HER

CLINICAL HOURS. STUDENTS ARE NOT ALLOWED TO BE PAID FOR CLINICAL TIME, NOR ARE THEY ALLOWED TO COMPLETE ANY COMPETENCY EXAMS DURING PAID TIME.

Students will not be allowed to document exams in their clinical logbook while they are employed as a student radiologic technologist/limited scope radiographer. If this is observed, students face the possibility of probation or possible termination from the program.

Students are not allowed to wear their school name tag or radiation monitoring device while employed at a health care facility. Students must be provided with a separate radiation monitor badge and name tag from the facility that employs them.

N. **Student Supervision Policy - 1601**

Approved By	Program Faculty	**Written By:**	M State Radiology Program Officials
Origination Date:	7-01	**Effective Date:**	7-01
Review Date:	5-08, 8-09, 6-10, 6-11, 7-12, 5-13, 12-14, 4-16, 3-17, 3-18, 08-19, 5-22, 5-23, 07-24	**Revised Date:**	6-08, 5-2020

Policy:

Until the student achieves the program's required competency in a given procedure (as evidenced by a completed final competency of such procedure), all clinical assignments shall be carried out under the direct supervision of a registered radiologic technologist.

Once the student achieves the program's required level of competency in a given procedure the student may perform that procedure under indirect supervision. With indirect supervision, supervision is provided by a registered radiologic technologist immediately when needed to assist students regardless of the level of student achievement.

In the interest of radiation protection, all unsatisfactory radiographs will be repeated only in the presence of a registered radiologic technologist (regardless of the competency level of the student, or the difficulty level of the exam).

Purpose:

The purpose of this policy is to maintain quality radiographic services for all patients and compliance with the As Low As Reasonably Achievable (ALARA) principle while providing educational opportunities for students in this program.

General Information:

Student supervision policy interpretation/clarification

The term "direct supervision" shall be interpreted to mean that a registered radiologic technologist is present in the exam room to supervise student activities. The term "indirect supervision" shall be interpreted to mean that a registered radiologic technologist is within vocal range of the student so that if the student encounters problems he/she can call for and receive help from the technologist.

This policy shall be interpreted to mean that any student will require direct supervision for any exam that the student has not proven competence through a final competency check-off.

This policy shall further be interpreted to mean that even after the student proves competence, he/she cannot go to the hospital floors to do portable or surgical exams/procedures alone, because in doing so the technologist is not "immediately available." When students do mobile exams after receiving a final competency check-off, a registered radiologic technologist must accompany them to the floor. The technologist does not need to go into the room but must be within vocal range. In addition to mobile exams, students must not be left alone in the department without indirect supervision.

Finally, this policy explicitly states that all repeat radiographs are to be done only if a registered radiologic technologist accompanies the student into the room and directly observes and supervises corrective action. This policy must be followed no matter how simple the corrective action may be and no matter how competent the student may be.

The onus of responsibility for making sure this policy is followed will be placed on the student. Technologists need to realize that students will refuse to go to the floor alone when doing portables and will refuse to do repeat radiographs unless a registered technologist provides direct supervision because, if any student is observed in violation of this policy (as outlined in this handbook), disciplinary action will be initiated on the student.

Procedure:

Following are the parameters of direct supervision:

1. The registered radiologic technologist reviews the request for examination in relation to the student's achievement.
2. The registered radiologic technologist evaluates the condition of the patient in relation to the student's achievement.

3. The registered radiologic technologist is present to assist the student as necessary.
4. The registered radiologic technologist reviews and approves the radiographs.

O. **Radiation Safety Guidelines/Policy as related to occupational exposure - 1701**

Approved By	Program Faculty	**Written By:**	M State Radiology Program Officials
Origination Date:	7-01	**Effective Date:**	7-01
Review Date:	6-11, 7-12, 3-13, 12-14, 5-16, 4-17, 3-18, 08-19, 5-22, 07-24	**Revised Date:**	3-13, 4-17, 5-2020

Policy:
Minnesota State Community and Technical College (M State) Radiologic Technology/Limited Scope Radiography Program recognizes the importance of monitoring exposure to radiation and therefore provides radiation monitoring badges to the students enrolled in the program.

Purpose:

To keep exposure of the radiation worker well below annual effective dose limit.

General Information:

"Standards for Protection Against Radiation" establishes radiation dose limits for occupationally exposed adults. These limits apply to the sum of the dose received from external exposure and the dose from internally deposited radioactive material. The annual limits for adults are 0.05 Sv (5 rem) total effective dose equivalent or 0.5 Sv (50 rem) total organ dose equivalent to any single organ or tissue (other than the lens of the eye), whichever is more limiting. The occupational dose limits for minors are 10 percent of the dose limit for adults, and a dose limit for the embryo/fetus of 5 mSv (0.5 rem) during the entire pregnancy.

It is the M State Radiologic Technology/Limited Scope Radiography Program's goal to ensure that all students, both over and under 18, receive less than 0.002 Sv (200 mrem) whole body dose while in the program. This goal demonstrates an extreme limit to the students' overall occupational exposure to ionizing radiation.

If a student receives more than 0.5 mSv (50 mrem) during any reporting period, a conference will be held with the RSO and the student to discuss the increased radiation dose and will be advised by program officials to determine the cause of the increased exposure and will develop a plan to limit radiation

exposure for the remainder of the clinical semesters. This practice will ensure that the ALARA principle is being upheld at all times and ensures that the student will not meet or exceed the annual total radiation exposure amount.

Procedure:

1. All Radiologic Technology/Limited Scope Radiography students will be issued one radiation dosimeter which will be worn on the collar or near the neck on the outside of the lead apron. This dosimeter will be changed on a quarterly basis. The radiation safety officer or faculty can exchange and collect these dosimeters, which will be sent to the college's dosimetry service provider for an occupational radiation exposure reading and report. If a student loses their radiation dose badge, they will be responsible for the cost of a replacement. The cost can be up to $150 or more.

    a. Dosimeter reports will be kept at the school for a period of 20 years post-graduation.
    b. Graduate students will be issued an “end dosimeter report” upon exiting the program.

2. The results of the occupational radiation exposure record/report will be posted in the Radiologic Technology/Limited Scope Radiography Program Lab. If the amount of exposure represents a level that is higher than normal or if the exposure exceeds ALARA (As Low As Reasonably Achievable) guidelines, the results will be discussed with the student.

    a. Students will be required to initial their reading when reports are posted.

3. All students will wear a lead apron at all times when working in a radiation exposure area such as fluoroscopy, surgery and portable work. Care should be taken not to expose the back to the radiation source (machine) if not wearing a wrap-around apron.

4. All students are educated and orientated on radiation safety prior to the start of (and during) their clinical rotations.

5. If a student becomes pregnant, she may voluntarily notify the program director so that radiation exposure records can be reviewed, an additional dosimeter can be ordered and education on the safety precautions necessary for protecting the fetus can be given. Please refer to the pregnancy policy outlined in this handbook.

6. It will be the responsibility of the program director/radiation safety officer to inform the student when exposure exceeds the pre-established limits as noted in the general information of the policy. A written report with possible cause, corrective action and follow-up will be sent to the student along with other appropriate authorities. In addition, the student will be counseled if they exceed ALARA (As Low As Reasonably Achievable) guidelines and written documentation will be kept in the student file.

7. Students not to hold patients or image receptors for procedures within their clinical settings.

8. Students will abide by radiation safety policies and procedures for laboratory experiences at M State by reviewing the Radiation Safety Rules posted in the lab and on this page of the handbook before working with the radiology equipment in the lab.

Minnesota State Community and Technical College
Radiologic Technology/Limited Scope Radiography Program Laboratory
RADIATION SAFETY RULES

- Students are not allowed to perform radiographic exposures of selves and others in the program laboratory.

- Students will not hold for any exposure. This would include phantom exposures and QA equipment testing.

- Students will remain behind the control booth for all exposures made. However, students will be required to wear their radiation safety badges during lab time.

- Any reported violations of the above will result in disciplinary action from program officials.

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE
RADIOLOGIC TECHNOLOGY/LIMITED SCOPE RADIOGRAPHY PROGRAM
STUDENT RADIATION LOG

Student Name: _____

Students: In the event that you are involved in a procedure (Mobile Exams, or General Procedures) that you are either in the room or in the room during excessive beam on time you must fill out this form and submit it with your weekly evaluation.

Students are encouraged to NOT hold for exams

Exam Information:

Date: _____

Facility: _____

Procedure: _____

Explain the Procedure: (Indicate the number and type of views held for and techniques used)

Student Signature: _____Date: _____

Technologist Signature: _____Date:_____

P. **Background Study Requirement for Students in Clinical Programs - 1801**

Approved By	Program Faculty	**Written By:**	M State Radiology Program Officials
Origination Date:	7-01	**Effective Date:**	7-01
Review Date:	5-08, 8-09, 6-10, 6-11, 7-12, 5-13, 12-14, 4-16, 4-17,5-22, 07-24	**Revised Date:** 08-19	6-08, 5-13, 6-19, 5-2020

Policy:
Students are informed of the following:
State law requires that any person who provides services that involve direct contact with patients and residents at a health care facility have a background study conducted by the State. An individual who is disqualified from having direct contact as a result of the background study and whose disqualification is not set aside by the Commissioner of Health will not be permitted to participate in a clinical placement in a health care facility. Failure to participate in a clinical placement required by the academic program would result in ineligibility to qualify for a degree in this program.

Purpose:
To provide safe, quality radiographic procedures to all patients.

General Information:

-Minnesota Department of Health Background Check: Students are required to complete a Minnesota Department of Health (MDH) Background Study after they have been notified of acceptance into the program. Students must pass the background study the summer prior to starting core Radiologic Technology/Limited Scope Radiography classes, all Radiologic Technology/Limited Scope Radiography students are required to have a clear record. The MDH background study must be repeated annually thereafter until the student graduates from the Radiologic Technology/Limited Scope Radiography program.

An individual who is disqualified from having direct contact with persons served by the program as a result of the background study, and whose qualification is not set aside, will not be permitted to participate in a clinical placement in facilities with programs subject to MDH rules under Minnesota Statutes and licensure by the North Dakota Board of Medical Imaging and Radiation Therapy (NDMIRT) of North Dakota. This ruling prevents a student from starting core classes in the Radiologic Technology/Limited Scope Radiography program. The purpose of this policy is to protect the health, safety and rights of patients who are served at associated clinical sites.

The Department of Human Services (DHS) determines disqualification, and the Department of Human Services will inform an individual of this report. If a student has questions or would like to appeal the results of his/her background study, he/she may contact the Minnesota Department of Human Services, Licensing Division, PO Box 64242, St. Paul, MN 55164-0242.

Students may not attend clinical experiences until the study is deemed clear. Discrepancies found are kept confidential, but may preclude a student from participating in clinical experiences, at the discretion of the MDH and the clinical facility. Students should work with the MDH to have discrepancies set aside, but should be aware that the process will need to be repeated with any subsequent MDH Background Study required (i.e. annually). Discrepancies not set aside by the MDH, will preclude the student from being able to participate in any clinical or service learning opportunities, which may jeopardize the student's ability to complete the radiologic technology program.

-National Background Study: Students will also be required to complete a national background study. The national background study is in addition to the required study with the Minnesota Department of Human Services. Information included in the national background study includes; County Criminal Record Search, National Criminal Database Search, ID Search, and National Sex Offender Public Registry Search. To learn more about criminal and public record searches, please go to http://www.verifiedcredentials.com/criminal-public-record-searches.

Students will be contacted with specific information and instructions prior to their first clinical experience and will be expected to meet the deadline indicated or will jeopardize their clinical experience. Students are responsible for all costs associated with the national background study.

Discrepancies found during the national background study are kept confidential. Students should be aware that if discrepancies are found, it is M State's contractual responsibility to disclose the specific results, while maintaining the student's confidentiality, to the clinical facility(s) where the student is assigned. At no time will a student's name or identifying information be shared. Discrepancies not set aside by the national background study will preclude the student from being able to participate in any clinical or service learning opportunities, which may jeopardize the student's ability to complete the limited scope radiography program.

-Federal Background Study: Some clinical facilities require a Federal Background Study. The clinical facility conducts this study on the student's behalf. Students required to do the Federal Background Study must follow directions and expectations of the clinical facility.

Procedure:
Background studies are submitted prior to final admission to the LSR program and prior to expiration of the previous background study.

Q. **Clinical Incident Report Policy - 1901**

Approved By	Program Faculty	**Written By:**	M State Radiology Program Officials
Origination Date:	7-01	**Effective Date:**	7-01
Review Date:	5-08, 8-09, 6-10, 6-11, 7-12, 5-13, 12-14, 4-16, 4-17 4-18, 08-19, 5-23, 07-24	**Revised Date:**	6-08, 5-2020

Policy:
It is the policy of the Minnesota State Community and Technical College Radiologic Technology/Limited Scope Radiography program to report all injuries or misconduct that occurs at any clinical site.

Purpose:
The purpose of this policy is to ensure safe environment while learning in healthcare facilities.

Procedure:
It shall be the responsibility of the clinical site where the injury occurred to report the incident and provide documentation of said incident to program officials.

A Clinical Incident Report form is included on the following page of this handbook. It is the student's responsibility to initiate completion of this form.

Minnesota State Community and Technical College
Radiologic Technology/Limited Scope Radiography Program
Incident Report Form

This report must be filled out by student radiographers or clinical site instructors when the following incidents occur:

1. When a registered technologist is not available to directly or indirectly supervise a radiographic procedure.

2. When a registered technologist is not available to directly supervise any repeat radiographic procedure.

3. When any substandard, unethical or inappropriate conduct is observed.

THIS REPORT IS BEING FILED IN REFERENCE TO:

Name: _____

Date of Incident: _____

Site of Incident: _____

Description of Incident:

Signature: _____

Incident Report Action

This portion of the incident report form will be filled out by the clinical coordinator or program director upon completion of an investigation of the reported incident.

Incident Report Investigation Findings:

Action Taken:

Comments of student/Clinical Instructor:

Comments of Program Official/Clinical Site Manager:

Signature of student/ Clinical Instructor: _____

Signature of Program Official/Clinical Site Manager: _____

Date: _____ **Original: 8/2004**

R. Laptop and internet requirements - 2001

Approved By	Program Faculty	**Written By:**	M State Radiology Program Officials
Origination Date:	8-09	**Effective Date:**	8-09
Review Date:	8-09, 6-10, 6-11, 7-12, 5-13, 12-14, 4-16, 4-18, 08-19, 5-23, 07-24	**Revised Date:**	5-2020

Policy:
It is the policy of Minnesota State Community and Technical College, Radiologic Technology/Limited Scope Radiography program that all incoming students are required to have access to a laptop computer which can access the school's wireless network. The students must also have an Internet service provider.

Purpose:
These computers will be used for research, computer-based exams and in-class participation.

Procedure:
It shall be the responsibility of the student to obtain a laptop and Internet service provider. At this time the school does not recommend a particular service provider.

S. MRI Safety Screening Policy – 2101

Approved By	Program Faculty	**Written By:**	M State Radiology Program Officials
Origination Date:	4-17	**Effective Date:**	4-17
Review Date:	4-18, 08-19, 5-22, 5-23	**Revised Date:**	5-2020, 04-2021

Policy:
It is the policy of the Minnesota State Community and Technical College Radiologic Technology/Limited Scope Radiography program that all students are required to participate in and successfully complete an MR safety screening in-service prior to taking part in an MR modality training.

Purpose:
MRI safety screening protects students and patients from unsafe exposure to MRI equipment and clinical areas.

Procedure:
It is the responsibility of the Radiographic Clinical I instructor to secure an MRI safety screening in-service provider. This in-service provider will provide an MRI safety screening training session that is consistent

with the current MRI safety screening procedures used in industry. The students will attend the in-service and successfully complete all requirements. The attendance will be noted on a sign in roster and kept in the class folder.

IX. INSTITUTIONAL POLICIES

A. Appeals and grievance procedure:

The following hyperlinks will direct you to the College's Policies and Procedures:
https://www.minnstate.edu/board/policy/
https://www.minnesota.edu/about/policies-and-procedures

A student who feels that their right to an education is being affected unfairly due to the presence of a technical college academic or non-academic policy has the right to seek remedy. Please refer to the following links for the policy and procedure.
https://www.minnesota.edu/associated_downloads/application_pdf/ComplaintsGrievancesInformalConcernsPolicyf5.20.19.pdf
https://www.minnesota.edu/associated_downloads/application_pdf/ComplaintsGrievancesInformalConcernsProceduref5.20.19.pdf

B. Weather and emergency cancellations and closings:

The following is a hyperlink that will direct you to M State's Weather and Emergency Cancellations Closings:
https://www.minnesota.edu/policies

Star alert system:

Star Alert: https://mstate.custhelp.com/app/answers/detail/a_id/86/kw/star%20alert

The radiology/Limited Scope Radiography program does not have a specific policy which addresses the unique situation for having multiple clinical sites throughout the region. Follow the recommendations suggested to ensure your safety.

First check the road conditions for your area and the clinical site where you will be traveling to. Use a reputable source, such as those listed in the M State Weather Policy, and the North Dakota Department of Transpiration website, https://www.dot.nd.gov/. Follow the recommendations for travel especially when traveling from your home or clinical site location.

- If no travel is recommended, stay home and travel to clinical sites as conditions allow.
- Contact the clinical site and the M State Radiologic Technology/Limited Scope Radiography faculty to inform them you will arriving late or that you will not be attending clinical that day.
- Enter the time you are not present in Trajecys.
- This time will not be counted as CTO and does not need to be made up unless necessary. Additional clinical days may be assigned if needed to complete clinical competencies.
- Please use sound judgment when making these decisions.

Your safety is our number one concern. Thank you for acting as responsible, accountable students. The institutional policies of the sponsoring institution, Minnesota State Community and Technical College, are contained in the Student Handbook.

C. Student accident and health plan:

Please be aware and understand that the Minnesota State Community and Technical College does not carry accident and health insurance for students enrolled. If the student does not have personal coverage through some insurance plan/carrier, he/she will not be covered by a policy for health or accident during attendance at Minnesota State Community and Technical College. Questions and further information regarding student accident and health coverage may be directed to the dean of the program.

Health Division students are covered by liability insurance when serving clinical portions of required classes.

Information concerning health services, health service fees, immunization requirements and the College's AIDS policy are all published in the institution's Student Handbook.

X. INSTITUTIONAL SERVICES

A. Academic guidance and student counseling:

Counseling service referrals are available to each student prior to, during and following enrollment.

The program director and clinical coordinator serve as academic advisors for all students in the Radiologic Technology/Limited Scope Radiography program. Each student is assigned an academic advisor who is available for academic advising, either by appointment or as time permits during the school year. Appointments are scheduled by the advisor on a mid-semester and end-of-semester basis.

B. Library facilities:

The library located on the Detroit Lakes campus has a seating capacity of approximately 50 students with access to 18 computer stations. Extensive health resources, periodicals and newspapers are available to students. The library provides the student with 40 on campus hours and online access through SpartanNet for studying, doing research activities including the access to over 80 databases including ProQuest and EBSCO Health sources. The library also offers access to 120,000 full-text reference eBooks, interlibrary loan services, photocopying, scanning, computerized review and instruction, audio-visual viewing including DVD and VHS. There are reference materials readily available to students in the offices of the program director and clinical coordinator.

The library is also networked with the University of Minnesota's main library through Minitex and the MnPALS system. This membership includes the borrowing of materials on an interlibrary loan basis, which also provides access to major university libraries in Minnesota.

The clinical affiliates also make their library and reference materials available for student use.

XI. Handbook Policy Signature Forms

Minnesota State Community and Technical College
Radiologic Technology/Limited Scope Radiography Program
Student Handbook Agreement Form

Attendance & Absence (Policy Nos. 1401, 1402 and 1403), Health (Policy No. 1301) and Dress (Policy Nos. 1201 and 1202) Policy Agreement

I have reviewed the Attendance, Health and Dress Policies. I understand the terms of these policies and agree to abide by the standards established therein. I expect that any violation I commit of the stated policies will result in disciplinary action.

Smoking (Policy No. 1251) and Cell Phone Use (Policy No. 1252) Policy Agreement

I have reviewed the Smoking and Cell Phone Use policies. I understand the terms of these policies and agree to abide by the standards established therein. I expect that any violation I commit of the stated policies will result in disciplinary action.

Student Employment Policy (Policy No. 1501) Agreement

I have reviewed the Student Employment Policy. I understand the terms and conditions of said policy and intend to comply. I understand that Minnesota State Community and Technical College assumes no liability or any other form of legal obligation for any situations that may occur as the result of my choosing to be employed as a Student Radiologic Technologist.

Student Supervision Policy (Policy No. 1601) Agreement

I have reviewed the Student Supervision Policy, I understand and agree to abide by the standards as stated in the policy. I further understand that it is my responsibility to make certain that I engage in clinical activities only when properly supervised and that disciplinary action will result if I do not.

Laptop and Internet Usage (Policy No. 2001) Agreement Form

I have reviewed the Laptop and Internet Usage Policy (Policy No. 2001), I understand and agree to abide by the standards as stated in the policy. I further understand that it is my responsibility to make certain that I have a laptop and Internet service provider.

Student Handbook Agreement Form

I have reviewed the Radiologic Technology/Limited Scope Radiography Student Handbook, I understand and agree to abide by the policies and standards as stated in the Handbook.

_____

Student Signature

_____

Date

Minnesota State Community and Technical College
Radiologic Technology/Limited Scope Radiography Program
Radiation Dosimetry Release Form

The undersigned grants permission to the Minnesota State Community and Technical College Detroit Lakes Radiologic Technology/Limited Scope Radiography program to post radiation dosimetry reports in the radiology lab for the purpose of informing and allowing personal access to individual exposure levels. This release form does not grant permission for the release of this or any other personal information to anyone for any other reason.

_____

Student Signature

_____

Date

COVID-19 Skills Acknowledgment of Risk

I understand by agreeing to complete the Radiologic Technology courses, that I will be participating in clinical competency exams where I will be required to perform healthcare skills on a live person. I understand I will be in close physical contact with other people in a clinical setting who may not be equipped with personal protective equipment (PPE). I understand I will also be in close physical contact with other health care personnel.

I agree to obey all safety precautions taught to me by my instructor, including social distancing where available, wearing my own [face shield, face mask gloves, gowns] when directed.

I acknowledge that there are certain risks inherent in my participation in this clinical rotation component, including but not limited to exposure to infectious diseases, including tuberculosis or other airborne pathogens (e.g., SARS-COV-2, and COVID-19).

I acknowledge that if I have health concerns or am not comfortable participating in the skills course at this time, I can elect to postpone the course to a later date.

Date_____

Student's printed name_____

Student's signature_____

Instructor's printed name_____

Instructor's signature_____

XII. Clinical Course Outlines

LSR1280 - Radiographic Clinical I

Credits:	4 (0/0/4)
Description:	This course will provide the student with opportunities to get hands-on experience in a variety of clinical settings. The student will work under the direct supervision of a registered radiologic technologist and will practice radiographic positioning and equipment manipulation to achieve diagnostic quality images. The focus of this clinical experience will be to obtain and pursue competence in radiographic exams of the chest, upper extremity, shoulder girdle and lower extremity (including podiatric exams).
Prerequisites:	LSR1120 LSR1140 LSR1160
Corequisites:	LSR1220 LSR1230 LSR1240 LSR1260
Pre/Corequisites*:	
Competencies:	1. Demonstrate competence in imaging procedures by meeting the requirements for Limited Scope Radiographers as outlined by the American Registry of Radiologic Technologists (ARRT). 2. Use professional communication with instructors, peers and members of the health care team. 3. Execute medical imaging procedures under the appropriate level of supervision. 4. Adapt to changes and varying clinical situations. 5. Provide patient-centered, clinically effective care for all patients regardless of age, gender, disability, special needs, ethnicity or culture. 6. Demonstrate competent patient assessment skills. 7. Respond appropriately to medical emergencies. 8. Adapt procedures to meet age-specific, disease-specific and cultural needs ofpatients. 9. Assess the patient and record clinical history. 10. Apply standard and transmission-based precautions. 11. Demonstrate competency in the principles of radiation protection standards. 12. Demonstrate safe, ethical and legal practices. 13. Examine procedure orders and make inquiries when they seem to lack accuracy. 14. Maintain patient confidentiality standards and meet Health Insurance Portabilityand Accountability Act (HIPAA) requirements. 15. Demonstrate the principles of transferring, positioning and immobilizing patients. 16. Adhere to national, institutional and departmental standards, policies and procedures regarding care of patients, providing radiologic procedures and reducing medical errors. 17. Select technical factors to produce quality diagnostic images with the lowest possible radiation exposure. 18. Critique images for appropriate anatomy, image quality and patient identification, and determine corrective measures to improve suboptimal images.

LSR1380 - Radiographic Clinical II

Credits:	7 (0/0/7)
Description:	This course will provide the student with additional opportunities to get hands-on experience in a variety of clinical settings. The student will work under the direct supervision of a registered radiologic technologist and will practice radiographic positioning and equipment manipulation to achieve diagnostic quality images. The focus of this clinical experience will be to obtain and pursue competence in radiographic exams of the spine, skull, paranasal sinuses and facial bones.
Prerequisites:	• LSR1220 • LSR1230 • LSR1240 • LSR1260 • LSR1280
Corequisites:	
Pre/Corequisites*:	

XIII. Clinical Documents

MINNESOTA STATE COMMUNITY AND TECHNICAL COLLEGE
DETROIT LAKES, MN
WEEKLY EVALUATION FORM - CLINICAL I - 1st 2 weeks

**The purpose of this evaluation form is to provide input to new students in order to ensure adequate utilization of clinical time. This form will replace the standard BARS Evaluation Form for the first 2 weeks of the student's initial clinical experience.

Clinical Site: _____ Student's Name: _____

1. The student arrives to the clinical site on time.
   Yes No

2. The student actively seeks out and completes tasks upon arrival to clinical site (i.e., assist technologist with machine warm-ups, daily tasks, stocking of supplies, etc.)
   Yes No

3. The student seeks out technologist and actively follows technologist during daily tasks.
   Yes No

4. The student consistently demonstrates basic communication skills with technologists, staff, physicians and patients.
   Yes No

5. The student actively seeks out patient exams (i.e. watching for light or checking for order requests).
   Yes No

6. The student utilizes down-time for practicing equipment manipulation and/or positioning.
   Yes No

7. The student actively follows technologist to observe and assist with exams they have not yet seen.
   Yes No

***Note to technologist: Please utilize space for comments; particularly where students received a "No". It is important for new students to understand how they can better utilize their clinical time in these "beginning stages" of their clinical practice.*

Evaluator: _____ Date: _____

Minnesota State Community and Technical College
Radiologic Technology/Limited Scope Radiography Program
Clinical I Weekly Evaluation

Student Name: _____

Rating Scale: 1 - The student **almost never** does this
2 - The student **sometimes** does this
3 - The student does this **at least 50%** of the time
4 - The student does this **at least 75%** of the time
5 - The student does this **at least 95%** of the time

Communication 1. Student explains the procedure to the patient in a concise manner and communicates/responds to patients in a polite and respectful manner.	**1**	**2**	**3**	**4**
2. Communicates with physicians in a polite and respectful manner.	**1**	**2**	**3**	**4**
3. Communicates effectively with staff in a polite and respectful manner.	**1**	**2**	**3**	**4**
4. Communicates and responds to patients in a polite and respectful manner.	**1**	**2**	**3**	**4**
5. Student demonstrates a desire for success and accepts constructive feedback.	**1**	**2**	**3**	**4**
Patient Care				
1. Student demonstrates complete patient care skills.	**1**	**2**	**3**	
2. Student is cognizant of patient comfort and responds to patient requests in a timely basis.	**1**	**2**	**3**	
3. Student maintains a clean area and follows guidelines for standard precautions.	**1**	**2**	**3**	
Equipment Operation				
1. Student is able to manipulate tubes/tables in all rooms in an efficient manner.	**1**	**2**	**3**	
2. Student demonstrates knowledge of various machine functions (radiographic).	**1**	**2**	**3**	
Radiation Protection				
1. Student uses gonadal shielding when appropriate.	**1**	**2**	**3**	
2. Student inquires about possible pregnancy when patient is within childbearing age.	**1**	**2**	**3**	
3. Student uses collimation when possible.	**1**	**2**	**3**	

4. Student provides/wears protective lead apparel when appropriate.	**1**	**2**	**3**	
Patient Positioning				
1. Student is able to properly position patients for routine exams.	**1**	**2**	**3**	
2. Student is able to assess when patient's condition will necessitate an adjustment from routine guidelines (Scoliosis, etc.).	**1**	**2**	**3**	
3. Student uses appropriate props such as sponges, sandbags, etc. to maintain patient position.	**1**	**2**	**3**	
4. Student demonstrates confidence in his/her clinical abilities.	**1**	**2**	**3**	

Exposure Factor Manipulation				
1. Student demonstrates an understanding of the difference between AEC and manual techniques.	**1**	**2**	**3**	
2. Student comprehends and applies knowledge of additive/destructive disease processes when choosing exposure factors.	**1**	**2**	**3**	
3. Student comprehends and applies knowledge of different IR types, grid/non-grid techniques when selecting exposure factors.	**1**	**2**	**3**	
4. Student comprehends and applies knowledge of how distance affects exposure factor.	**1**	**2**	**3**	
Evaluating Quality Radiographs				
1. Student takes pride in producing high quality radiographs.	**1**	**2**	**3**	
2. Student is able to identify when technical factors necessitate a repeat exam and is able to manipulate these factors appropriately.	**1**	**2**	**3**	
3. Student is able to identify when positioning is inadequate and is able to make the necessary adjustments to produce a quality image.	**1**	**2**	**3**	
Maintaining Patient Records				
1. Student consistently checks request for patient history.	**1**	**2**	**3**	
2. Student accurately and consistently abides by the facility's requirements for documentation.	**1**	**2**	**3**	
3. Student constantly and accurately labels images with appropriate information (patient data) right vs. left, etc.	**1**	**2**	**3**	
Initiative				
1. Student initiates and prepares for exam without being told to do so.	**1**	**2**	**3**	**4**
2. Student demonstrates persistence in getting job done.	**1**	**2**	**3**	**4**
3. Student shows interest in exams not yet observed by assisting technologist.	**1**	**2**	**3**	**4**
4. Student is able to work with direct/indirect supervision when completing exams.	**1**	**2**	**3**	**4**

5. Student uses slow times for clinical practice and didactic review.	**1**	**2**	**3**	**4**	
Compliance					
1. Student wears appropriate uniform including name tag, rad badge, predominantly white shoes and is neat in appearance.	**1**	**2**	**3**	**4**	**5**
2. Student is consistently punctual for scheduled shifts.	**1**	**2**	**3**	**4**	**5**
3. Student uses allocated time off appropriately.	**1**	**2**	**3**	**4**	**5**
4. Student follows directions consistently.	**1**	**2**	**3**	**4**	**5**

Comments:

Evaluator Signature: _____ **Date:** _____

Clinical Site: _____

Minnesota State Community and Technical College
Radiologic Technology/Limited Scope Radiography Program
Clinical II Weekly Evaluation

Student Name: _____

Rating Scale: 1 - The student **almost never** does this
2 - The student **sometimes** does this
3 - The student does this **at least 50%** of the time
4 - The student does this **at least 75%** of the time
5 - The student does this **at least 95%** of the time

Communication 1. Student explains the procedure to the patient in a concise manner and communicates/responds to patients in a polite and respectful manner.	**1**	**2**	**3**	**4**
2. Communicates with physicians in a polite and respectful manner.	**1**	**2**	**3**	**4**
3. Communicates effectively with staff in a polite and respectful manner.	**1**	**2**	**3**	**4**
4. Communicates and responds to patients in a polite and respectful manner.	**1**	**2**	**3**	**4**
5. Student demonstrates a desire for success and accepts constructive feedback.	**1**	**2**	**3**	**4**
Patient Care				
1. Student demonstrates complete patient care skills.	**1**	**2**	**3**	**4**
2. Student is cognizant of patient comfort and responds to patient requests in a timely basis.	**1**	**2**	**3**	**4**
3, Student maintains a clean area and follows guidelines for standard precautions.	**1**	**2**	**3**	**4**
Equipment Operation				
1. Student is able to manipulate tubes/tables in all rooms in an efficient manner.	**1**	**2**	**3**	**4**
2. Student demonstrates knowledge of various machine functions (radiographic).	**1**	**2**	**3**	**4**
Radiation Protection				
1. Student uses gonadal shielding when appropriate.	**1**	**2**	**3**	**4**
2. Student inquires about possible pregnancy when patient is within childbearing age.	**1**	**2**	**3**	**4**
3. Student uses collimation when possible.	**1**	**2**	**3**	**4**

4. Student provides/wears protective lead apparel when appropriate.	**1 2 3 4**
Patient Positioning	
1. Student is able to properly position patients for routine exams.	**1 2 3 4**
2. Student is able to assess when patient's condition will necessitate an adjustment from routine guidelines (Scoliosis, etc.).	**1 2 3 4**
3. Student uses appropriate props such as sponges, sandbags, etc. to maintain patient position.	**1 2 3 4**
4. Student demonstrates confidence in his/her clinical abilities.	**1 2 3 4**

Exposure Factor Manipulation	
1. Student demonstrates an understanding of the difference between AEC and manual techniques.	**1 2 3**
2. Student comprehends and applies knowledge of additive/destructive disease processes when choosing exposure factors.	**1 2 3**
3. Student comprehends and applies knowledge of different IR types, grid/non-grid techniques when selecting exposure factors.	**1 2 3**
4. Student comprehends and applies knowledge of how distance affects exposure factor.	**1 2 3**
Evaluating Quality Radiographs	
1. Student takes pride in producing high quality radiographs.	**1 2 3**
2. Student is able to identify when technical factors necessitate a repeat exam and is able to manipulate these factors appropriately.	**1 2 3**
3. Student is able to identify when positioning is inadequate and is able to make the necessary adjustments to produce a quality image.	**1 2 3**
Maintaining Patient Records	
1. Student consistently checks request for patient history.	**1 2 3 4**
2. Student accurately and consistently abides by the facility's requirements for documentation.	**1 2 3 4**
3. Student constantly and accurately labels images with appropriate information (patient data) right vs. left, etc.	**1 2 3 4**
Initiative	
1. Student initiates and prepares for exam without being told to do so.	**1 2 3 4 5**
2. Student demonstrates persistence in getting job done.	**1 2 3 4 5**

3. Student shows interest in exams not yet observed by assisting technologist.	**1**	**2**	**3**	**4**	**5**
4. Student is able to work with direct/indirect supervision when completing exams.	**1**	**2**	**3**	**4**	**5**
5. Student uses slow times for clinical practice and didactic review.	**1**	**2**	**3**	**4**	**5**
Compliance					
1. Student wears appropriate uniform including name tag, rad badge, predominantly white shoes and is neat in appearance.	**1**	**2**	**3**	**4**	**5**
2. Student is consistently punctual for scheduled shifts.	**1**	**2**	**3**	**4**	**5**
3. Student uses allocated time off appropriately.	**1**	**2**	**3**	**4**	**5**
4. Student follows directions consistently.	**1**	**2**	**3**	**4**	**5**

Comments:

Evaluator Signature: _____ **Date:** _____

Clinical Site: _____

Guidelines for Overall Scores

	Clinical 1	Clinical 2
Communication	**4**	**4**
Patient Care	**3**	**4**
Equipment Operation	**3**	**4**
Radiation Protection	**3**	**4**
Patient Positioning	**3**	**4**
Exposure Factor Manipulation	**3**	**3**
Evaluating Quality Radiographs	**3**	**3**
Maintaining Patient Records	**3**	**4**
Initiative	**4**	**5**
Compliance	**5**	**5**
	34	**40**

MINNESOTA STATE COMMUNITY & TECHNICAL COLLEGE
RADIOLOGIC TECHNOLOGY/LIMITED SCOPE RADIOGRAPHY PROGRAM
Clinical Site Evaluation

Site being evaluated:_____ **Date:** _____

Rating Scale:

1	2	3	4	5
Never Describes the Site		Sometimes Describes the Site		Always Describes the Site

Communication:	
When first visiting the site, the student is given an introductory tour of the radiology department.	**1 2 3 4 5**
Explains routines of exams to the student during first visit.	**1 2 3 4 5**
Radiologist and technologists communicate with the student in a polite manner.	**1 2 3 4 5**
Aids students in their desire for success and offers constructive criticism.	**1 2 3 4 5**
Equipment Operation	
When first visiting the site, various machine functions were explained thoroughly (including fluoro, tomo and portables).	**1 2 3 4 5**
Radiation Protection:	
The site provides all necessary protective lead apparel when appropriate.	**1 2 3 4 5**
Facility never asks a student to hold during an exposure.	**1 2 3 4 5**
Patient Positioning:	
Unusual positioning is explained to the student before performing an exam (e.g., special views that may not have been demonstrated in the lab setting).	**1 2 3 4 5**
Appropriate devices such as sponges, sandbags, etc. are available for student use.	**1 2 3 4 5**
Exposure Factor Manipulation:	
A technique chart is available for student use.	**1 2 3 4 5**
Evaluating Quality Radiographs:	
The site takes pride in producing quality radiographs and doesn't second-guess a student's decision to repeat a radiograph.	**1 2 3 4 5**
Maintaining Patient Records:	
When first visiting site, a clear explanation of all paperwork is provided to the student.	**1 2 3 4 5**
Initiative:	
The student is sought out and told when a patient arrives for an exam (e.g., the student is in the file room and is unaware that a patient has arrived).	**1 2 3 4 5**

When a student is practicing during slow times and a question arises, a technologist is willing to provide an answer to the best of his or her knowledge.	**1 2 3 4 5**
Compliance:	
The student felt at ease around the technologist and other employees.	**1 2 3 4 5**
Time spent at this facility was worthwhile and an integral part of my overall clinical experience.	**1 2 3 4 5**

MINNESOTA STATE COMMUNITY & TECHNICAL COLLEGE
RADIOLOGIC TECHNOLOGY/LIMITED SCOPE RADIOGRAPHY PROGRAM
Clinical Instructor Evaluation

Instructor being evaluated: _____

Semester: _____

Rating Scale:

1	2	3	4	5
Never Describes the Instructor		Sometimes Describes the Instructor		Always Describes the Instructor

1.Has a good attitude when working with students.	1 2 3 4 5
2.Was approachable and helpful.	1 2 3 4 5
3.Stimulated and challenged me to think.	1 2 3 4 5
4.Asked me pertinent questions.	1 2 3 4 5
5.Helped me relate course work to clinical practice.	1 2 3 4 5
6.Offered me positive feedback when appropriate.	1 2 3 4 5
7.Offered me an initial orientation.	1 2 3 4 5
8.Provided adequate supervision.	1 2 3 4 5
9.Discussed my evaluation with me.	1 2 3 4 5
10. Encouraged me to think outside of the box and apply critical thinking skills.	1 2 3 4 5
11. Operated in accordance with standards set forth by ARRT, ASRT and JRCERT.	1 2 3 4 5

Student Comments:

MINNESOTA STATE COMMUNITY & TECHNICAL COLLEGE
RADIOLOGIC TECHNOLOGY/LIMITED SCOPE RADIOGRAPHY PROGRAM
STUDENT ABSENCE REPORT FORM

Today's Date: _____

Student Name: _____

Day(s) Absent: _____

Total Hours Absent: _____
**Note: CTO hours must be taken in increments of at least one-half hour.

Reason for absence:

_____

_____

_____

_____

I verify that the above information is true and correct.

Student Signature: _____

This form must be submitted to the clinical course instructor on or before absence.

***A planned absence must be pre-approved by the clinical course instructor. The student is responsible for notifying the clinical instructor (CI) at the site they are assigned to.

***This form is for the purpose of maintaining attendance records of required clinical hours.

Filling out a Clinical Competency Form Instructions

Clinical instructors will be using evaluation forms when students are being evaluated on a competency completion. After this evaluation the student should be competent to perform this exam under indirect supervision. These forms will also be used for spot checks.

These forms have two columns: a procedure column and a competency column. The procedure column will be used when the student tests out in the lab, and the competency column will be used by clinical sites when the student is ready to sign off on an exam and thus work under indirect supervision and for spot checks.

Each evaluation form has several sections. In each section there are several criteria the student must meet. To indicate if the student meets the criteria, you will circle either yes or no.

If the student meets the criteria, circle yes. The student will receive full credit for this criterion.

If the student does not meet the criteria, circle no. The student will receive no credit for this criterion.

If the student needs a subtle reminder to meet the criteria, circle yes and no. The student will receive partial credit for this criterion.
Example: If you see something the student has forgotten before an exposure is made, prompt the student by asking, "Are you forgetting something?" If the student realizes his or her error without delay, circle both yes and no, and partial credit will be awarded. If the student does not correct the error, circle no.

If the student does not need to perform one of the criteria, cross out both yes and no. This criterion will then be deducted from the total possible.
Example: If it is a male patient, the student will not need to ask about pregnancy.

The student cannot use the exam as a competency completion if he or she gets more than two no's on the evaluation. This policy does not apply to spot checks.

If a student fails to ask a female patient with reasonable reproductive potential if there is a chance of pregnancy or if he or she fails to collect pertinent information from the patient (obtain a history), it is an automatic failure and the evaluation needs to be attempted again with another patient.

You are not responsible for assessing a grade. We will complete that process.

Please sign and date the evaluation form and make any comments that would be helpful.

2024-2025 LSR COMPETENCY COMPLETION CHECKLIST

Student:

Listed below are the exams that students are required to complete prior to graduation date. Students are required to complete the exams prior to the expected due date. ***Demonstration of competencies includes requisition evaluation, patient assessment, room preparation, patient management, equipment operation, technique selection, positioning skills, radiation safety, image processing, and image evaluation.**

Examination	Due Date	Mandatory/Elective	Completion Date	Verified by:
Abdomen				
Upright	End of Clinical I	**Mandatory-ARRT**		
Supine/KUB	End of Clinical I	**Mandatory-ARRT**		
Decubitus	Set by RT Program	Elective-ARRT		
Intravenous Urography	Set by RT Program	Elective-ARRT		
Chest and Thorax				
Chest Routine (PA and Lateral)	End of Clinical I	**Mandatory-ARRT**		
AP (Wheelchair or Stretcher)	End of Clinical I	**Mandatory-ARRT**		
Lateral Decubitus	End of Clinical II	Elective-ARRT		
Ribs	End of Clinical II	**Mandatory-ARRT**		
Sternum (Oblique and Lateral)	Set by RT Program	Elective-ARRT		
Soft Tissue Neck/Upper Airway	Set by RT Program	Elective-ARRT		
Upper Extremity				
Thumb or Finger (PA, Oblique,Lateral)	End of Clinical I	**Mandatory-ARRT**		
Hand (PA, Oblique, Lateral)	End of Clinical I	**Mandatory-ARRT**		
Wrist (PA, Oblique, Lateral)	End of Clinical I	**Mandatory-ARRT**		
Forearm (AP and Lateral)	End of Clinical II	**Mandatory-ARRT**		
Elbow (PA, Oblique, Lateral)	End of Clinical II	**Mandatory-ARRT**		
Humerus (AP and Lateral)	End of Clinical II	**Mandatory-ARRT**		
Shoulder-Routine (AP, Oblique, Axillary, Scapular Y)	End of Clinical I	**Mandatory-ARRT**		
A/C Joints	End of Clinical II	Elective-ARRT		

Clavicle (AP and Axial)	End of Clinical II	**Mandatory-ARRT**		
Scapula (AP and Lateral)	End of Clinical II	Elective-ARRT		
Shoulder-Trauma (Scapular Y, Transthoracic or axillary)*	Set by RT Program	**Mandatory-ARRT**		
Trauma Upper Extremity (nonshoulder)*	Set by RT Program	**Mandatory-ARRT**		
Lower Extremity				
Toes (AP, Oblique, Lateral)	End of Clinical II	Elective-ARRT		
Foot (AP, Oblique, Lateral)	End of Clinical II	**Mandatory-ARRT**		
Ankle (AP, Oblique, Lateral)	End of Clinical I	**Mandatory-ARRT**		
Calcaneus (Os Calsis)	End of Clinical II	Elective-ARRT		
Tibia/Fibula (AP and Lateral)	End of Clinical II	**Mandatory-ARRT**		
Knee-Routine (AP, Oblique, Lateral)	End of Clinical I	**Mandatory-ARRT**		
Patella (1 view)	End of Clinical I	Elective-ARRT		
Femur (AP and Lateral)	End of Clinical II	**Mandatory-ARRT**		
Trauma Lower Extremity*	Set by RT Program	**Mandatory-ARRT**		
Fluoroscopy Studies: Candidate must select either UGI or BE plus one other elective procedure from this section				
Small Bowel (AP/PA)	Set by RT Program	Elective-ARRT		
Barium Enema-Single or Double Contrast (AP/PA, Oblique, Lateral, Axial or Decub)	Set by RT Program	Elective-ARRT		
UGI-Single or Double Contrast (PA, Oblique and Lateral)	Set by RT Program	Elective-ARRT		
Esophagram (AP/PA and Lateral)	Set by RT Program	Elective-ARRT		
Cystogram/Cystourethrogram	Set by RT Program	Elective-ARRT		
Arthrogram	Set by RT Program	Elective-ARRT		
ERCP	Set by RT Program	Elective-ARRT		
Myelogram	Set by RT Program	Elective-ARRT		
Hysterosalpingograhpy	Set by RT Program	Elective-ARRT		
Spine and Pelvis				

Cervical-Routine (AP, Oblique, Lateral)	End of Clinical II	**Mandatory-ARRT**		
Thoracic-Routine (AP and Lateral)	End of Clinical II	**Mandatory-ARRT**		
Lumbar-Routine (AP, Oblique, Lateral)	End of Clinical II	**Mandatory-ARRT**		
Sacrum and/or Coccyx (AP and Lateral)	End of Clinical II	Elective-ARRT		
Sacroiliac Joints (Axial and Oblique)	End of Clinical II	Elective-ARRT		
Scoliosis Series	End of Clinical II	Elective-ARRT		
Hip (AP and Lateral)	End of Clinical II	**Mandatory-ARRT**		
Pelvis	End of Clinical II	**Mandatory-ARRT**		
Cross-Table (Horizontal Beam) Lateral Spine	Set by RT Program	**Mandatory-ARRT**		
Cross -Table(Horizontal beam) lateral Hip	End of Clinical II	**Mandatory-ARRT**		
Head: Candidate must select at least one elective procedure from this section.				
Facial Bones (AP/PA and Lateral)	End of Clinical II	Elective-ARRT		
Nasal Bones (AP/PA and Lateral)	End of Clinical II	Elective-ARRT		
Paranasal Sinuses (AP/PA and Lateral)	End of Clinical II	Elective-ARRT		
Skull-Routine (AP/PA and Lateral)	End of Clinical II	Elective-ARRT		
Orbits (AP/PA and Lateral)	End of Clinical II	Elective-ARRT		
Zygomatic Arches	Set by RT Program	Elective-ARRT		
Mandible	Set by RT Program	Elective-ARRT		
Temporomandibular Joints	Set by RT Program	Elective-ARRT		
Mobile Studies				
Abdomen	End of Clinical II	**Mandatory-ARRT**		
Chest	End of Clinical II	**Mandatory-ARRT**		
Orthopedic	End of Clinical II	**Mandatory-ARRT**		
Pediatrics (age 6 or younger)				
Routine Chest (PA and Lateral)	End of Clinical II	**Mandatory-ARRT**		
Abdomen	End of Clinical II	Elective-ARRT		

Upper Extremity	End of Clinical II	Elective-ARRT		
Lower Extremity	End of Clinical II	Elective-ARRT		
Mobile Pediatric exam	End of Clinical II	Elective-ARRT		
Geriatric Patient (Physically or cognitively impaired as a result of aging)				
Chest Routine (PA and Lateral)	End of Clinical I	**Mandatory-ARRT**		
Upper Extremity	End of Clinical II	**Mandatory-ARRT**		
Lower Extremity	End of Clinical II	**Mandatory-ARRT**		
Mobile C- arm Studies				
C-arm(requiring manipulation to obtain more than one projection)	Set by RT Program	**Mandatory-ARRT**		
Surgial C-Arm procedure (requiring manipulation around a sterile field)	Set by RT Program	**Mandatory-ARRT**		
General Patient Care-These are not included in the count for mandatory or elective competencies.				
CPR	Prior to Clinical I	Mandatory-ARRT		
Vital Signs - Blood Pressure,Pulse, Respiration, Pulse Oximetry, Temperature	End of Clinical II	Mandatory- ARRT		
Sterile and Medical Aseptic Technique	End of Clinical II	Mandatory-ARRT		
Transfer of Patient	End of Clinical II	Mandatory-ARRT		
Care of Patient Medical Equipment (e.g. oxygen tank, IV tubing)	End of Clinical II	Mandatory-ARRT		
Venipuncture	Set by RT Program	Mandatory-ARRT		

Students must complete the required # of competencies (typically 4) before gaining competency completion. These exams are kept track of by the student in the logbook. When competency completion is achieved the student can work under in-direct supervision.

*Trauma is considered a serious injury or shock to the body. Modifications may include variations in positioning, minimal movement of the body part, etc. ****LSR students may not obtain trauma competencies****

Competency evaluations must be performed in the presence of a Registered Technologist.

All ARRT **mandatory exams must be completed. 29 of the 36 ARRT mandatory must be demonstrated on patients (not Phantoms or simulated), the remaining 8 can be performed on phantoms or simulated.** General patient care exams are not included in the mandatory exam count. General patient care exams are all required.

15 of the 34 ARRT **electives must also be demonstrate. However, these can be on patients, phantoms or as simulations.

This form will be initialed by program director or clinical coordinator at various times during the program. It must correspond to the student's logbook.

One elective procedure must be from the head section and 2 must be from the GI section, one of them being a BE or UGI. **LSR Students do not perform GI studies**

*All competencies highlighted in Blue are RT program specific competencies. **LSR students do not perform these exams.**

The student has demonstrated the competency requirements as identified above.

Program Director/Clinical Coordinator	Date	Student	Date

Revised:
7/16/2024

Clinical Competency Completion Chart

	Examination					
	Abdomen					
M	Upright	1	2	3	4	Competent
E	Decub	1	2			Competent
M	Supine (KUB)	1	2	3	4	Competent
E	IVU	1	2			Competent
	Chest and Thorax					
M	PA and LAT	1	2	3	4	Competent
M	Wheelchair	1	2	3	4	Competent
M	Stretcher	1	2	3	4	Competent
E	Decub	1	2			Competent
E	Sternum	1	2			Competent
M	Ribs	1	2	3	4	Competent
E	Soft tissue neck	1	2			Competent
	Upper Extremity					
M	Finger/Thumb	1	2	3	4	Competent
M	Hand	1	2	3	4	Competent
M	Wrist	1	2	3	4	Competent
M	Forearm	1	2	3	4	Competent
M	Elbow	1	2	3	4	Competent
M	Humerus	1	2	3	4	Competent
M	Shoulder	1	2	3	4	Competent
M	Shoulder trauma (scap.Y)	1	2	3	4	Competent
E	A/C Joints	1	2	3		Competent
M	Clavicle	1	2	3		Competent
E	Scapula	1	2			Competent
M	Trauma Upper ext.	1	2	3		Competent
	Lower Extremity					
E	Toes	1	2			Competent
M	Foot	1	2	3	4	Competent
M	Ankle	1	2	3	4	Competent
E	Calcaneus	1	2	3		Competent
M	Tibia/Fibula	1	2	3	4	Competent
M	Knee	1	2	3	4	Competent
E	Patella	1	2	3	4	Competent
M	Femur	1	2	3	4	Competent
M	Trauma lower ext.	1	2	3	4	Competent
	Fluoroscopy Studies					
E	Small Bowel	1	2	3	4	Competent
E	BE Single or Double Contrast	1	2	3	4	Competent
E	UGI-Single or Double	1	2	3	4	Competent
E	Esophagram	1	2	3		Competent
E	Cystogram	1	2			Competent
E	Arthrogram	1	2			Competent
E	ERCP	1	2			Competent
E	Myelogram	1	2			Competent
E	Hysterosalpingography	1	2			Competent
**Procedures highlighted in blue cannot be performed by LSR students						

	Examination					
	Spine and Pelvis					
M	Cervical-Routine	1	2	3	4	Competent
M	Cervical-Cross-Table Lateral	1	2	3		Competent
M	Thoracic	1	2	3	4	Competent
M	Lumbar	1	2	3	4	Competent
E	Sacrum/Coccyx	1	2			Competent
E	SI Joints	1	2			Competent
E	Scoliosis	1	2			Competent
M	Hip	1	2	3	4	Competent
M	Trauma Hip	1	2	3	4	Competent
M	Pelvis	1	2	3	4	Competent
	Head					
E	Facial Bones	1	2			Competent
E	Nasal Bones	1	2			Competent
E	Paranasal Sinuses	1	2			Competent
E	Skull	1	2			Competent
E	Orbits	1	2			Competent
E	Zygomatic Arches	1	2			Competent
E	Mandible	1	2			Competent
E	TMJ	1	2			Competent
	Mobile					
M	Abdomen	1	2			Competent
M	Chest	1	2	3	4	Competent
M	Orthopedic	1	2			Competent
	Pediatrics					
M	Chest	1	2	3		Competent
E	Abdomen	1	2	3		Competent
E	Upper Ext.	1	2	3		Competent
E	Lower Ext.	1	2	3		Competent
E	Mobile Peds exam	1	2			Competent
	Geriatrics					
M	Chest	1	2	3		Competent
M	Upper Ext.	1	2	3		Competent
M	Lower Ext.	1	2	3		Competent
	Mobile C-Arm					
M	C-arm 2 projections	1	2	3		Competent
M	C-arm sterile field	1	2	3		Competent
	Patient Care					
	Vital Signs					
M	Blood Pressure	1				Competent
M	Temperature	1				Competent
M	Pulse	1				Competent
M	Respiration	1				Competent
M	Pulse Oximetry	1				Competent
M	Sterile and Aseptic Technique	1				Competent
M	Venipuncture	1				Competent
M	Patient Transfer	1				Competent
M	Care of Medical Equipment	1				Competent

Limited Scope of Practice in Radiography

The purpose of the *Limited Scope of Practice in Radiography Examination*, which is developed and administered by *The American Registry of Radiologic Technologists (ARRT)* on behalf of state licensing agencies, is to assess the knowledge and cognitive skills underlying the intelligent performance of the tasks typically required of operators of radiographic equipment used to radiograph selected anatomic regions (chest, extremities, etc.). ARRT administers the examination to state approved candidates under contractual arrangement with the state and provides the results directly to the state. This examination is not associated with any type of certification and registration by the ARRT.

The knowledge and skills covered by the examination were determined by administering a comprehensive practice analysis survey to a nationwide sample of radiographers and adopting a subset of the tasks developed for the radiography task inventory as the limited scope task inventory. The task inventory appears in *Attachment C* of this document. The content specifications for the limited scope examination identify the knowledge areas underlying performance of the tasks on the limited scope task inventory. Every content category can be linked to one or more activities on the task inventory.

It is the philosophy of the ARRT that individuals licensed in limited scope radiography possess the same knowledge and cognitive skill, in their specific area of radiography, as radiographers. The modules covered by the examination are outlined below. Subsequent pages describe in detail the topics covered within each module. All candidates take the CORE module of the examination and one or more PROCEDURE modules, depending on the type of license for which they have applied.

Core Module	**Number of Scored Questions**[1]	**Testing Time**
Patient Care	18	
Patient Interactions and Management (18)		
Safety	40	
Radiation Physics and Radiobiology (12)		
Radiation Protection (28)		
Image Production	42	
Image Acquisition and Evaluation (20)		
Equipment Operation and Quality Assurance (22)		
Total for Core Module	100	1 hr, 55 min
Procedure Modules		
1. Chest	20	25 min
2. Extremities	25	30 min
3. Skull/Sinuses	20	25 min
4. Spine	25	30 min
5. Podiatric	20	25 min

1. The core module includes an additional 15 unscored (pilot) questions. Each of the procedure modules has five additional unscored questions.

Patient Care

1. Patient Interactions and Management

A. Ethical and Legal Aspects
   1. patients' rights
      a. consent (*e.g., informed, oral, implied)
      b. confidentiality (HIPAA)
      c. American Hospital Association (AHA) Patient Care Partnership (Patients' Bill of Rights)
         1. privacy
         2. extent of care (e.g., DNR)
         3. access to information
         4. living will, health care proxy, advanced directives
         5. research participation
   2. legal issues
      a. verification (e.g., patient identification, compare order to clinical indication)
      b. common terminology (e.g., battery, negligence, malpractice, beneficence)
      c. legal doctrines (e.g., respondeat superior, res ipsa loquitur)
      d. positioning aids used to prevent motion artifact
      e. manipulation of electronic data (e.g., exposure indicator, processing algorithm, brightness and contrast, cropping or masking off anatomy)
      f. documentation (e.g., changes to order)
   3. Professional Ethics

B. Interpersonal Communication
   1. modes of communication
      a. verbal/written
      b. nonverbal (e.g., eye contact, touching)
   2. challenges in communication
      a. interactions with others
         1. language barriers
         2. cultural and social factors
         3. physical, sensory, or cognitive impairments
         4. age
         5. emotional status, acceptance of condition (e.g., stage of grief)
      b. explanation of medical terms
      c. strategies to improve understanding
   3. patient education (e.g., explanation of current procedure purpose, length of time, radiation dose)

C. Ergonomics and Monitoring
   1. body mechanics (e.g., balance, alignment, movement)
      a. patient transfer techniques
      b. safe patient handling devices (e.g., transfer board, gait belt)
   2. assisting patients with medical equipment (e.g., oxygen delivery systems, urinary catheters)
   3. patient monitoring and documentation
      a. vital signs
      b. physical signs and symptoms (e.g., motor control, severity of injury)
      c. fall prevention

D. Medical Emergencies
   1. allergic reactions (e.g., contrast media, latex)
   2. cardiac/respiratory arrest (e.g., CPR, AED)
   3. physical injury or trauma
   4. other medical disorders (e.g., seizures, diabetic reactions)

* The abbreviation "e.g.," is used to indicate that examples are listed in parentheses, but that it is not a complete list of all possibilities.

(Patient Care continues on the following page.)

Patient Care (continued)

E. Infection Control
   1. chain of infection (cycle of infection)
      a. pathogen
      b. reservoir
      c. portal of exit
      d. mode of transmission
         1. direct
            a. droplet
            b. direct contact
         2. indirect
            a. airborne
            b. vehicle borne (fomite)
            c. vector borne (mechanical or biological)
      e. portal of entry
      f. susceptible host
   2. asepsis
      a. equipment disinfection
      b. equipment sterilization
      c. medical aseptic technique
      d. sterile technique
   3. CDC Standard Precautions
      a. hand hygiene
      b. use of personal protective equipment (e.g., gloves, gowns, masks)
      c. safe handling of contaminated equipment/surfaces
      d. disposal of contaminated materials
         1. linens
         2. needles
         3. patient supplies
         4. blood and body fluids
   4. transmission-based precautions
      a. contact
      b. droplet
      c. airborne
   5. additional precautions
      a. neutropenic precautions (reverse isolation)
      b. healthcare associated (nosocomial) infections

F. Handling and Disposal of Toxic or Hazardous Material
   1. types of materials
      a. chemicals
   2. safety data sheet (material safety data sheet)

Safety

1. Radiation Physics and Radiobiology

A. Principles of Radiation Physics
   1. x-ray production
      a. source of free electrons (e.g., thermionic emission)
      b. acceleration of electrons
      c. focusing of electrons
      d. deceleration of electrons
   2. target interactions
      a. bremsstrahlung
      b. characteristic
   3. x-ray beam
      a. frequency and wavelength
      b. beam characteristics
         1. quality
         2. quantity
         3. primary versus remnant (exit)
      c. inverse square law
      d. fundamental properties (e.g., travel in straight lines, ionize matter)
   4. photon interactions with matter
      a. photoelectric
      b. Compton
      c. coherent (classical)
      d. attenuation by various tissues
         1. thickness of body part
         2. type of tissue (atomic number)

B. Biological Effects of Radiation
   1. SI units of measurement (NCRP Report #160)
      a. absorbed dose (Gy)
      b. dose equivalent (Sv)
      c. exposure (C/kg)
      d. effective dose (Sv)
   2. radiosensitivity
      a. dose-response relationships
      b. relative tissue radiosensitivities (e.g., LET, RBE)
      c. cell survival and recovery (LD_{50})
      d. oxygen effect
   3. somatic effects
      a. cells
      b. tissue (e.g., eye, thyroid, breast, skin, marrow, gonadal)
      c. embryo and fetus
      d. carcinogenesis
      e. early versus late or acute versus chronic
      f. deterministic (tissue reactions) versus stochastic
      g. acute radiation syndromes
         1. hemopoietic
         2. gastrointestinal (GI)
         3. central nervous system (CNS)

(Safety continues on the following page.)

Safety (continued)

2. Radiation Protection

A. Minimizing Patient Exposure
   1. exposure factors
      a. kVp
      b. mAs
   2. beam restriction
      a. purpose of primary beam restriction
      b. types (e.g., collimators)
   3. patient considerations
      a. positioning
      b. communication
      c. pediatric
      d. morbid obesity
   4. filtration
      a. effect on skin and organ exposure
      b. effect on average beam energy
      c. NCRP recommendations (NCRP Report #102, minimum filtration in useful beam)
   5. radiographic dose documentation
   6. image receptors
   7. grids
   8. dose area product (DAP) meter

B. Personnel Protection (ALARA)*
   1. sources of radiation exposure
      a. primary x-ray beam
      b. secondary radiation
         1. scatter
         2. leakage
      c. patient as source
   2. basic methods of protection
      a. time
      b. distance
      c. shielding
   3. protective devices
      a. types (e.g., aprons, barriers)
      b. attenuation properties
      c. minimum lead equivalent (NCRP Report #102)
   4. radiation exposure and monitoring
      a. dosimeters
         1. types
         2. proper use
      b. NCRP recommendations for personnel monitoring (NCRP Report #116)
         1. occupational exposure
         2. public exposure
         3. embryo/fetus exposure
         4. dose equivalent limits
         5. evaluation and maintenance of personnel dosimetry records

* Note: Although it is the responsibility of the individual licensed in limited scope radiography to apply radiation protection principles to minimize bioeffects for both patients and personnel, the ALARA concept is specific to personnel protection and is listed only for that section.

Image Production

1. Image Acquisition and Evaluation

A. Factors Affecting Radiographic Quality
(X indicates topics covered on the examination.)

	1. Receptor Exposure	2. Spatial Resolution	3. Distortion
a. mAs	X		
b. kVp	X		
c. OID		X	X
d. SID	X	X	X
e. focal spot size		X	
f. tube filtration	X		
g. beam restriction	X		
h. motion		X	
i. anode heel effect	X		
j. patient factors (size, pathology)	X	X	X
k. angle (tube, part, or receptor)		X	X

B. Technique Charts
   1. anatomically programmed technique
   2. fixed versus variable kVp
   3. special considerations
      a. casts
      b. pathologic factors
      c. age (e.g., pediatric, geriatric)
      d. body mass index (BMI)
      e. grids
      f. OID

C. Digital Imaging Characteristics
   1. spatial resolution
      a. pixel characteristics (e.g., size, pitch)
      b. detector element (DEL) (e.g., size, pitch, fill factor)
      c. CCD, CMOS (e.g., size, pitch)
      d. sampling frequency (CR)
      e. modulation transfer function (MTF)
   2. contrast resolution
      a. bit depth
      b. detective quantum efficiency (DQE)
      c. grids
   3. image signal
      a. dynamic range
      b. quantum noise (quantum mottle)
      c. signal to noise ratio (SNR)

D. Image Identification
   1. methods (e.g., radiographic, electronic)
   2. legal considerations (e.g., patient data, examination data)

E. Criteria for Image Evaluation
   1. exposure indicator
   2. quantum noise (quantum mottle)
   3. gross exposure error (e.g., loss of contrast, saturation)
   4. spatial resolution
   5. distortion (e.g., size, shape)
   6. identification markers (e.g., anatomical side, patient, date)
   7. image artifacts
   8. radiation fog (CR)

(Image Production continues on the following page.)

Image Production (continued)

2. Equipment Operation and Quality Assurance

A. Imaging Equipment
   1. x-ray generator
      a. basic principles
      b. phase, pulse, and frequency
      c. tube loading
   2. components of radiographic unit (fixed or mobile)
      a. operating console
      b. x-ray tube construction
         1. electron source
         2. target materials
         3. induction motor
         4. filtration
      c. automatic exposure control (AEC)
         1. radiation detectors
         2. back-up timer
         3. exposure adjustment (e.g., density, +1 or -2)
         4. minimum response time
      d. manual exposure controls
      e. image receptors
         1. computed radiography
            a. plate (e.g., photo-stimulable phosphor (PSP))
            b. plate reader
         2. digital radiography (DR)
            a. direct conversion
            b. indirect conversion
               1. amorphous silicon (a-Si)
               2. charge coupled device (CCD)
               3. complementary metal oxide semiconductor (CMOS)
      f. beam restriction
   3. accessories
      a. stationary grids
      b. Bucky assembly
      c. compensating filters

B. Image Processing and Display
   1. raw data (pre-processing)
      a. analog-to-digital converter (ADC)
      b. quantization
      c. corrections (e.g., rescaling, flat fielding, dead pixel correction)
      d. histogram
   2. corrected data for processing
      a. grayscale
      b. edge enhancement
      c. equalization
      d. smoothing
   3. data for display
      a. values of interest (VOI)
      b. look-up table (LUT)
   4. post-processing
      a. brightness
      b. contrast
      c. region of interest (ROI)
      d. electronic cropping or masking
      e. stitching
   5. display monitors
      a. viewing conditions (e.g., viewing angle, ambient lighting)
      b. spatial resolution (e.g., pixel size, pixel pitch)
      c. brightness and contrast
   6. imaging informatics
      a. information systems (e.g., HIS, RIS, EMR, EHR)
      b. networking
         1. PACS
         2. DICOM
      c. downtime procedures

C. Quality Control of Imaging Equipment and Accessories
   1. beam restriction
      a. light field to radiation field alignment
      b. central ray alignment
   2. recognition and reporting of malfunctions
   3. digital imaging receptor systems
      a. maintenance (e.g., detector calibration, plate reader calibration)
      b. QC tests (e.g., erasure thoroughness, plate uniformity, spatial resolution)
      c. display monitor quality assurance (e.g., grayscale standard display function, luminance)
   4. shielding accessories (e.g., testing lead apron, gloves)

Procedures

The specific positions and projections within each anatomic region that may be covered on the examination are listed in *Attachment A*. A guide to positioning terminology appears in *Attachment B*.

PROCEDURE MODULE [1]	**# QUESTIONS PER MODULE** [2]
1. Chest	
A. Routine	16
B. Other	4
TOTAL	**20**
2. Extremities	
A. Lower (toes, foot, calcaneus, ankle, tibia/ fibula, knee/ patella, and femur)	11
B. Upper (fingers, hand, wrist, forearm, elbow, and humerus)	11
C. Pectoral Girdle (shoulder, scapula, clavicle, and acromioclavicular joints)	3
TOTAL	**25**
3. Skull/Sinuses	
A. Skull	8
B. Paranasal Sinuses	8
C. Facial Bones (orbits, nasal bones)	4
TOTAL	**20**
4. Spine	
A. Cervical Spine	8
B. Thoracic Spine	6
C. Lumbar Spine	8
D. Sacrum, Coccyx, and Sacroiliac Joints	2
E. Scoliosis Series	1
TOTAL	**25**
5. Podiatric	
A. Foot and Toes	14
B. Ankle	5
C. Calcaneus (os calcis)	1
TOTAL	**20**

FOCUS OF QUESTIONS [3]

1. **Positioning** (e.g., topographic landmarks, body positions, path of central ray, positioning aids, respiration)

   emphasis: high

2. **Anatomy** (including physiology, basic pathology, and related medical terminology)

   emphasis: medium

3. **Evaluation of displayed anatomical structures** (e.g., patient positioning, tube-part-image receptor alignment)

   emphasis: medium

4. **Procedure adaptation** (e.g., body habitus, body mass index, trauma, pathology, age, limited mobility, casts, splints, soft tissue for foreign body, etc.)

   emphasis: low

5. **Equipment and Accessories** (grids or Bucky, compensating filter, automatic exposure control [AEC], automatic collimation)

   emphasis: low

Notes:

1. Candidates take one or more procedure modules, depending on the type of license they have applied for. Each procedure module has 20 or 25 scored test questions, depending on the module (see chart above). The number of questions within a module should be regarded as approximate values.
2. Each of the procedure modules has five additional unscored questions.
3. The procedure modules may include questions about the five areas listed under *FOCUS OF QUESTIONS* on the right side of the chart. The podiatric module does not include questions from the equipment and accessories section.

Attachment A

Radiographic Positions and Projections

I. Chest
- A. Chest
  1. PA or AP upright
  2. lateral upright
  3. AP Lordotic
  4. AP supine
  5. lateral decubitus

II. Extremities
- A. Toes
  1. AP, entire forefoot
  2. AP or AP axial toe
  3. oblique toe
  4. lateral toe
  5. sesamoids, tangential
- B. Foot
  1. AP axial
  2. medial oblique
  3. lateral oblique
  4. lateral
  5. AP axial weight bearing
  6. lateral weight bearing
- C. Calcaneus
  1. lateral
  2. plantodorsal, axial
  3. dorsoplantar, axial
- D. Ankle
  1. AP
  2. mortise
  3. lateral
  4. medial oblique
  5. AP stress
  6. AP weight bearing
  7. lateral weight bearing
- E. Tibia/Fibula
  1. AP
  2. lateral
- F. Knee/patella
  1. AP
  2. lateral
  3. AP weight bearing
  4. lateral oblique
  5. medial oblique
  6. PA axial–intercondylar fossa (Holmblad)
  7. PA axial–intercondylar fossa (Camp Coventry)
  8. AP axial–intercondylar fossa (Béclère)
  9. PA patella
  10. Tangential (Merchant)
  11. tangential (Settegast)
- G. Femur
  1. AP
  2. lateral
- H. Fingers
  1. PA entire hand
  2. PA finger only
  3. lateral
  4. medial and/or lateral oblique
  5. AP thumb
  6. medial oblique thumb
  7. lateral thumb
- I. Hand
  1. PA
  2. lateral
  3. lateral oblique
- J. Wrist
  1. PA
  2. lateral oblique
  3. lateral
  4. PA–ulnar deviation
  5. PA axial (Stecher)
  6. tangential carpal canal (Gaynor-Hart)
- K. Forearm
  1. AP
  2. lateral
- L. Elbow
  1. AP
  2. lateral
  3. lateral oblique
  4. medial oblique
  5. AP partial flexion
  6. trauma axial laterals (Coyle)
- M. Humerus
  1. AP
  2. lateral
  3. neutral
  4. transthoracic lateral
- N. Shoulder
  1. AP internal and external rotation
  2. inferosuperior axial (Lawrence)
  3. posterior oblique (Grashey)
  4. AP neutral
  5. PA oblique (scapular Y)
- O. Scapula
  1. AP
  2. lateral
- P. Clavicle
  1. AP or PA
  2. AP axial
  3. PA axial
- Q. Acromioclavicular Joints – AP Bilateral With and Without Weights

III. Skull/Sinuses
- A. Skull
  1. AP axial (Towne)
  2. lateral
  3. PA axial (Caldwell)
  4. PA
  5. submentovertex (full basal)
- B. Facial Bones
  1. lateral
  2. parietoacanthial (Waters)
  3. PA axial (Caldwell)
  4. modified parietoacanthial (modified Waters)
- C. Nasal Bones
  1. parietoacanthial (Waters)
  2. lateral
  3. PA axial (Caldwell)
- D. Orbits
  1. parietoacanthial (Waters)
  2. lateral
  3. PA axial (Caldwell)
  4. modified parietoacanthial (modified Waters)
- E. Paranasal Sinuses
  1. lateral, horizontal beam
  2. PA axial (Caldwell), horizontal beam
  3. parietoacanthial (Waters), horizontal beam
  4. submentovertex (full basal), horizontal beam

IV. Spine
- A. Cervical Spine
  1. AP axial
  2. AP open mouth
  3. lateral
  4. PA axial obliques
  5. AP axial obliques
  6. lateral swimmers
  7. lateral flexion and extension
- B. Thoracic Spine
  1. AP
  2. lateral, breathing
  3. lateral, expiration
- C. Scoliosis Series
  1. AP or PA
  2. lateral
- D. Lumbar Spine
  1. AP
  2. PA
  3. lateral
  4. L5-S1 lateral spot
  5. posterior oblique
  6. anterior oblique
  7. AP axial L5-S1
  8. AP right and left bending
  9. lateral flexion and extension
- E. Sacrum and Coccyx
  1. AP axial sacrum
  2. AP axial coccyx
  3. lateral sacrum and coccyx, combined
  4. lateral sacrum or coccyx, separate
- F. Sacroiliac Joints
  1. AP axial
  2. posterior oblique
  3. anterior oblique

V. Podiatric*
- A. Foot and Toes
  1. dorsal plantar (DP)
  2. medial oblique
  3. lateral oblique
  4. lateral
  5. sesamoidal axial
- B. Ankle
  1. AP
  2. mortise
  3. AP medial oblique
  4. AP lateral oblique
  5. lateral
- C. Calcaneus
  1. axial calcaneal
  2. Harris and Beath (ski-jump)

*weightbearing or non-weightbearing

Attachment B

Standard Terminology for Positioning and Projection

Radiographic View: Describes the body part as seen by the image receptor. Restricted to the discussion of a *radiograph* or *image*.

Radiographic Position: Refers to a specific body position, such as supine, prone, recumbent, erect or Trendelenburg. Restricted to the discussion of the *patient's physical position*.

Radiographic Projection: Restricted to the discussion of the *path of the central ray*.

POSITIONING TERMINOLOGY

A. Lying Down

1. *supine* – lying on the back
2. *prone* – lying face downward
3. *decubitus* – lying down with a horizontal x-ray beam
4. *recumbent* – lying down in any position

B. Erect or Upright

1. *anterior position* – facing the image receptor
2. *posterior position* – facing the radiographic tube

C. Either Upright or Recumbent

1. oblique torso positions

    a. anterior oblique (facing the image receptor)

        i. *left anterior oblique (LAO)* — body rotated with the left anterior portion closest to the image receptor

        ii. *right anterior oblique (RAO)* — body rotated with the right anterior portion closest to the image receptor

    b. posterior oblique (facing the radiographic tube)

        i. *left posterior oblique (LPO)* — body rotated with the left posterior portion closest to the image receptor

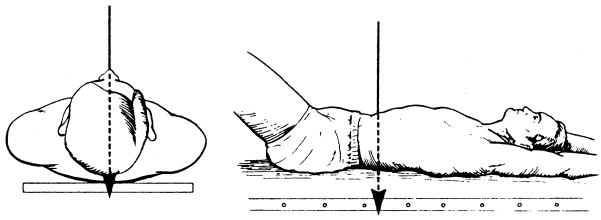
        ii. *right posterior oblique (RPO)* — body rotated with the right posterior portion closest to the image receptor

2. oblique extremity positions

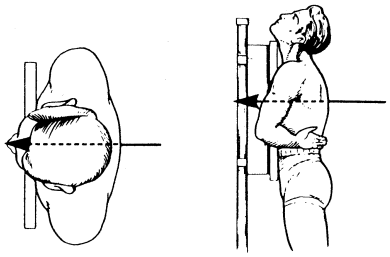
    a. lateral (external) rotation — outward rotation of the extremity

    b. medial (internal) rotation — inward rotation of the extremity

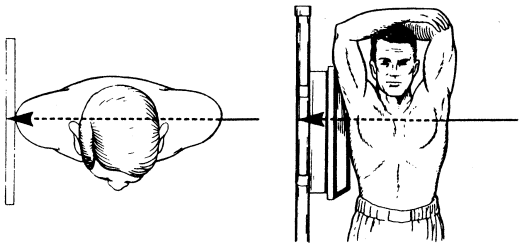
Anteroposterior Projection



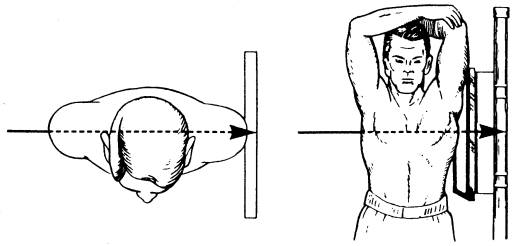
Posteroanterior Projection



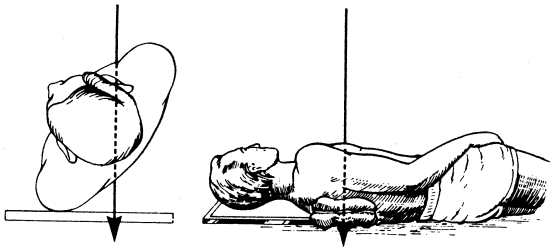
Right Lateral Position



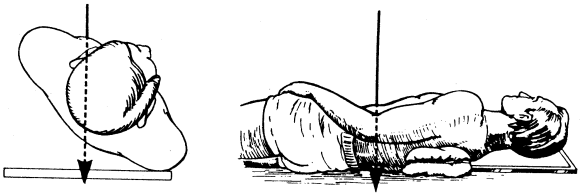
Left Lateral Position



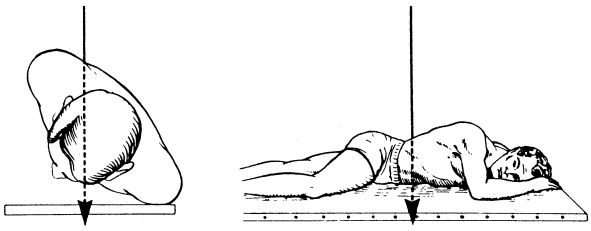
Left Posterior Oblique Position



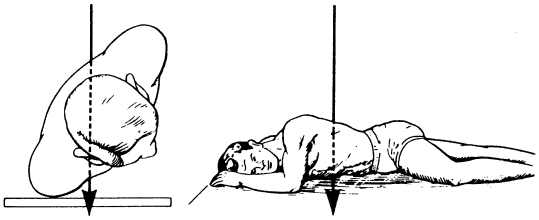
Right Posterior Oblique Position



Left Anterior Oblique Position



Right Anterior Oblique Position



Attachment C

Task Inventory for Limited Scope of Practice in Radiography Examination

Activity		Content Categories Legend: PC = Patient Care, S = Safety, IP = Image Production, P = Procedures
1.	Verify the patient's identity.	PC.1.A.2.A., PC.1.B., IP.1.D.
2.	Evaluate the patient's ability to understand and comply with requirements for the requested examination.	PC.1.B.
3.	Obtain pertinent medical history.	PC.1.A.2.A., PC.1.B., PC.1.C.3.
4.	Manage interpersonal interactions in an effective manner.	PC.1.B., PC.1.C.
5.	Review the examination request to verify information is accurate, appropriate, and complete (e.g., patient history, clinical diagnosis, physician's orders).	PC.1.A.2.A., PC.1.A.2.F.
6.	Explain the procedure instructions to patient, patient's family, or authorized representative (e.g., pre-procedure, post procedure).	PC.1.B.3.
7.	Respond as appropriate to procedure inquiries from the patient, patient's family, or authorized representative (e.g., scheduling delays, exam duration).	PC.1.B.
8.	Monitor the patient's auxiliary medical equipment (e.g., IVs, oxygen) during a procedure.	PC.1.C.2.
9.	Follow environmental protection standards for handling and disposing of bio-hazardous materials (e.g., sharps, blood, body fluids).	PC.1.E.3., PC.1.F.
10.	Follow environmental protection standards for handling and disposing of hazardous materials (e.g., disinfectant)	PC.1.E.3., PC.1.F.
11.	Provide for the patient's safety, comfort, and modesty.	PC.1.B., PC.1.C., S.2.A.
12.	Notify appropriate personnel of adverse events or incidents (e.g., patient fall, wrong patient imaged).	PC.1.A.2., PC.1.C.3.
13.	Demonstrate and promote professional and ethical behavior (e.g., confidentiality, regulation compliance).	PC.1.A., PC.1.B.
14.	Verify informed consent as necessary.	PC.1.A.1.A., PC.1.B.
15.	Communicate relevant information to appropriate members of the care team.	PC.1.A., PC.1.B., PC.1.C.3.
16.	Practice Standard Precautions.	PC.1.E.3.
17.	Follow appropriate procedures when caring for patients with communicable diseases.	PC.1.E.3., PC.1.E.4., PC.1.E.5.
18.	Use positioning aids, as needed, to reduce patient movement, and/or promote patient safety.	PC.1.A.2.D., P.
19.	Use proper body mechanics and/or patient ergonomic devices to promote personnel safety.	PC.1.C.1.

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20.	Use sterile or aseptic technique when indicated.	PC.1.E.2.
21.	Obtain vital signs.	PC.1.C.3.A.
22.	Recognize and communicate the need for prompt medical attention.	PC.1.C.3., PC.1.D.
23.	Assist with providing emergency care (e.g., CPR).	PC.1.C.2., PC.1.C.3., PC.1.D.
24.	Clean and disinfect, or sterilize facilities and equipment .	PC.1.E.2., PC.1.E.3
25.	Document required information on the patient's medical record (e.g., imaging procedure documentation, images, adverse events).	PC.1.A.2.F., PC.1.B.1.A., PC.1.C.3., IP.1.D., IP.2.B.6.
26.	Evaluate the need for and use of protective shielding.	S.2.B.3.
27.	Take appropriate precautions to minimize radiation exposure to the patient.	S.2.A.
28.	Screen female patients of child bearing age for the possibility of pregnancy and take appropriate action (e.g., document response, contact physician).	PC.1.A.2.F., PC.1.B., S.1.B.3.
29.	Restrict beam to the anatomical area of interest.	S.2.A.2., IP.1.A.1.G., IP.2.A.2.F.
30.	Set technical factors to produce optimal images and minimize patient dose.	S.2.A., IP.1.A., IP.1.B.
31.	Document radiographic procedure dose.	PC.1.A.2.F., S.2.A.5., IP.2.B.6.A.
32.	Keep all unnecessary persons out of the immediate area during radiation exposure.	S.2.B.2., S.2.B.4.B.
33.	Take appropriate precautions to minimize occupational radiation exposure.	S.2.B.
34.	Advocate radiation safety and protection.	S.1.B., S.2.A., S.2.B.
35.	Describe the potential risk of radiation exposure when asked.	PC.1.B.3., S.1.B.
36.	Wear a radiation monitoring device while on duty.	S.2.B.4.
37.	Evaluate individual occupational exposure reports to determine if values for the reporting period are within established limits.	S.2.B.4.B.
38.	Select appropriate radiographic exposure factors using the following: a. Fixed kVp technique chart b. Variable kVp technique chart c. Automatic Exposure Control (AEC) d. Anatomically programmed technique*	IP.1.A., IP.1.B.
39.	Operate radiographic unit and accessories including: a. Fixed unit b. Mobile unit	IP.2.A.1., IP.2.A.2., IP.2.A.3., IP.2.B.

* Applies to specific modules

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40.	Operate digital imaging devices and information technology systems including: a. Computed radiography (CR) b. Digital radiography (DR) c. Picture Archiving and Communication System (PACS) d. medical information systems (e.g., HIS, RIS, EMR, EHR)	IP.2.A.2., IP.2.B.
41.	Recognize and report malfunctions in the information technology systems (e.g., downtime procedures).	IP.2.B.6., IP.2.C.2.
42.	Remove radiopaque materials that could interfere with the image from the exposure field (e.g., clothing, jewelry).	PC.1.B.3., IP.1.E.7.
43.	Use radiopaque anatomical side markers at the time of image acquisition.	IP.1.D., IP.1.E.6.
44.	Select imaging accessories (e.g., grid*, compensating filter*) for the examination requested.	S.2.A.2., IP.2.A.3., P.
45.	Align central ray to body part and image receptor to demonstrate the desired anatomy.	S.2.A.6., IP.1.A., IP.1.E., IP.2.A.2.E., P.
46.	Explain breathing instructions prior to making the exposure.*	PC.1.B., IP.1.A.2.H., P.
47.	Position patient to demonstrate the desired anatomy using anatomical landmarks.	P.
48.	Modify exposure factors for circumstances such as involuntary motion, casts and splints*, pathological conditions, or patient's inability to cooperate.	IP.1.A.2.H., IP.1.A.2.J., IP.1.A.3.J. IP.1.B., P.
49.	Adapt procedures for: a. Patient condition (e.g., age, size, trauma, pathology) b. Location (e.g., mobile, surgical, isolation).	PC.1.C.3., PC.1.E., S.2.A.3., IP.1., P.
50.	Select appropriate geometric factors (e.g., SID, OID, focal spot size, tube angle).	IP.1.A., IP.1.B.
51.	Evaluate images for diagnostic quality.	IP.1.D., IP.1.E., IP.2.C., P.
52.	Respond appropriately to digital exposure indicator values.	IP.1.E.1.
53.	Verify accuracy of patient identification associated with images.	IP.1.D., IP.1.E.6., P.
54.	Add electronic annotations on images to indicate position or other relevant information (e.g., time, upright, decubitus).	IP.1.D., IP.1.E.6., P.
55.	Perform post-processing on digital images in preparation for interpretation.	IP.2.B., P.
56.	Determine corrective measures if image is not of diagnostic quality and take appropriate action.	IP.1.E., IP.2.C., P.
57.	Identify image artifacts and make appropriate corrections as needed.	PC.1.B.3., IP.1.E.7.
58.	Store and handle image receptor in a manner which will reduce the possibility of artifact production.	IP.1.E.7., IP1.E.8., IP.2.A.2.E., IP.2.C.3

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59.	Recognize and report malfunctions in the imaging unit and accessories.	IP.1.E.7., IP.2.C.
60.	Recognize the need for periodic maintenance and evaluation of radiographic equipment affecting image quality and radiation safety (e.g., shielding, image display monitor, light field, central ray detector calibration).	IP.2.C.
61.	Perform routine maintenance on digital equipment including: a. Detector calibration b. CR plate erasure c. Equipment cleanliness d. Test images	IP.2.C.
Perform the following diagnostic examinations:		
62.	Chest	P.1.A
63.	Cervical spine	P.4.A.
64.	Thoracic spine	P.4.B.
65.	Scoliosis series	P.4.E.
66.	Lumbar spine	P.4.C.
67.	Sacrum/coccyx	P.4.D.
68.	Sacroiliac joints	P.4.D.
69.	Skull	P.3.A.
70.	Facial bones	P.3.C.
71.	Nasal bones	P.3.C.
72.	Orbits	P.3.C.
73.	Paranasal sinuses	P.3.B.
74.	Toes	P.2.A., P.5.A.
75.	Foot	P.2.A., P.5.A.
76.	Calcaneus	P.2.A., P.5.C.
77.	Ankle	P.2.A., P.5.B.
78.	Tibia/fibula	P.2.A.
79.	Knee/patella	P.2.A.
80.	Femur	P.2.A.
81.	Fingers	P.2.B.
82.	Hand	P.2.B.
83.	Wrist	P.2.B.
84.	Forearm	P.2.B.

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85.	Elbow	P.2.B.
86.	Humerus	P.2.B.
87.	Shoulder	P.2.C.
88.	Scapula	P.2.C.
89.	Clavicle	P.2.C.
90.	Acromioclavicular joints	P.2.C.