

*NURSING & HEALTH SCIENCES*

**Radiologic Technology Program**

Student and Clinical Handbook  
2024-2025



# **Radiologic Technology Program Student Handbook**

# Radiologic Technology Program Student Handbook

## Table of Contents

### Program Overview

Handbook Review and Revision	5
Program Description	5
Degree Awarded	5
Placement of the Radiologic Technology Program within the College Organization	5
North Central Missouri College Mission	7
Program Mission	7
Goals and Student Learning Outcomes	7
Program Learning Outcomes	7
Program Faculty	8
Responsibilities of Program Faculty	8
Faculty Office Hours	10
Advisory Committee	10

### Program Standards

Accreditation	11
Joint Review Committee on Education in Radiologic Technology Standards for an Accredited Education Program in Radiography	11
American Registry of Radiologic Technologists Mission, Rules and Regulations, and Standards of Ethics	12
American Society of Radiologic Technologists Mission, Vision, Core Values, and Value Propositions	13

### Student Resources and Support

Classrooms and Labs	14
Lab Rules	14
Student Support Services	14
Academic Advising	14
Accessibility Services	14
Campus Store	14
Career Services	14
Financial Aid	15
College Library	15
Personal Counseling	15
Testing Center	15
TRIO-Student Support Services	15
Tutoring Center	15
Radiologic Technology Faculty Tutoring	15
Program Library	15
Student Professional Organizations	15

### Program Policies and Procedures

Application to the Program	17
Transfer Students	17
Notice of Non-Discrimination	17
Student Records (FERPA)	17
Criminal Background Check	18
American Registry of Radiologic Technologists Ethics Review Pre-Application	18
Drug Screening Policy	18
Essential Functions	19
Food and Drink	21
Children or Guests in the Classroom	21
Electronic Devices	21
Classroom/Lab Dress Code	22
Didactic Course Attendance	22
Class Call In Procedure	22
Facility Closure/Inclement Weather	23
Early Alert	23

Continued Program Eligibility	23
Probation	23
Withdrawal Procedures	24
Re-Application	24
Graduation Requirements	24
Student Conduct	24
Student Grievances	24
Social Media Usage	25

## Course Information

Course Sequence	29
Course Descriptions	27
Class Schedule	29
Explanation of Letter Grades	30
Credit Hour Calculation	30
Exam Retakes	31
Late Assignments	31
Missed Quizzes	31
Missed Exams	31

## Student Health and Safety

Emergency Preparedness	32
Healthcare Insurance	32
Student Health	32
Radiation Safety	32
Pregnancy Policy	34
MRI Safety	35
Student Alcohol and Drug Abuse	36
Tobacco	36
Sharps and Biohazard Policy	36

# **PROGRAM OVERVIEW**

## **HANDBOOK REVIEW AND REVISION**

The North Central Missouri College (NCMC) Radiologic Technology Program Student and Clinical Handbook is designed to provide easily accessible information regarding the program. Students are expected to be familiar with the information presented in this handbook and with all college policies. In addition to this publication, students can access the college's website and College Catalog.

The handbook is not intended to replace or alter any college policy or regulation. The material in this handbook may be modified or revoked at any time at the discretion of the college. Notice of changes will be communicated to students.

## **PROGRAM DESCRIPTION**

The NCMC Radiologic Technology Program is a full-time, two-year program consisting of six semesters. The program is fully accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT).

The curriculum is in alignment with the American Society of Radiologic Technologists (ASRT) requirements and contains didactic and clinical components. Curriculum is competency based and is designed to develop health care professionals who possess entry-level skills in diagnostic imaging.

Weekly schedules vary; however, students can expect to be involved in educational activities up to 40 hours per week in the classroom and clinical environment. Class schedules vary by semester, but will be held between the hours of 7:00 a.m. to 7:00 p.m. Clinical site education hours are typically 8:00 a.m. to 4:30 p.m. in the Fall and Spring semesters and 8:00 a.m. to 5:00 p.m. in the Summer semester, however, clinical education hours may vary by assignment.

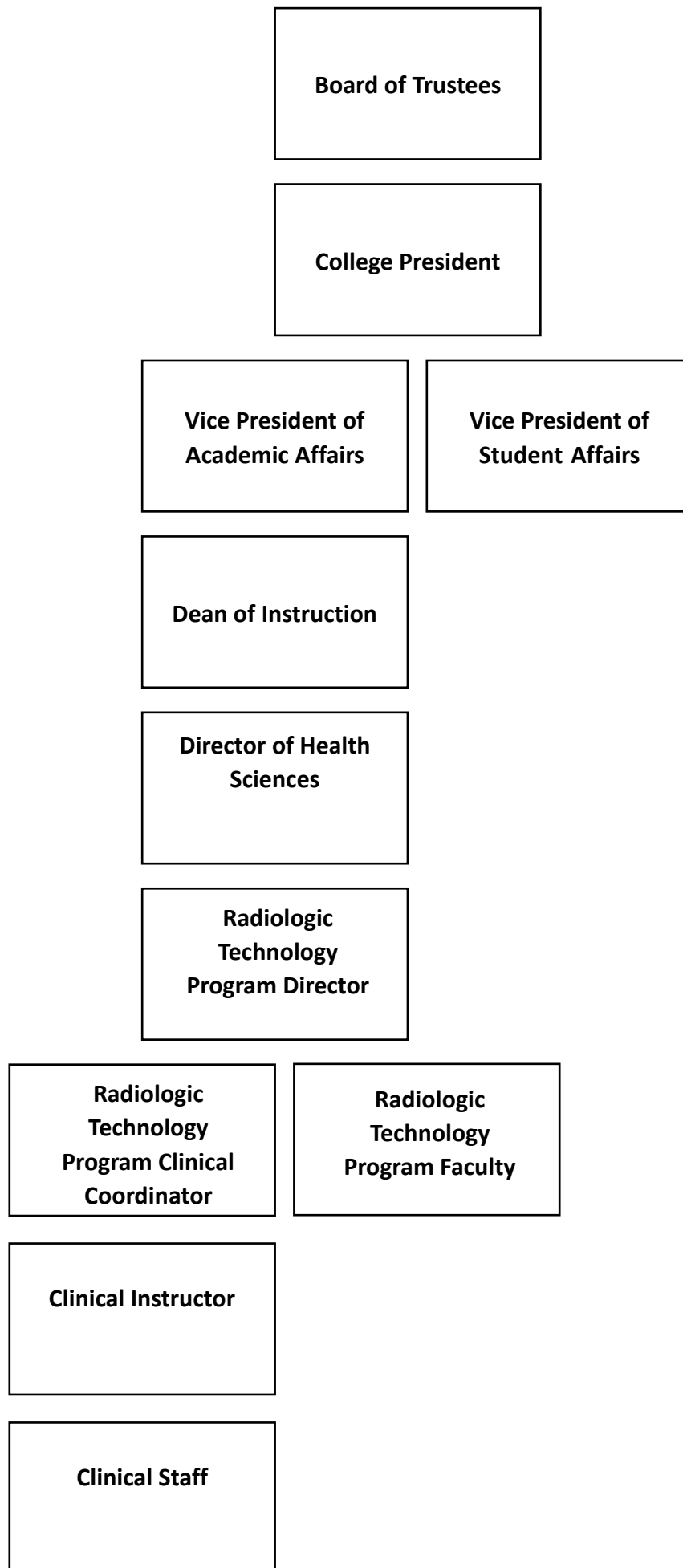
## **DEGREE AWARDED**

Upon successful completion of the NCMC Radiologic Technology Program, the student will be awarded an Associate of Applied Science degree in Radiologic Technology.

## **PLACEMENT OF THE PROGRAM WITHIN THE COLLEGE ORGANIZATION**

NCMC is the sponsoring institution of the Radiologic Technology Program. The college is governed by a Board of Trustees and administered by the College President. The college also has a Vice President of Academic Affairs, Vice President of Student Affairs, and Dean of Instruction.

College faculty are grouped into divisions of administration. The Radiologic Technology Program is in the division of Nursing and Health Sciences.



## **NORTH CENTRAL MISSOURI COLLEGE MISSION**

North Central Missouri College provides accessible, affordable, and quality educational programs, with emphases on excellence in teaching, learning, student services, diversity and inclusiveness, and workforce development to the rural and small communities of our 17-county service region.

## **PROGRAM MISSION**

To graduate students who possess the skills, knowledge, and professional values required for an entry-level radiographer to serve the needs of the community.

## **GOALS AND STUDENT LEARNING OUTCOMES**

Goal #1- Students will demonstrate clinical competency.

Student Learning Outcomes:

- 1.1 Students will position the patient.
- 1.2 Students will apply radiation protection.
- 1.3 Students will select technical factors.

Goal #2- Students will utilize critical thinking skills.

Student Learning Outcomes:

- 2.1 Students will perform non-routine examinations.
- 2.2 Students will analyze images for quality.

Goal #3- Students will demonstrate professionalism.

Student Learning Outcomes:

- 3.1 Students will understand the importance of professional organizations.
- 3.2 Students will understand professional ethics.

Goal #4- Students will communicate.

Student Learning Outcome:

- 4.1 Students will communicate orally.
- 4.2 Students will demonstrate written communication.

The NCMC Radiologic Technology Program outcome assessment is conducted to gather useful data to measure goals and student learning outcomes. Annual review of outcome assessment data is conducted by program faculty, advisory committee members, and college leadership to evaluate program strengths and weaknesses and to facilitate program improvement. The assessment process itself is evaluated every other year. The outcome assessment reports are maintained in the program director's office.

## **PROGRAM LEARNING OUTCOMES**

Upon completion of the Radiologic Technology Program, graduates will be able to:

1. Communicate effectively with all members of the healthcare team.
2. Achieve the clinical requirements of an entry-level radiographer, as defined by employers.
3. Provide a safe environment for the patient and deliver age appropriate patient care in a variety of clinical situations.
4. Utilize appropriate radiation protection techniques for patients and personnel.

5. Perform routine and non-routine radiographic imaging procedures.
6. Evaluate radiographic images for proper diagnostic quality and take corrective action when needed.
7. Implement critical thinking and problem solving.
8. Educate the public and members of the healthcare team on the benefits and hazards of diagnostic radiation exposure.
9. Demonstrate ethical and professional behavior in support of the profession.
10. Appreciate the value of professional development and continuing education.

## **PROGRAM FACULTY**

### **Dean of Instruction**

Dr. Mitchell Holder  
Trenton Campus, Cross Hall Office #126  
[miholder@mail.ncmissouri.edu](mailto:miholder@mail.ncmissouri.edu)

### **Director of Health Sciences**

Kristi Cutsinger  
Trenton Campus, Cross Hall Office #125  
[kcutsinger@mail.ncmissouri.edu](mailto:kcutsinger@mail.ncmissouri.edu)

### **Program Director/Faculty**

Mallary Hann, M.Ed., RT(R)(MR)(ARRT)  
Savannah Campus Office #113  
[mhann@mail.ncmissouri.edu](mailto:mhann@mail.ncmissouri.edu)

### **Clinical Coordinator/Faculty**

Lorinda Ross, B.A., RT(R)(MR)(ARRT)  
Savannah Campus Office #114  
[lross@mail.ncmissouri.edu](mailto:lross@mail.ncmissouri.edu)

### **Adjunct Instructor**

Krit Engemann, B.A., RT(R)(CT)(ARRT)  
[kengemann@mail.ncmissouri.edu](mailto:kengemann@mail.ncmissouri.edu)

## **RESPONSIBILITIES OF PROGRAM FACULTY**

To provide students with a successful learning environment, program faculty are available for guidance in both didactic and clinical settings. Students should communicate questions or concerns to the appropriate program faculty member.

The following is a list of the program officers' responsibilities:

### **Program Director**

- Assures all faculty and staff possess academic and professional qualifications appropriate for their assignment;
- Assumes responsibilities and supervision of the Radiologic Program in accordance with the minimum standards for accreditation as set forth by Joint Review Committee on Education in Radiologic Technology (JRCERT);
- Organize, administer, review, develop and assures program effectiveness;
- Conducts on-going program assessment;



- Participates in budget planning;
- Prepares and maintains course outlines and objectives, evaluates students and reports progress;
- Instructs students;
- Evaluates and assures clinical education effectiveness;
- Maintains current knowledge of the professional discipline and educational methodologies through continuing professional development;
- Assumes the leadership role in the continued development of the program.

#### **Clinical Coordinator**

- Correlates clinical education with didactic education;
- Prepares and maintains course outlines and objectives;
- Instructs students;
- Evaluates students and reports progress;
- Coordinates, evaluates and assures clinical education effectiveness;
- Participates in accreditation and assessment processes;
- Cooperates with program director in periodic review and revision of clinical course materials;
- Maintains current knowledge of the professional discipline and educational methodologies through continuing professional development;
- Maintains current knowledge of program policies, procedures, and student progress.

#### **Program Didactic Faculty (Full-Time and Adjunct)**

- Prepares and maintains course outlines and objectives;
- Instructs students;
- Evaluates students and reports progress;
- Participates in accreditation and assessment processes;
- Cooperates with program director in periodic review and revision of course materials;
- Maintains current knowledge of the professional discipline and educational methodologies through continuing professional development;
- Maintains current knowledge of program policies, procedures, and student progress.

#### **Clinical Instructor**

- Is knowledgeable of program goals;
- Understands clinical objectives and clinical evaluation system;
- Provides students with clinical instruction/supervision;
- Evaluates students' clinical competence;
- Participates in accreditation and assessment processes, as appropriate;
- Cooperates with program director in period review and revision of clinical course materials;
- Maintains current knowledge of the professional discipline and educational methodologies through continuing professional development;
- Maintains current knowledge of program policies, procedures, and student progress.

#### **Clinical Staff**

- Understands clinical competency system;
- Support educational process;
- Maintains current knowledge of the professional discipline and educational methodologies through continuing professional development;
- Maintains current knowledge of program policies, procedures, and student progress.

#### **Administration**

- Works with program director to coordinate funding;
- Provides support in the acquisition of new equipment and materials;
- Assists students in providing access to the necessary educational and support resources.

## FACULTY OFFICE HOURS

Radiologic Technology Program faculty members instruct students in both the classroom and the clinical setting. Office hours are set to assist the students in meeting their educational requirements. Faculty office hours will be listed in each syllabus. Students may meet with faculty during the posted times or by appointment.

## ADVISORY COMMITTEE

### Ex Officio Members:

Kristi Cutsinger Director of Health Sciences North Central Missouri College	Mallary Hann Program Director/Faculty North Central Missouri College	Lorinda Ross Clinical Coordinator/Faculty North Central Missouri College
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### Appointed Members:

Shirley Bartley Community Member	Cassie Franken Business Partner Mosaic Medical Center	Ricardo Lugo Clinical Instructor Mosaic Medical Center-Maryville
Aileen Rost Radiology Manager Mosaic Medical Center-St. Joseph	Sean Cowman Director of Radiology Mosaic Medical Center-St. Joseph	

### Elected Student/Graduate

#### Members:

Jaycie Griffin Program Graduate	Ravyn Whisenand Senior Class Member	TBA Junior Class Member
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# PROGRAM STANDARDS

## ACCREDITATION

North Central Missouri College is fully accredited by the Higher Learning Commission (HLC).

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

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

Program # 0694

## JOINT REVIEW COMMITTEE ON EDUCATION IN RADIOLOGIC TECHNOLOGY STANDARDS FOR AN ACCREDITED PROGRAM IN RADIOGRAPHY

According to the Introductory Statement of the Standards for an Accredited Educational Program in Radiography, “The Joint Review Committee on Education in Radiologic Technology (JRCERT) **Standards for an Accredited Educational Program in Radiography** are designed to promote academic excellence, patient safety, and quality healthcare. The **Standards** require a program to articulate its purposes; to demonstrate that it has adequate human, physical, and financial resources effectively organized for the accomplishment of its purposes; to document its effectiveness in accomplishing these purposes; and to provide assurance that it can continue to meet accreditation standards.

The JRCERT is recognized by both the United States Department of Education (USDE) and the Council for Higher Education Accreditation (CHEA). The JRCERT **Standards** incorporate many of the regulations required by the USDE for accrediting organizations to assure the quality of education offered by higher education programs. Accountability for performance and transparency are also reflected in the **Standards** as they are key factors for CHEA recognition.

The JRCERT accreditation process offers a means of providing assurance to the public that a program meets specific quality standards. The process not only helps to maintain program quality but stimulates program improvement through outcomes assessment.”

There are six (6) standards. Each standard is titled and includes a narrative statement supported by specific objectives.

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

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

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

**Standard Four: Curriculum and Academic Practices-** “The program’s curriculum and academic practices prepare students for professional practice.”

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

**Standard Six: Programmatic Effectiveness and Assessment: Using Data for Sustained Improvement-** “The extent of a program’s effectiveness is linked to the ability to meet its mission, goals, and student learning outcomes. A systematic, ongoing assessment process provides credible evidence that enables analysis and critical discussions to foster ongoing program improvement.”

A full copy of JRCERT Standards and Objectives can be located at: [Accreditation Standards - 2021 - JRCERT: Joint Review Committee on Education in Radiologic Technology](#)

## **AMERICAN REGISTRY OF RADIOLOGIC TECHNOLOGISTS MISSION, RULES AND REGULATIONS, AND STANDARDS OF ETHICS**

### **ARRT Mission**

Promoting high standards of patient care by recognizing qualified individuals in medical imaging, interventional procedures, and radiation therapy.

In support of this mission, the ARRT:

- Adopts and upholds standards for educational preparation for entry into the profession;
- Adopts and upholds standards of professional behavior consistent with the level of responsibility required by professional practice; and
- Develops and administers examinations which assess the knowledge and skills underlying the intelligent performance of the tasks typically required by professional practice in the discipline. In addition to initial recognition, ARRT provides a mechanism to recognize individuals who continue to demonstrate their qualifications through adherence to the standards of professional behavior and compliance with continuing education requirements.

### **ARRT Rules and Regulations**

The NCMC Radiologic Technology Program enforces all rules and regulations set forth by the American Registry of Radiologic Technologist (ARRT). A complete and current listing of ARRT Rules and Regulations can be found at: [ARRT RULES AND REGULATIONS \(kc-usercontent.com\)](#)

### **ARRT Standards of Ethics**

The NCMC Radiologic Technology Program mirrors the Standards of Ethics set forth by the American Registry of Radiologic Technologists (ARRT). As future candidates of the American Registry of Radiologic Technologists, students of the NCMC Radiologic Technology Program are held to these ARRT Standards of Ethics. A complete and current listing of ARRT’s Standard of Ethics can be found at: [arrt-standards-of-ethics.pdf \(kc-usercontent.com\)](#)

# **AMERICAN SOCIETY OF RADIOLOGIC TECHNOLOGISTS MISSION, VISION, CORE VALUES, AND VALUE PROPOSITIONS**

## **ASRT Mission**

The mission of the American Society of Radiologic Technologists is to advance the medical imaging and radiation therapy profession and to enhance the quality of patient care.

## **ASRT Vision**

The American Society of Radiologic Technologists will be the premier professional association for the medical imaging and radiation therapy community through education, advocacy and research.

## **ASRT Core Values**

### **Commitment**

We share a common purpose and give our personal best to transform ASRT's vision into reality.

### **Leadership**

We guide and inspire internal and external stakeholders to achieve ASRT's mission and vision.

### **Integrity**

We practice transparency by telling the truth, obeying the law, acting ethically, fulfilling expectations and keeping promises we make.

### **Creativity**

We are adaptable and flexible to new possibilities and discoveries, and we provide an environment that encourages creative solutions.

### **Accountability**

Each of us stands responsible for achieving targeted outcomes, cost effectiveness and improved performance in all that we do.

## **ASRT Value Propositions**

We use a quality framework to achieve customer centricity and operational excellence.

### **Member Centricity**

Understand and address the needs of the radiologic technology community to strengthen relationships and earn customer loyalty.

### **Operational Excellence**

Deliver a combination of service, quality, price and ease of use that other associations and organizations can't match.

<http://www.asrt.org/main/about-asrt/mission-vision>

## **STUDENT RESOURCES AND SUPPORT**

### **CLASSROOMS AND LABS**

Classrooms and labs are located in the Harry F. Duncan Center for Nursing and Allied Health at the North Central Missouri College Savannah Campus 601 N. US Hwy 71 in Savannah, Missouri. The classroom is room #146 and the lab is room #148.

Students may practice skills or access other instructional materials within the classroom or labs at times designated by the instructor of a particular course. Students are not allowed to remove materials from the classroom or labs and must leave the facilities in the condition they were found.

### **LAB RULES**

1. Students must notify the instructor prior to using the lab and before making exposures.
2. Dosimeters must be worn while in the lab.
3. X-ray room doors must be shut prior to making exposures.
4. All persons must be in the control booth prior to making exposures.
5. All ancillary equipment (shields, image receptors, grids, etc.) must be put away after use and the equipment should be properly shut down.

### **STUDENT SUPPORT SERVICES**

NCMC offers a variety of services for students. The following services are available and more information about them and how to access them can be found on the college's website or in the College Catalog.

#### **Academic Advising**

[Academic Advising - Advising \(ncmissouri.edu\)](https://ncmissouri.edu/academic-advising)

Academic advisors are available to help students explore, understand, and choose programs, degrees, and certificates. Additionally, advisors help students select classes each semester, set educational goals, and solve academic problems.

#### **Accessibility Services**

[Accessibility Services - Accessibility Services \(ncmissouri.edu\)](https://ncmissouri.edu/accessibility-services)

Accessibility services are available to provide coordination of support services and accommodations for all qualified students with disabilities.

#### **Campus Store**

[North Central Missouri College Campus Bookstore | North Central Missouri College Bookstore \(ncmissouri.edu\)](https://ncmissouri.edu/campus-store)

All required and supplementary textbooks for classes at NCMC are available in the Campus Store. The Campus Store also carries a complete line of school supplies, clinical uniforms and supplies, and college apparel. Items may be purchased in person or online through the college's website.

#### **Career Services**

[NCMC Career Services - Career Services \(ncmissouri.edu\)](https://ncmissouri.edu/career-services)

Career services are available to assist students in preparing for their career and life after NCMC including resume proofing, mock interviews, and employment search assistance.

## **Financial Aid**

[Financial Aid - Financial Aid \(ncmissouri.edu\)](https://ncmissouri.edu/financial-aid)

Financial aid advisors are available to help students understand their financial aid options and help guide them through the process.

## **College Library**

[Library - Library \(ncmissouri.edu\)](https://ncmissouri.edu/library)

The library is available to provide students with variety of materials for educational and recreational purposes including an extensive reference collection, a circulating book collection, DVDs, and newspapers. The library is automated with an online catalog system, online periodical databases, and internet access which allows for both on-campus and remote access to materials 24 hours a day.

## **Personal Counseling**

[Counseling Services - Student Life \(ncmissouri.edu\)](https://ncmissouri.edu/counseling-services)

Counseling sessions, including teletherapy, are available for any NCMC student at no cost.

## **Testing Center**

[Testing Services - Testing \(ncmissouri.edu\)](https://ncmissouri.edu/testing-services)

Testing services are available, including exam proctoring and the administration and/or interpretation of several standardized tests and career inventories.

## **TRiO-Student Support Services**

[SSS - Student Support Services \(ncmissouri.edu\)](https://ncmissouri.edu/ssss)

Student Support Services (SSS) is a TRiO grant program 100% federally funded through the Department of Education. SSS provides an array of academic and personal support services to eligible college students to help them complete their degree, with the ultimate goal of successful transfer to four-year institutions.

## **Tutoring Center**

[Tutoring Center - Tutoring Center \(ncmissouri.edu\)](https://ncmissouri.edu/tutoring-center)

Tutoring services, in math and writing, are available both in person and online. Program specific tutoring is also available upon request with qualified peer and professional tutors.

## **RADIOLOGIC TECHNOLOGY FACULTY TUTORING**

Tutoring is available by appointment with all NCMC Radiologic Technology Program faculty members.

## **PROGRAM LIBRARY**

NCMC'S Radiologic Technology Program maintains a resource library to support and enhance the student's educational experience. All resources are the property of NCMC; however, items may be checked out and taken home by students. All library resources must be returned upon graduation, withdrawal, or dismissal.

## **STUDENT PROFESSIONAL ORGANIZATIONS**

The NCMC Radiologic Technology Program believes that student involvement in professional and student organizations is an important aspect of the learning process. Students are encouraged and supported in their involvement in these organizations and have the opportunity to be a member and participant in the American Society of Radiologic Technologists (ASRT) and the Missouri Society of Radiologic Technologists (MOSRT).

The ASRT is a national professional organization for those involved in medical imaging. ASRT's focus is to advance the field of radiologic technology. Students are responsible for ASRT membership fees.

The MOSRT is the state affiliate of the ASRT. MOSRT's focus is also to advance the field of radiologic technology. Second year students are required to attend the annual MOSRT conference and may compete in designated activities. Students are responsible for MOSRT membership fees. Fundraisers will be held throughout the year to help defray the cost of the annual conference fees and lodging. All other expenses related to MOSRT and the annual conference are the student's responsibility.



# **PROGRAM POLICIES AND PROCEDURES**

## **APPLICATION TO THE PROGRAM**

For information regarding application to the program, see the Radiologic Technology Program Pre-Admission Data Packet.

## **TRANSFER STUDENTS**

The NCMC Radiologic Technology Program does not offer transfer credit of professional Radiologic Technology courses from any institution. General education courses may be accepted for transfer in compliance with NCMC's policy.

## **NOTICE OF NON-DISCRIMINATION**

North Central Missouri College does not discriminate in its programs, activities and facilities on the basis of race, color, national origin, sex, disability, religion, age, genetic information, veteran status, marital status, ancestry, gender identity, gender expression, or sexual orientation, as those terms are defined under applicable law, as it administers its admissions policies, educational policies, financial aid, athletic programs, student treatment and services, housing, and other institutionally administered programs or activities and employment. The College also provides equal access to the Boy Scouts and other designated youth groups. North Central Missouri College prohibits sexual harassment, including sexual violence. Sources: Title IX of the Educational Amendments of 1972; the Americans with Disabilities Act of 1990; Section 504 of the Rehabilitation Act of 1973; Title VII of the Civil Rights Act of 1964; discrimination prohibited by Title VI Public Law 88-352, 1964; Title IX, Public Law 88-380, 1972; the Age Discrimination Act; Missouri Statutes; and other applicable statutes and College policies. Title IX prohibits a recipient from discriminating on the basis of sex in admissions, recruitment, financial aid, academic programs, activities, student treatment and services, counseling and guidance, discipline, classroom assignment, grading, vocational education, recreation, physical education, athletics, housing, use of buildings, and employment.

Questions regarding this policy statement or compliance with its provisions may be directed to Dr. Lenny Klaver, President, Frey Administrative Center, 1213 Mabel Street, Trenton MO 64683, (660) 359-3948 ext. 1200, [klaver@mail.ncmissouri.edu](mailto:klaver@mail.ncmissouri.edu); or Dr. Kristen Alley, Dean of Student Affairs, Alexander Student Center Office 12, 1204 Main Street, Trenton MO 64683, (660) 359-3948 ext. 1400, [kalley@mail.ncmissouri.edu](mailto:kalley@mail.ncmissouri.edu).

North Central Missouri College's policy on non-discrimination can be found at [Notice of Non-Discrimination - Consumer Information \(ncmissouri.edu\)](#)

## **STUDENT RECORDS (FERPA)**

Student records shall be kept in accordance with policies as established by NCMC. The final cumulative record shall be maintained by the Registrar's office, located in the Alexander Student Center, after completion of the program.

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to the student's education records. A complete list of student's rights under FERPA can be viewed on the college's website or in the College Catalog.

## **CRIMINAL BACKGROUND CHECK**

A criminal background check is required prior to program start date. An adverse finding on the criminal background check may eliminate a participant.

Criminal proceedings that occur while attending the NCMC Radiologic Technology Program may result in the student being unable to complete the clinical experience and dismissal from the program. Likewise, it may result in ineligibility to take the national certification or state licensure exams.

Students must immediately notify the NCMC Radiologic Technology Program Director if an event occurs that may be found on a future Criminal Background Check.

In the event that at an additional background check is required by a clinical site, it will be at the student's expense.

## **AMERICAN REGISTRY OF RADIOLOGIC TECHNOLOGISTS ETHICS REVIEW PRE-APPLICATION**

Certain violations on a criminal record check could deem the graduate ineligible to take the national certification examination administered by the American Registry of Radiologic Technologists (ARRT). The NCMC Radiologic Technology Program recommends that students or prospective students with violations on their criminal background check pre-apply to determine eligibility for the ARRT examination.

The Ethics Review Pre-Application provides an early ethics review of violation(s) that would otherwise need to be reported on your Application for Certification when you have completed an ARRT-recognized educational program and may be used for the following circumstances:

- Criminal proceeding including:
  - misdemeanor charges and convictions,
  - felony charges and convictions,
  - military court-martials; and/or
- Disciplinary actions taken by a state or federal regulatory authority or certification board; and/or
- Honor code violations

The review applies only to violations specified in the Ethics Review Pre-Application packet; it does not apply to any violations not reported or occurring after submission of the Ethics Review Pre-Application.

Submission of the Ethics Review Pre-Application does not waive any other ARRT eligibility and application requirements. An Application for Certification must still be submitted at the time of graduation.

It is the student's responsibility to complete and submit the application and pay the associated fees. The NCMC Radiologic Technology Program faculty will assist the student in finding and completing the application; however, completion and submission is the student's sole responsibility.

The ARRT Ethics Review Pre-Application Packet can be found at: [Ethics Review Preapplication - ARRT](#)

## **DRUG SCREENING POLICY**

NCMC students will be subject to random urine drug screening throughout the program. In the event that a student is absent at the time of the random drug screen, the student will submit to a supervised drug screening at a time and place scheduled by the Clinical Coordinator. Failure to comply with the screening process,

tampering with the test, and/or a drug screen resulting in a positive finding is cause for dismissal from the NCMC Radiologic Technology Program. Additionally, legally prescribed medical marijuana is not allowed as it is against federal regulations and prohibited by clinical sites. Drug screening will be completed at the student's expense.

## ESSENTIAL FUNCTIONS

The following are the essential functions that all individuals must be able to perform independently, with or without reasonable accommodation, in order to be accepted and retained as a student of the Radiologic Technology Program at North Central Missouri College.

The essential functions include communication skills, critical thinking skills, interpersonal skills, mobility/motor skills, professional attitude/demeanor, and sensory abilities (auditory, olfactory, tactile, and visual).

Students with disabilities who wish to request reasonable accommodations under the American's with Disabilities Act must follow the college's procedure for doing so (see "Accessibility Services" in the "Student Resources and Support" section of this handbook).

Essential Function	Standard	Some Examples of Necessary Activities (not all inclusive)
<b>Auditory Ability</b>	Auditory abilities (hearing) sufficient to monitor and assess the health needs of patients.	<ul style="list-style-type: none"> <li>• Hear and respond to individuals with differing tones, volumes, and clarity and of speech.</li> <li>• Hear and respond to individuals who may be in close proximity or are distant, with or without the presence of extraneous noise</li> <li>• Hear and respond to individuals whose lips cannot be seen.</li> <li>• Detect monitor alarms, emergency signals, and rotor/exposure sounds on radiographic equipment.</li> <li>• Detect faint sounds such as auscultatory sounds.</li> </ul>
<b>Communication Skills</b>	Communication abilities sufficient for effective interaction with others in verbal, non-verbal, and written form in the English language.	<ul style="list-style-type: none"> <li>• Communicate with other members of the healthcare team.</li> <li>• Explain radiographic procedures and provide procedural instructions to patients.</li> <li>• Utilize questioning techniques to obtain accurate clinical history.</li> <li>• Document patient responses, history, and exam information in the patient's medical record using correct punctuation, grammar, and spelling.</li> <li>• Effectively listen.</li> </ul>
<b>Critical Thinking Skills</b>	Critical thinking ability sufficient for safe clinical judgement.	<ul style="list-style-type: none"> <li>• Comprehend and carry out instructions.</li> <li>• Read and comprehend written material.</li> <li>• Identify cause-and-effect-relationships.</li> <li>• Recall information from the classroom and apply it to clinical situations.</li> </ul>

		<ul style="list-style-type: none"> <li>• Calculate dosages or technical factor changes correctly.</li> <li>• Evaluate patient responses.</li> <li>• Synthesize patient results to draw sound conclusions.</li> <li>• Prioritize patients and sequence examinations.</li> </ul>
<b>Interpersonal Skills</b>	Interpersonal abilities sufficient to interact with individuals, families, and groups, from a variety of social, cultural, and intellectual backgrounds.	<ul style="list-style-type: none"> <li>• Establish a rapport and maintain professional relationships with patients and colleagues.</li> <li>• Work as a member of the healthcare team.</li> <li>• Provide care to all types of patient populations.</li> <li>• Demonstrate compassion, empathy, and concern for others.</li> </ul>
<b>Mobility/Motor Skills</b>	Physical abilities, stamina, and gross and fine motor skills sufficient to provide safe and effective patient care.	<ul style="list-style-type: none"> <li>• Possess the physical stamina to stand and walk for long periods of time, usually 8 to 12 hour shifts.</li> <li>• Lift 50 pounds.</li> <li>• Wear leaded apparel for long periods of time.</li> <li>• Manually move and position radiographic equipment.</li> <li>• Push and maneuver mobile radiographic equipment.</li> <li>• Reach and operate an x-ray tube placed 48 inches above the x-ray table.</li> <li>• Bend, stoop, or reach items on the floor or low/high shelves or cabinets.</li> <li>• Assist and support patients and be capable of positioning patients of all sizes for all procedures.</li> <li>• Transport patients in wheelchairs or on stretchers, sometimes with additional ancillary equipment.</li> <li>• Perform cardiopulmonary resuscitation (CPR).</li> <li>• Use both hands simultaneously.</li> <li>• Use instruments such as a goniometer, tape measure, and caliper.</li> <li>• Manipulate dials, buttons, and switches of various sizes.</li> <li>• Perform a manual blood pressure check.</li> <li>• Insert an IV catheter for instillation of contrast media for radiographic procedures.</li> </ul>
<b>Olfactory Ability</b>	Olfactory senses (smell) sufficient for maintaining environmental and patient safety.	<ul style="list-style-type: none"> <li>• Distinguish smells which are contributory to assessing and/or maintaining the patient's health status.</li> <li>• Distinguish smells related to environmental safety.</li> </ul>

<b>Professional Attitude and Demeanor</b>	Ability to present professional appearance and implement measures to maintain own physical and mental health and emotional stability.	<ul style="list-style-type: none"> <li>• Maintain composure and function effectively in stressful or emergent situations.</li> <li>• Self-regulate emotional responses.</li> <li>• Use appropriate precautions when exposed to communicable diseases and radiation.</li> <li>• Adapt to fluctuating work environments.</li> <li>• Take responsibility for one's own actions.</li> <li>• Resolve conflict and respond to feedback in a professional manner.</li> <li>• Adhere to appropriate ethical standards.</li> </ul>
<b>Tactile Ability</b>	Tactile ability sufficient for physical assessment and performance of radiographic procedures.	<ul style="list-style-type: none"> <li>• Perform functions of physical examination such as checking for a pulse.</li> <li>• Palpate the patient to locate radiographic landmarks for procedural positioning.</li> </ul>
<b>Visual Ability</b>	Visual ability sufficient for observation and assessment necessary for safe patient care and in the operation of equipment.	<ul style="list-style-type: none"> <li>• Observe patients up close and at a distance to gather data about the patient.</li> <li>• View controls, letters, numbers, etc. of varying sizes located on radiographic equipment and supplies while working in a low light environment.</li> <li>• Detect x-ray collimation field and radiation field center.</li> <li>• Differentiate subtle changes in shades of gray on radiographic images.</li> <li>• View radiographic images on a computer screen and evaluate for quality acceptance standards.</li> <li>• Have use of depth perception and peripheral vision.</li> </ul>

## **FOOD AND DRINK**

Food and drinks in lidded containers may be allowed in the classroom at the faculty member's discretion. Please discard garbage. No food or drinks are allowed in lab areas.

## **CHILDREN OR GUESTS IN THE CLASSROOM**

In order to provide a safe and positive learning environment, children or guests are NOT allowed to accompany students to any learning setting. Children are not to be left unattended in any area of the college including college lounges, hallways, laboratories, or faculty and staff offices.

## **ELECTRONIC DEVICES**

The use of electronic devices during class is at the discretion of the instructor. The use of electronic devices, including but not limited to cellular phones or smart watches, are strictly prohibited during examinations and laboratory simulations.

## CLASSROOM/LAB DRESS CODE

Students may wear casual clothing to the classroom and lab; however, clothing must sufficiently cover the body and avoid attracting excessive attention or causing disruptions.

Occasionally, students may be required to wear clinical attire on a class day at the request of the Program Director or Clinical Coordinator.

For information regarding the clinical dress code, see the Radiologic Technology Program Clinical Handbook.

## DIDACTIC COURSE ATTENDANCE

Students are expected to attend all class sessions of the courses in which they are enrolled. Absence places a student in jeopardy of failing. When a student finds it necessary to be absent, the student must notify the instructor of impending absence before class. It is acceptable to leave a message regarding the absence on the instructor's voice mail or email. The student will be responsible for obtaining lecture notes from the other students and must hand in any work due by the due date.

A tardy or a partial absence from one minute up to half of the class day will be recorded as a half day absent. A tardy or partial absence greater than a half class day will equal a full day absent.

Students exceeding two days of absence in any main session (16 week) didactic course or one day of absence in any first or second session (8 week) didactic course will be withdrawn from the course, which will result in program dismissal.

Extenuating circumstances will be evaluated on an individual basis (i.e. death or serious illness of an immediate family member, emergency surgery, military or jury duty). Appropriate documentation for validation of the circumstance will be required of the student upon return.

## CLASS CALL IN PROCEDURE

In the event a student will be **absent, tardy, or partially absent** the student must:

### On classroom days:

Notify appropriate faculty member(s) via telephone or email prior to the start of class.

- If the faculty member(s) cannot be reached, it is acceptable to leave a voicemail or send an email.
- Contact by cellular text is absolutely not acceptable, will not be acknowledged, and will not fulfill the notification requirement.
- Except in extreme or emergent situations, the student must personally make contact with the faculty member(s) and it is not acceptable for anyone other than the student to initiate contact regarding attendance. The student may not have a spouse, family member, classmate, or Clinical Instructor notify the faculty member(s) of an absence, tardy, or partial absence.
- Exams and homework due on the missed day will follow the Late Assignments Policy.
- Only students in attendance will receive points for pop quizzes, participation, and lab activities.
- It is the student's responsibility to contact each faculty member for the classes missed and obtain homework assigned during the absence. If work assigned during the absence is not turned in on the due date, that work will be considered late and follow the Late Assignment Policy.
- Failure to notify the appropriate faculty member(s) prior to the start of the scheduled class constitutes a no-call, no-show. Two occurrences of no-call, no-show will result in program dismissal.

**On clinical days:**

Refer to the Radiologic Technology Program Clinical Handbook.

**FACILITY CLOSURES/INCLEMENT WEATHER**

If the Savannah Campus is closed due to unforeseen circumstances, classes will be cancelled. Clinical rotations may not be affected. The Program Director or the Clinical Coordinator will notify students of changes in the clinical schedule.

Extreme weather conditions during the winter months may require NCMC to cancel or delay classes. Students may check the NCMC website, check the NCMC text message alert system, or messages left on the NCMC phone system. Local radio and television stations will also relate any weather closure.

If the Savannah Campus is closed, classes and clinical will be cancelled as well. If there are cancellations, faculty may post lecture-related material or assignments on Brightspace and may hold virtual class sessions. Students should check their specific course Brightspace Announcements and emails for class instructions.

Safety is imperative, and each student should use their own judgement when road conditions may be hazardous. If a student feels that the weather is such that it would be unsafe for them to travel to class or to their clinical site, but the college has not closed; the student may elect to be absent that day.

For college closures:

- On class days: Class Call-In procedure is **NOT** necessary.
- On clinical days: Clinical Call-In Procedure is required; it is **NOT** necessary to contact the Clinical Coordinator.

**EARLY ALERT**

If a student's cumulative grade falls below 80% in any course an early alert will be triggered. Every student is encouraged to approach an instructor or their program appointed academic advisor at the first sign of academic difficulty. The student may, and is encouraged to, initiate a conference with any instructor, at any time, and for any reason.

**CONTINUED PROGRAM ELIGIBILITY**

In order to continue in the program, students are required to:

- Successfully complete all NCMC Radiologic Technology courses on the first attempt with a 75% (C) or better.
  - **A final grade of less than 75% (C) in any course will result in dismissal from the program.**
- Complete all course and clinical competencies.
- Comply with NCMC Radiologic Technology Program policies and procedures.

**PROBATION**

The student may be placed on **academic probation** for reasons including, but not limited to:

- Falling below 75% (C) during any didactic or clinical course
- Failure to complete clinical competencies in the published time
- Failure to fulfill Clinical Obligations

The student may be placed on **conduct probation** for reasons including, but not limited to:

- Failure to comply with NCMC's policies and procedures
- Failure to comply with any of NCMC's Radiologic Technology Program policies and procedures
- Failure to comply with any of NCMC's Radiologic Technology Program Standards
  - JRCERT Standards
  - ARRT Rules and Regulations and Standards of Ethics
- Failure to comply with the Clinical Site's policies and procedures

Failure to comply with NCMC policies and procedures or NCMC Radiologic Technology program policies and procedures and/or Standards may result in disciplinary action up to and including dismissal from the program. Students will be informed of any issues on a Student Concern Form and any serious or continued issues will be addressed on a Student Behavioral Contract.

## **WITHDRAWAL PROCEDURES**

Students may withdraw from a class at any time prior to the college's published last day to withdraw. It is important that students who stop attending classes withdraw formally from the courses in which they are enrolled. If a student chooses to withdraw from any Radiologic Technology course, they will also be required to withdraw from all Radiologic Technology courses. The program course work is sequential in nature, if a student withdraws from the coursework for any semester, they will not be eligible to continue in the program.

## **RE-APPLICATION**

Students who electively withdraw from the Radiologic Technology Program must gain pre-approval from the Program Director to re-apply. NCMC does not offer advanced placement for previously completed Radiologic Technology courses from any institution including NCMC.

Students who are dismissed from the Radiologic Technology Program for any reason are not eligible to re-apply.

## **GRADUATION REQUIREMENTS**

In order to graduate in good standing, the student must:

- have passed all courses, clinical and didactic, with a 75% (C) or better
- have completed all the program didactic and clinical competencies
- meet the ARRT requirements for clinical competency
- be in good standing with NCMC

## **STUDENT CONDUCT**

NCMC Radiologic Technology students are expected to follow the Student Conduct Policy. Failure to follow the policy may result in disciplinary action up to and including expulsion. The complete policy can be viewed in the College Catalog.

## **STUDENT GRIEVANCES**

The North Central Missouri College (NCMC) Student Complaint Policy is available to students who wish to have a concern resolved regarding a process or person of the college community not covered by existing policies. The objective of the NCMC Student Complaint Policy is to resolve concerns as quickly and efficiently



as possible at the level closest to the student. A complaint should be filed during the semester of occurrence but no later than 60 days from the first day of the following academic semester. Failure to follow the process as outlined in the catalog will invalidate the process. Please refer to the College Catalog and [Student Complaint Policy - Consumer Information \(ncmissouri.edu\)](http://ncmissouri.edu) for further information.

Should a grievance or other issue remain unresolved after following NCMC's formal grievance procedure, any Radiologic Technology student may submit allegations of non-compliance directly to JRCERT at:

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

JRCERT Standard 1.5 states that the student must first follow NCMC's formal grievance procedure. JRCERT Standard 1.5 further states that "If the individual is unable to resolve the complaint with institution/program officials or believes that the concerns have not been properly addressed, the individual may submit allegations of non-compliance directly to the JRCERT."

## **SOCIAL MEDIA USAGE**

Social media includes, but is not limited to, text, images, audio and video communicated by the following:

- Blogs
- Podcasts
- Social media networks such as Twitter, Facebook, or Snapchat
- Professional networks such as LinkedIn
- YouTube
- Photo or video sharing sites such as Instagram or TikTok

The use of social media is prohibited while in the clinical setting. Radiologic Technology students have an ethical and legal obligation to maintain patient privacy and confidentiality at all times. Distribution of sensitive and confidential information is protected under HIPAA and FERPA whether discussed through traditional communication channels or through social media.

Do not post confidential or proprietary information about NCMC, clinical facilities, patients/clients, or others with whom you have contact with in the role of an NCMC Radiologic Technology student.

Patient privacy must be maintained in all communications. Do not disclose information that may be used to identify patients or their health condition(s).

Each student is legally responsible for individual postings and may be subject to liability if individual postings are found defamatory, harassing or in violation of any other applicable law. Students may also be liable if individual postings include confidential or copyrighted information.

Failure to follow this policy and/or HIPAA violations may result in disciplinary action up to and including expulsion.

## COURSE INFORMATION

### COURSE SEQUENCE

First Academic Year		
Summer I (8 Weeks)		
Course Name	Course Number	Credit Hours
Fundamentals of Radiologic Science and Health Care	RT 100	3
Patient Care in Radiologic Science	RT 110	3
<b>Total Semester Credits</b>		<b>6</b>
Fall I (16 Weeks)		
Course Name	Course Number	Credit Hours
Radiographic Procedures I	RT 120	4
Production and Characteristics of Radiation (First 8 weeks)	RT 130	2
Equipment Operations and Maintenance (Second 8 weeks)	RT 140	2
Clinical Practice I	RT 150	4
<b>Total Semester Credits</b>		<b>12</b>
Spring I (16 Weeks)		
Course Name	Course Number	Credit Hours
Radiographic Procedures II and Pharmacology	RT 160	4
Image Acquisition and Evaluation I (First 8 weeks)	RT 170	2
Image Acquisition and Evaluation II (Second 8 weeks)	RT 180	2
Clinical Practice II	RT 190	4
<b>Total Semester Credits</b>		<b>12</b>
<b>Total First Year Credits</b>		<b>30</b>
Second Academic Year		
Summer II (8 Weeks)		
Course Name	Course Number	Credit Hours
Cross Sectional Anatomy	RT 200	2
Clinical Practice III	RT 210	4
<b>Total Semester Credits</b>		<b>6</b>
Fall II (16 Weeks)		
Course Name	Course Number	Credit Hours
Imaging Modalities	RT 220	3
Radiographic Pathology	RT 230	3
Clinical Practice IV	RT 240	6
<b>Total Semester Credits</b>		<b>12</b>
Spring II (16 Weeks)		
Course Name	Course Number	Credit Hours
Radiation Biology and Protection (First 8 weeks)	RT 250	3
Clinical Practice V	RT 260	6
Final Seminar	RT 270	3
<b>Total Semester Credits</b>		<b>12</b>
<b>Total Second Year Credits</b>		<b>30</b>

## **COURSE DESCRIPTIONS**

### **RT 100 Fundamentals of Radiologic Science and Health Care**

An overview of the foundations of radiologic technology and the practitioner's role in the health care delivery system. Principles, practices, and policies of the health care organization(s) will be examined and discussed. Radiographic terminology and an orientation to understanding radiographic orders and diagnostic report interpretation will be introduced. Procedures of the chest and abdomen will also be included in this course.

### **RT 110 Patient Care in Radiologic Science**

Explore the concepts of optimal patient care, including consideration for the physical and psychological needs of the patient and family. Routine and emergency patient care procedures are described, as well as infection control procedures using standard precautions. Establish the role of the radiographer in patient education. Discover and apply foundational knowledge relating to ethics and law related to the practice of medical imaging and the professional responsibilities of the radiographer.

### **RT 120 Radiographic Procedures I**

Develop knowledge to perform standard radiographic procedures along with the application to special studies. Investigate the production of radiographic images of optimal diagnostic quality. Analyze radiographic images while discovering the importance of optimal imaging standards, utilizing problem-solving technique for image evaluation, and the factors that can affect image quality. Focused primarily on appendicular and axial skeleton radiographic imaging. Actual images will be included for analysis with lab-based experiences augmenting course learning.

### **RT 130 Production and Characteristics of Radiation**

Explore the fundamental concepts of radiation physics. Establish basic knowledge of atomic structure and terminology. The nature and characteristics of radiation, x-ray production and the fundamentals of photon interactions with matter will be described.

### **RT 140 Equipment Operations and Maintenance**

Establish a knowledge base in radiographic, fluoroscopic, and mobile equipment requirements and design. X-ray tube design, x-ray circuitry, image intensified fluoroscopy, and automatic exposure control will be described. Explore concepts of quality control related to radiographic imaging.

### **RT 150 Clinical Practice I**

Sequentially develop, apply, critically analyze, integrate, synthesize and evaluate concepts and theories in the performance of radiologic procedures. Through competency-based clinical assignments, apply and evaluate concepts of team practice, patient-centered clinical practice and professional development. Provide patient care and assessment, competent performance of radiologic imaging and total quality management. Levels of competency and outcomes measurement ensure the well-being of the patient prior, during, and following the radiologic procedure.

Assisting and performing examinations of the chest, abdomen, upper and lower extremities, shoulder girdle, hips and pelvis, vertebral column, and bony thorax, under the appropriate level of supervision.

### **RT 160 Radiographic Procedures II and Pharmacology**

Expand knowledge base to perform standard radiographic procedures along with the application to special studies. Compare and contrast radiographic images while illustrating the importance of optimal imaging standards, discussion of a problem-solving technique for image evaluation and the factors that can affect image quality. Focused primarily on procedures of the head, contrast studies, trauma, pediatric, operating room

procedures, mobile and additional diagnostic procedures. Recognize basic concepts of pharmacology, venipuncture and administration of diagnostic contrast agents and intravenous medications. The appropriate delivery of patient care during these procedures is emphasized. Actual images will be included for analysis with lab-based experiences augmenting course learning.

### **RT 170 Image Acquisition and Evaluation I**

Investigate factors governing the image production process. Demonstrate basic principles of radiographic exposure techniques used in the production of radiographs. Evaluate the radiographic quality factors of radiographic exposure, contrast, detail and distortion.

### **RT 180 Image Acquisition and Evaluation II**

Examine the components, principles, and operation of digital imaging systems found in diagnostic radiology. Factors that impact image acquisition, display, archiving and retrieval are discussed. Principles of digital system quality assurance and maintenance are presented.

### **RT 190 Clinical Practice II**

Sequentially develop, apply, critically analyze, integrate, synthesize and evaluate concepts and theories in the performance of radiologic procedures. Through competency-based clinical assignments, apply and evaluate concepts of team practice, patient-centered clinical practice and professional development. Provide patient care and assessment, competent performance of radiologic imaging and total quality management. Levels of competency and outcomes measurement ensure the well-being of the patient prior, during, and following the radiologic procedure.

A continuation of clinical examination areas from RT150 while adding cranium, mobile/portable exams, pediatric and geriatric exams, fluoroscopic exams, and surgical exams under the appropriate level of supervision.

### **RT 200 Cross Sectional Anatomy**

Examine gross anatomy of the entire body. Detailed analysis of gross anatomical structures will be conducted systematically for location, relationship to other structures and function. Gross anatomical structures are located and identified in axial (transverse), sagittal, coronal and orthogonal (oblique) planes. Illustrations and anatomy images will be compared with MR and CT images in the same imaging planes and at the same level, when applicable.

### **RT 210 Clinical Practice III**

Sequentially develop, apply, critically analyze, integrate, synthesize and evaluate concepts and theories in the performance of radiologic procedures. Through competency-based clinical assignments, apply and evaluate concepts of team practice, patient-centered clinical practice and professional development. Provide patient care and assessment, competent performance of radiologic imaging and total quality management. Levels of competency and outcomes measurement ensure the well-being of the patient prior, during, and following the radiologic procedure.

All examinations will be performed independently to develop proficiency under the appropriate level of supervision.

### **RT 220 Imaging Modalities**

Summarize advanced imaging modalities for the entry-level radiography student. Identify equipment components and basic operational principles and explore career opportunities and requirements. Computed Tomography, Magnetic Resonance Imaging, Nuclear Medicine/PET, Sonography, Mammography, Bone Densitometry, Angiography/Special Procedures, and Radiation Therapy are examined and discussed.

### **RT 230 Radiographic Pathology**

Explore disease processes of various body systems. Etiology, responses, appropriate radiographic imaging, and radiographic manifestations are discussed. Analyze radiographic images to identify pathologic processes while discovering the impact diseases have on technical factor selection.

### **RT 240 Clinical Practice IV**

Sequentially develop, apply, critically analyze, integrate, synthesize and evaluate concepts and theories in the performance of radiologic procedures. Through competency-based clinical assignments, apply and evaluate concepts of team practice, patient-centered clinical practice and professional development. Provide patient care and assessment, competent performance of radiologic imaging and total quality management. Levels of competency and outcomes measurement ensure the well-being of the patient prior, during, and following the radiologic procedure.

All examinations will be performed independently to develop proficiency under the appropriate level of supervision. Additionally, advanced modality rotations will be provided to gain understanding of advanced technologies.

### **RT 250 Radiation Biology and Protection**

Summarize the principles of the interaction of radiation with living systems. Radiation effects on molecules, cells, tissues and the body as a whole are presented. Factors affecting biological response are presented, including acute and chronic effects of radiation. Application of the principles of radiation protection, including the responsibilities of the radiographer for patients, personnel, and the public. Radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies and health care organizations are incorporated.

### **RT 260 Clinical Practice V**

Sequentially develop, apply, critically analyze, integrate, synthesize and evaluate concepts and theories in the performance of radiologic procedures. Through competency-based clinical assignments, apply and evaluate concepts of team practice, patient-centered clinical practice and professional development. Provide patient care and assessment, competent performance of radiologic imaging and total quality management. Levels of competency and outcomes measurement ensure the well-being of the patient prior, during, and following the radiologic procedure.

All examinations will be performed independently in a proficient manner under the appropriate level of supervision.

### **RT 270 Final Seminar**

Illustrate mastery of all program objectives. Content areas included coincide with the American Registry of Radiologic Technologists' certification examination. Mock examinations will be administered in preparation for successful completion of the ARRT examination. Resume and interview skills will also be explored in preparation for employment in radiologic technology.

## **CLASS SCHEDULE**

### **1<sup>st</sup> YEAR:**

Summer I	Didactic:	Mon., Tues., Wed., & Thurs.
Fall I	Didactic:	Mon., Tues., & Wed.
	Clinical:	Thurs. & Fri.

Spring I	Didactic:	Mon., Tues., & Wed.
	Clinical:	Thur. & Fri.
<b>2<sup>nd</sup> YEAR:</b>		
Summer II	Didactic:	Every other Thurs.
	Clinical:	Mon., Tues., Wed., & every other Thurs.
Fall II	Didactic:	Thurs. & Fri.
	Clinical:	Mon., Tues., & Wed.
Spring II	Didactic:	Thurs. & Fri.
	Clinical:	Mon., Tues., & Wed.

Class schedules will vary by semester, but classes will be held on the designated days between the hours of 7:00 a.m. to 7:00 p.m.

Clinical site education hours are typically 8:00 a.m. to 4:30 p.m. in the Fall and Spring semesters and 8:00 a.m. to 5:00 p.m. in the Summer semester, however, clinical education hours may vary by assignment. Although some clinical site times vary, all students will complete an 8-8.5 hour clinical education shift between traditional operation hours of 5:00 a.m. to 7:00 p.m.

Per JRCERT Standard 4.4, “For the safety of students and patients, not more than ten (10) clinical hours shall be scheduled in any one day. Scheduled didactic and clinical hours combined cannot exceed forty (40) hours per week.”

## **EXPLANATION OF LETTER GRADES**

Many factors determine a grade for a given course. Preparation of all daily assignments, test scores, class attitude, participation, and attendance are all factors. Student assessment is made in the affective, cognitive, and psychomotor domains.

The following grading scale is used for all course work in Radiologic Technology. Grades will not be rounded.

A = 93 - 100%  
 B = 84 - 92  
 C = 75 - 83  
 D = 65 - 74  
 F = any score below 65%

Each student must achieve a grade of 75% (C) or better in each Radiologic Technology course. A student who does not achieve a 75% (C) or better in any course, will not be eligible to enroll in the following semester of Radiologic Technology course work and will be dismissed from the program.

## **CREDIT HOUR CALCULATION**

North Central Missouri College’s Institutional Policy requires the following **minimum** hours of instruction per credit hour:

- For didactic courses, 1 credit hour is equal to 15 hours of instruction.
- For labs, 1 credit hour is equal to 30 hours of instruction.

- For clinical courses, 1 credit hour is equal to 45 hours of instruction.
  - Clinical assignments in the Radiologic Technology Program average ~~50~~-60 hours of instruction per clinical credit hour, to align with clinical facility scheduling and provide more opportunities for students to meet all clinical competencies.

## **EXAM RETAKE**

Comprehension and retention of learned material is critical to successfully completing the Radiologic Technology Program. Examinations are the student's opportunity to demonstrate the knowledge they have gained and their achievement of competency. Any student earning less than a 75% (C) on any exam will be required to retake the exam until competency is demonstrated with a passing grade. Only the score earned from the original attempt will be recorded for a grade. Exams cannot be re-taken during regularly scheduled class time. A final course grade will not be issued until all "retakes" are completed. It is the student's responsibility to schedule the retake with the instructor.

Instructors may require remediation outside of class, lab, or clinical time prior to re-taking exams to help improve student outcomes.

## **LATE ASSIGNMENTS**

To move efficiently and successfully through the Radiologic Technology courses, it is important, and expected, that assignment due dates are met. It is expected that the student take ownership of meeting deadlines and take initiative to ensure all assignments are turned into the instructor at the designated time.

All assignments are due at the beginning of the class period. Assignments that are turned in after the designated time but within 24 hours of the designated time will receive a 10-percentage point reduction from the grade earned. Assignments turned in after 24 hours of the designated time will receive a zero for that assignment.

Only students in attendance will receive full credit for assignments.

All assignments are required to be turned in prior to the end of the course in order to demonstrate competence. A final course grade will not be issued until all assignments are turned in. It is the student's responsibility to turn assignments in to the instructor.

## **MISSED QUIZZES**

Only students in attendance will receive credit for quizzes. Students who are not in class will receive a zero for the missed quiz.

## **MISSED EXAMS**

Missed exams must be made up on the first day returning to class and a 10-percentage point reduction will be made to the grade earned on that exam. Exams cannot be made up during regularly scheduled class time. The student must initiate contact with the instructor prior to the start of class on the first day back and arrange a time to take the missed exam. Failure to take the exam on the first day back will result in a zero. It is the student's responsibility to schedule the missed exam with the instructor.

# **STUDENT HEALTH AND SAFETY**

## **EMERGENCY PREPAREDNESS**

Emergency response and evacuation plans are outlined in the NCMC Emergency Response Action Plan which can be viewed on the NCMC website. [Consumer Information - Consumer Information \(ncmissouri.edu\)](http://ncmissouri.edu)

## **HEALTHCARE INSURANCE**

Students are responsible for their own health and healthcare insurance coverage. Neither NCMC nor any of the affiliated clinical sites are responsible for payment of charges incurred due to student's illness or injuries. The use of the emergency department or any other medical providers will be at the financial responsibility of the student. For this reason, all NCMC Radiologic Technology students are strongly encouraged to maintain personal healthcare insurance throughout the duration of the program.

## **STUDENT HEALTH**

There are no formal health services provided by the college. In the event of illness, students are advised to contact a physician of his/her choice.

In the event of a medical emergency at the college, emergency medical services will be contacted and transportation will be arranged to the nearest hospital at the student's expense. The Program Director or Clinical Coordinator should be notified in the event of an emergency.

For information regarding accident or injury at the clinical site, see the Radiologic Technology Program Clinical Handbook.

Students are required to report any illness, communicable disease, or other condition that might affect the health of the student, patients, or staff to the Program Director as soon as they become aware of the condition. Students experiencing such a condition are still required to comply with program policies, rules, and requirements. A student who feels unable to complete their clinical and/or didactic responsibilities due to an illness, injury or condition may be referred to Accessibility Services.

## **RADIATION SAFETY**

The NCMC Radiologic Technology Program has adopted and strictly enforces the policies for Health and Safety as set forth by the JRCERT Standards. JRCERT Standards on Health and Safety are defined in the JRCERT Radiography Standard FIVE: Health and Safety. [Accreditation Standards - 2021 - JRCERT: Joint Review Committee on Education in Radiologic Technology](#)

All students will be provided instruction concerning radiation safety in the RT 100 Fundamentals of Radiologic Science and Health Care course during the first semester of the program. All Radiologic Technology students are required to exercise sound radiation protection at all times. At no time may a student participate in unsafe radiation protection practices. The A.L.A.R.A. (As Low As Reasonably Achievable) principle must always be followed and the Three Cardinal Rules of Radiation Protection (Time, Distance, Shielding) must always be optimized. Radiation protection and proper use of radiation is the responsibility of the student technologist as described in the ARRT Code of Ethics. Failure to practice safe radiation protection and/or violation of the ARRT Code of Ethics will result in disciplinary action.



Students are not allowed in the on-campus energized labs without faculty supervision. Exposures in the energized lab are to be made only under the direction and supervision of a program faculty member.

Students must always properly wear radiation dosimeters in the Radiologic Technology Program lab and at Clinical Education sites. Dosimeters must be worn at the collar and outside of any lead shielding. The Program Director is the acting Radiation Safety Officer (RSO). Dosimeters will be distributed, collected, read, and redistributed to students from the RSO's office during the first day of the month students are on campus.

Students:

- MUST NOT hold patients or image receptors during any radiographic procedure.
- Must properly wear radiation dosimeters in the Radiologic Technology Program lab and at Clinical Education sites. No student will be allowed at a Clinical Education Site or in a program lab without their properly read and worn radiation dosimeter.
- Will not be allowed to remain at a clinical site if they are not properly wearing their personal radiation dosimeter. The student will not be able to return to the clinical site until the dosimeter is obtained. All the time missed from clinical education will be counted towards the attendance policy.
- Will not be able to participate in Radiologic Technology Program lab activities if they are not properly wearing their personal radiation dosimeter. The activities missed may impact the student's grade if the missed activity is a graded assignment.
- Must immediately report any damage to, or loss of a radiation dosimeter to the RSO. The student must provide a written report of the incident within 24 hours of the oral report.
- Must immediately report known overexposures, accidental or intentional, to the RSO.
  - Any overexposure will be thoroughly investigated. If the overexposure is determined to be accidental, the student will be counseled on proper radiation protection practices. If the overexposure is found to be intentional, disciplinary action will occur.
- Radiation dosimeters issued to the student by the NCMC Radiologic Technology Program are to only be worn while performing activities as an NCMC student. If the student becomes employed as a student technologist, the hiring institution must issue the student a separate dosimeter to be worn during working hours.
- The RSO generates and reviews monthly student and staff dosimetry reports at the beginning of each month. 40 millirem or greater in one month will initiate an investigation. The Clinical Instructor will be questioned, the student's procedure log will be evaluated, and the student will be counseled regarding radiation safety practices.
- If the student's exposure exceeds maximum annual permissible dose limits (5000 millirem), they will be suspended from Clinical Practice Education until the effective annual dose falls below the maximum permissible dose. If a declared pregnant student exceeds the monthly fetal dose limit (50 millirem), they will be suspended from Clinical Practices Education for the duration of the pregnancy. Suspended time for maximum permissible dose limits will follow the attendance policy.

Radiation dosimeters are to be turned in to the Program Director on the first class day of the month. Dosimeters not turned in on time will result in disciplinary action.

- First occurrence of failure to turn in dosimeter will result in the student receiving a verbal warning.
- Second occurrence of failure to turn in dosimeter will result in the student receiving a written warning.
- Any additional occurrences of failure to turn in dosimeter will result in conduct probation.

Radiation dosimetry reports, devoid of personally identifiable information (i.e. dates of birth or Social Security Number), will be placed in the "Radiation Dosimetry Report" binder by the RSO within 24 hours of receipt. The "Radiation Dosimetry Report" binder with reports pertaining to current students will be maintained at the instructor's podium in room 216. Students may access the binder, without prior permission, at any time.

Students will be directed monthly to monitor their exposure and should initial to indicate they are aware of the results. The “Radiation Dosimetry Report” binder for previous year’s students is maintained in the Program Director’s office.

Upon graduation, withdrawal, or dismissal the student may view all personal radiation dosimetry reports by contacting the RSO.

Upon graduation, withdrawal, or dismissal the student must immediately return any radiation dosimeters in their possession. The RSO will collect the student’s final dosimeter, deactivate the student from future dosimeters, and will have a Terminal Radiation Dosimetry Report generated. A copy of the Terminal Radiation Dosimetry Report will be maintained by the NCMC Radiologic Technology Program and a copy will be mailed to the student at the last known address within 5 working days of their receipt by the school.

## **PREGNANCY POLICY**

The purpose of the student pregnancy policy is to assure students a safe pregnancy and to ensure compliance with federal and state radiation control guidelines, the U.S. Equal Employment Opportunity Commission, and the Nuclear Regulatory Commission regulations regarding the declared pregnant student.

### **Pregnant students may continue in NCMC Radiologic Technology Program without modification.**

Pregnant students have the right to seek accommodations through Accessibility Services (see “Accessibility Services” in the “Student Resources and Support” section of this handbook). It is the pregnant student’s responsibility to follow the A.L.A.R.A. principle and to utilize the guidelines set forth in this policy for protection of the embryo/fetus and self.

1. All NCMC students will be informed of this policy prior to attending any Clinical Practice Education. All students will receive instruction related to radiation exposure and the potential biological harm to an embryo/fetus prior to attending any Clinical Practice Education.
2. **A pregnant student may voluntarily declare their pregnancy in writing to the NCMC Program Director or Clinical Coordinator at any time.** All Radiologic Technology Program students are encouraged to immediately declare their pregnancy; however, declaration of pregnancy is completely voluntary. If the student chooses to voluntarily inform program officials of her pregnancy it must be in writing. **At any time after declaring pregnancy, the student may withdraw the declaration of pregnancy in writing.** Students will not be considered pregnant unless written voluntary notification is provided from the pregnant student. It is the student’s responsibility to inform the program in writing and to take the appropriate precautions to protect the fetus.
3. The declared pregnant student will read the:
  - a. U.S. Nuclear Regulatory Commission's Regulatory Guide 8.13, "Instruction Concerning Prenatal Radiation Exposure"
  - b. NCRP Report No. 105
    - i. 3.5- “Embryonic and Fetal Effects”
    - ii. 4.2- “Dose Limits for the Embryo and Fetus”
  - c. NCRP Report No. 116
    - i. 10. “Protection of the Embryo-Fetus”

After reading the above documents, the Radiologic Technology Program Director or Clinical Coordinator will counsel the pregnant student concerning A.L.A.R.A., methods to reduce radiation exposure to the embryo/fetus, and any concerns about pregnancy in diagnostic radiology. The program faculty will discuss the effects of irradiation in-utero and radiation protection practices.

4. After receiving counseling and clarification of the related documents from the Radiologic Technology Program Director or Clinical Coordinator, the pregnant student may voluntarily sign the Declaration of Pregnancy Form. Voluntarily signing the Declaration of Pregnancy is an acknowledgement of comprehension of the information provided by the program faculty. A copy of the US Nuclear Regulatory Commission's Regulatory Guide 8.13, NCRP Report #116, and NCRP #105 will be maintained in the Radiologic Technology Program Director's office and will be made available to all students, at any time.
5. An additional radiation dosimeter (fetal badge) will be issued to the student to be worn anteriorly at waist level at all times. When a lead apron is worn, the fetal badge will be worn under the apron. The exposure reported on the fetal badge will be maintained on a separate record and identified as exposure to the fetus or fetal dose. The lease fee for a fetal badge has not been included in tuition; therefore, in the event a student voluntarily declares pregnancy, they will be charged the actual cost of the fetal badge plus overnight postage.
6. The Radiologic Technology Program Director will review the student's dosimetry reports (if existent) from the previous six months to estimate the fetal dose from date of conception to date of declaration of pregnancy. The Radiologic Technology Program Director will monitor the monthly radiation dosimetry report of the pregnant student and fetal badge and make that information available to the student. The dose to the embryo/fetus must not exceed 0.05 rem per month or 0.5 rem for the duration of the pregnancy. If a declared pregnant student exceeds the fetal dose limit, they will be suspended from the Clinical Practice Education for the duration of the pregnancy. Suspended time for maximum permissible dose limits will follow the attendance policy.
7. If fluoroscopy and mobile radiography are performed, the pregnant student radiographer must wear an apron with a minimum of 0.5 mm lead equivalent. If available, a 1.0 mm lead equivalent apron should be worn.
8. It is not recommended that pregnant student radiographers perform radiographic procedures on patients with intra-cavity or interstitial source gamma radiation.
9. The pregnant student is expected to meet all other objectives and clinical competencies of each clinical practice assignment. Any requests for changes in job responsibilities or duties from the pregnant student will be determined on an individual basis and will be based on the industry standards for protection of the pregnant student and the embryo/fetus.
10. As long as the student and/or baby's health is not endangered, and her physical condition does not impair her ability to perform assigned duties, the student may continue in the program. A physician's written and signed order must be provided if for any portion of time the student may not fulfill and course requirements due to the pregnancy.
11. Pregnant students should make a good faith effort to complete all clinical and didactic requirements at regularly scheduled times, while following the Attendance Policy. Accommodations may be sought through Accessibility Services.

## **MRI SAFETY**

The NCMC Radiologic Technology Program has adopted and strictly enforces the policies for Health and Safety as set forth by the JRCERT Standards. JRCERT Standards on Health and Safety are defined in JRCERT

Radiologic Technology students may have potential access to the magnetic resonance environment during clinical assignments. All students will be educated in MRI safety and will be screened for contraindications. Should a student's status change regarding contraindications at any time, he/or she must notify the Program Director. Students with contraindications will be evaluated on a case by case basis and modifications to modality assignments will be made based upon the type of contraindication.

### **STUDENT ALCOHOL/DRUG ABUSE**

NCMC Radiologic Technology students are expected to follow the Alcohol and Illegal Drugs Policy. Failure to follow the policy may result in disciplinary action up to and including expulsion. The complete policy can be viewed in the College Catalog.

### **TOBACCO**

Smoking, vaping, or the use of tobacco products are prohibited at NCMC and all clinical settings. The complete policy can be viewed in the College Catalog.

### **SHARPS AND BIOHAZARD POLICY**

Students of the NCMC Radiologic Technology Program will be taught correct techniques to be used when handling biohazard materials and "sharps". If a student comes into contact with a biohazard or is injured by a "sharps" device while at the Clinical Practice Education site, he/she must immediately report the incident to the Clinical Instructor and follow the clinical site's protocol. If medical attention is necessary, the student must obtain care at the nearest appropriate institution. Depending on the nature of the incident and the facility where it occurred, the medical treatment may be at the student's expense. NCMC is NOT responsible for student injuries. NCMC does NOT carry healthcare insurance on the student or any insurance that covers the student's health. The student must additionally contact the Radiologic Technology Program Director or Clinical Coordinator on the date of occurrence. The student will provide NCMC with a detailed written account of the incident and a copy of the clinical site's incident report, if available.



# **Radiologic Technology Program Clinical Handbook**

# Radiologic Technology Program Clinical Handbook

## Table of Contents

### Clinical Education Policies and Procedures

Clinical Practice Education	39
Clinical Rotation Schedule	39
Clinical Schedule	40
Clinical Attendance	40
Clinical Call In Procedure	41
Recognized Clinical Education Settings	41
Clinical Eligibility	44
Clinical Obligations	44
Clinical Dismissal	46
Advanced Modality Rotations	46
Clinical Dress Code	47
Student Supervision Policy	48
Malpractice	50
Accident or Injury	50
Transportation	50
Student Employment	50
Falsification of Records	51
Validity	51

### Clinical Education Setting Student Evaluation

Clinical Practice Education Documentation	52
Site Orientation	52
Equipment Orientation	52
Time Records	52
Daily Log of Exams/Repeat Log	53
Evaluation of Student's Clinical Competency	54
Competency Evaluation	54
Evaluation of Clinical Coordinator	55
Evaluation of Clinical Instructor	56
Student Evaluation of Clinical Setting	56
Terminal Competency Evaluation	56
Clinical Competency Requirements	56
Clinical Grading	57
Clinical Competency Evaluation System	58

# **CLINICAL EDUCATION POLICIES AND PROCEDURES**

## **CLINICAL PRACTICE EDUCATION**

The Clinical Practice Education is a critical component of North Central Missouri College's Radiologic Technology competency-based program. It is essential that NCMC and the clinical affiliates work together to provide the best educational experience for all students.

NCMC has affiliated with a variety of clinical practice settings to provide the student with a diverse and adequate Clinical Practice Education. Each student will rotate through three types of Radiologic facilities, including a large hospital, community hospital, and a clinic. Each student will be assigned to at least one clinical rotation in each of the three types of facilities.

There are five (5) Clinical Practice courses throughout the two-year program. The Clinical Coordinator assigns/places Radiologic Technology students at affiliated hospitals, clinics, and imaging centers and ensures the clinical education correlates with the didactic course content. The Clinical Coordinator additionally ensures these assignments provide the student with the volume and variety of clinical experiences required to successfully progress through the program and meet ARRT Clinical Competency Requirements.

During the Clinical Practice Education the student will receive formal affective evaluations, receive coaching and critique, maintain various records/documents, and complete Competency Evaluations to meet ARRT Clinical Competency Requirements. Efforts have been made to develop a clinical evaluation system that will identify the student's strengths and deficiencies as they progress through the Clinical Practice Education. The clinical evaluation will help each student address deficiencies and maximize learning outcomes.

## **CLINICAL ROTATION SCHEDULE**

The NCMC didactic course content must closely align with experiences gained in the Clinical Practice Education. The Clinical Coordinator and Clinical Instructors maintain open and frequent communication to coordinate all aspects of the NCMC Radiologic Technology competency-based curriculum. The Clinical Coordinator keeps Clinical Instructors informed of Clinical Objectives and the Clinical Instructor has professional discretion in delivering the clinical aspect of those objectives.

To provide guidance to the student and Clinical Instructor, the following guidelines have been established to direct clinical focus when rotating through the various types of radiographic facilities. The guidelines indicate the approximate amount of time the student should be spending in each clinical category. Although it is an important aspect of the profession, time spent in ancillary activities should be limited (file room, front desk, transport, etc.).

### **Large Hospital:**

- Diagnostic/Ortho- 75%
- Fluoroscopy- 10%
- Trauma/Portables- 5%
- Surgery- 5%
- Ancillary Services- 5%

### **Community Hospital:**

- Diagnostic/Ortho- 80%
- Fluoroscopy- 5%

- Trauma/Portables- 5%
- Surgery- 5%
- Ancillary Services- 5%

#### Clinic:

- Diagnostic/Ortho- 95%
- Fluoroscopy- 0%
- Trauma/Portables- 0%
- Surgery- 0%
- Ancillary Services- 5%

## CLINICAL SCHEDULE

Clinical education hours for most NCMC affiliated sites are between 8:00 a.m. and 4:30 p.m. in the Fall and Spring semesters and 8:00 a.m. to 5:00 p.m. in the Summer semester. Although clinical assignments may vary, hours will normally be between 5:00 a.m. and 7:00 p.m. The Clinical Coordinator will inform the student of the clinical hours when the assignment is given.

The days of clinical education assignment are established by the program. The Class Schedule in the Radiologic Technology Program Student Handbook outlines the clinical schedule.

Once established, clinical site assignments, schedules, and hours are set and alterations will not be considered unless extenuating circumstances arise that the Clinical Coordinator was not aware of when making the assignment. Valid requests for change may be formally made by submitting a Clinical Schedule Change Request form. Reasons that are valid and will be considered include, but are not limited to:

- Change of site for modality rotations
- Reasonable changes in shift start and stop times
  - Must be based on extenuating circumstances

Reasons that are NOT valid and will NOT be considered include, but are not limited to:

- Drive time
- Distance from student's home (as long as within 90 miles from NCMC)
- Personal perception of the site
- Multiple rotations to a site

Valid change requests will be considered and will only be made with the approval of the Clinical Instructor, Clinical Coordinator, and Radiologic Technology Program Director.

## CLINICAL ATTENDANCE

Students are expected to attend all clinical sessions of the courses in which they are enrolled. Absence places a student in jeopardy of failing. When a student finds it necessary to be absent, the student must notify the Clinical Coordinator and Clinical Instructor of impending absence before clinical. It is acceptable to leave a message regarding the absence on the instructor's voice mail or email.

A tardy or a partial absence from one minute up to half of the clinical day will be recorded as a half day absent. A tardy or partial absence greater than a half class day will equal a full day absent.

Students exceeding three days absence in any clinical course will be withdrawn from the course.



Extenuating circumstances will be evaluated on an individual basis (i.e. death or serious illness of an immediate family member, emergency surgery, military or jury duty). Appropriate documentation for validation of the circumstance will be required of the student upon return.

## **CLINICAL CALL IN PROCEDURE**

In the event a student will be **absent, tardy, or partially absent** the student must:

### **On classroom days:**

- Refer to the Radiologic Technology Program Student Handbook.

### **On clinical days:**

Notify the Clinical Coordinator **AND** Clinical Instructor via telephone or email prior to start of the student's scheduled clinical shift.

- If the Clinical Coordinator cannot be reached, it is acceptable to leave a voicemail. If direct contact with the Clinical Instructor cannot be made, the student may leave a message with another technologist in the department (record the person you leave the message with). Regardless of who you speak with, it **MUST BE RECEIVED PRIOR TO THE START OF THE CLINICAL SHIFT**.
- Contact by cellular text is absolutely not acceptable, will not be acknowledged, and will not fulfill the notification requirement.
- Except in extreme or emergent situations, the student must personally make contact with the Clinical Coordinator and Clinical Instructor and it is not acceptable for anyone other than the student to initiate contact regarding attendance. The student may not have a spouse, family member, or classmate notify the Clinical Coordinator or Clinical Instructor of an absence, tardy, or leaving early.
- The absence must be entered in Trajecsyst and the reason should be entered in the "explanation" box.
- Failure to notify the Clinical Coordinator **AND** Clinical Instructor of an absence prior to the start of the clinical shift constitutes a no-call, no-show. Two occurrences of no-call, no-show will result in dismissal.

## **RECOGNIZED CLINICAL EDUCATION SETTINGS**

The NCMC Radiologic Technology Program utilizes clinical education settings that have been approved by JRCERT. A complete listing of these approved institutions is available on the JRCERT database at:

<http://www.jrcert.org/>

<b>Clinical Sites</b>	<b>Clinical Instructors</b>	<b>Mileage</b>
<b>Amberwell Atchison</b> 800 Ravenhill Drive Atchison, KS 66002 (913) 360-5392	Heather Birkinsha <a href="mailto:hbirkinsha@amberwellhealth.org">hbirkinsha@amberwellhealth.org</a>  Kacie Finley <a href="mailto:kfinley@amberwellhealth.org">kfinley@amberwellhealth.org</a>  Tara Johansen <a href="mailto:tjohansen@amberwellhealth.org">tjohansen@amberwellhealth.org</a>	(41 miles) Community Hospital
<b>Clarinda Regional Health Center</b> 220 Essie Davison Drive Clarinda, IA 51632 (712) 542-8245	Amber Bix <a href="mailto:abix@clarindahealth.com">abix@clarindahealth.com</a>  Kallista Staples <a href="mailto:kstaples@clarindahealth.com">kstaples@clarindahealth.com</a>	(64 miles) Community Hospital
<b>Harrison County Community Hospital</b> 2600 Miller Street Bethany, MO 64424 (660) 425-0274	Jenna Tatum <a href="mailto:jtatum@hcchospital.org">jtatum@hcchospital.org</a>  Kerri Ward <a href="mailto:kward@hcchospital.org">kward@hcchospital.org</a>	(64 miles) Community Hospital
<b>Mosaic Life Care at St. Joseph-Family Care North Pointe B</b> 5210 North Belt Highway Entrance B & C St. Joseph, MO 64506 (816) 271-1334	Heather Knapp <a href="mailto:heather.knapp@mymlc.com">heather.knapp@mymlc.com</a>	(9 miles) Clinic
<b>Mosaic Life Care at St. Joseph-Internal Medicine Plaza 2</b> 901 Heartland Road Plaza 2, Suite 3800 St. Joseph, MO 64506 (816) 671-4800 or (816) 271-1062 Ext. 5031	Marisa Kamler <a href="mailto:marisa.kamler@mymlc.com">marisa.kamler@mymlc.com</a>	(14 miles) Clinic
<b>Mosaic Life Care at St. Joseph-Radiology and Outpatient Imaging</b> 3620 Frederick Avenue St. Joseph, MO 64506 (816) 671-4846	Kristina Engemann <a href="mailto:krit.engemann@mymlc.com">krit.engemann@mymlc.com</a>  Tiffany Hale <a href="mailto:tiffany.hale@mymlc.com">tiffany.hale@mymlc.com</a>  Kelsey Wildhagen <a href="mailto:kelsey.wildhagen@mymlc.com">kelsey.wildhagen@mymlc.com</a>	(13 miles) Clinic
<b>Mosaic Medical Center-Albany</b> 705 College Street Albany, MO 64402 (660) 726-3941	Courtney May <a href="mailto:courtney.may@mymlc.com">courtney.may@mymlc.com</a>  Marissa Spillman <a href="mailto:marissa.spillman@mymlc.com">marissa.spillman@mymlc.com</a>	(49 miles) Community Hospital

<b>Mosaic Medical Center-Maryville</b> 2016 South Main Street Maryville, MO 64468 (660) 562-4354 (night tech phone)	Ricardo Lugo <a href="mailto:ricardo.lugo@mymhc.com">ricardo.lugo@mymhc.com</a>	(28 miles) Community Hospital
<b>Mosaic Medical Center-St. Joseph</b> 5325 Faraon Street St. Joseph, MO 64506 (816) 271-6475	Rayme Greaser <a href="mailto:rayme.greaser@mymhc.com">rayme.greaser@mymhc.com</a>  Janice Halcomb <a href="mailto:janice.halcomb@mymhc.com">janice.halcomb@mymhc.com</a>  Tiffany Jansen <a href="mailto:tiffany.jansen@mymhc.com">tiffany.jansen@mymhc.com</a>	(14 miles) Large Hospital
<b>Pershing Memorial Hospital</b> 130 East Lockling Avenue Brookfield, MO 64628 (660) 258-2222	Kimi Brooks <a href="mailto:radtech1@phsmo.org">radtech1@phsmo.org</a>	(108 miles) *Only used if mutually beneficial for the student. Community Hospital
<b>Saint Luke's-Hedrick Medical Center</b> 2799 North Washington Street Chillicothe, MO 64601 (660) 214-8326	Sydnee Crowe <a href="mailto:srounkles@saint-lukes.org">srounkles@saint-lukes.org</a>  Melissa Kitchin <a href="mailto:mmallory@saint-lukes.org">mmallory@saint-lukes.org</a>  April Jenkins <a href="mailto:atietjens@saint-lukes.org">atietjens@saint-lukes.org</a>	(85 miles) Community Hospital
<b>Saint Luke's-Wright Memorial Hospital</b> 191 Iowa Boulevard Trenton, MO 64683 (660) 359-5621	Sydnee Crowe <a href="mailto:srounkles@saint-lukes.org">srounkles@saint-lukes.org</a>  Kalli Miller <a href="mailto:kmiller@saint-lukes.org">kmiller@saint-lukes.org</a>  April Tipton <a href="mailto:atipton@saint-lukes.org">atipton@saint-lukes.org</a>	(77 miles) Community Hospital
<b>University Health-Lakewood Medical Center</b> 7900 Lee's Summit Road Kansas City, MO 64139 (816) 404-7000	Sarah Black <a href="mailto:sarah.black@uhkc.org">sarah.black@uhkc.org</a>	(80 miles) Community Hospital
<b>University Health-Truman Medical Center</b> 2301 Holmes Street Kansas City, MO 64108 (816) 404-0692	Priyanka Conner <a href="mailto:priyanka.conner@uhkc.org">priyanka.conner@uhkc.org</a>	(67 miles) Large Hospital

## CLINICAL ELIGIBILITY

Prior to assignment to a clinical setting, students must:

- Successfully complete all courses in the term prior to the clinical assignment.
- Be certified in Cardiopulmonary Resuscitation (CPR).
- Be compliant in HIPAA.
- Receive training in, understand, and practice radiation protection and the Cardinal Rules of radiation protection (time, distance, and shielding).
- Be knowledgeable of JRCERT Standards and the NCMC policies related to clinical practice including, but not limited to:
  - student to technologist ratio (4.4)
  - radiation safety practices (5.3)
  - direct supervision (5.4)
  - indirect supervision (5.4)
  - repeat image supervision (5.4)
- Be knowledgeable of the Radiologic Technology Program and Clinical Handbook.
- Have complete and current immunization records on file with NCMC.
  - Mumps, Measles, and Rubella (MMR)
  - Tetanus, Diphtheria, and Pertussis (Tdap)
  - Hepatitis B
  - Varicella (Chickenpox)
  - COVID-19
    - Exemptions are reviewed and granted on a case-by-case basis. Exemptions must be submitted and approved in advance of clinical placement.
- Have documented annual Two-Step TB test on file with NCMC.
  - In the event the test is positive, a documented negative chest x-ray may be required.
- Have documented annual influenza vaccination on file with NCMC.
- Submit to random drug screenings and maintain a negative status.
- Complete all requirements of the clinical setting including, but not limited to: verification of criminal background check, Family Care Registry, Employee Disqualification List, clinical orientation, HIPAA compliance, etc.
  - Many clinical settings have unique requirements before a student can attend their site. The Clinical Coordinator will advise the student in advance of what needs to be completed or provided prior to assignment. It is the student's responsibility to provide the necessary documentation and complete the necessary forms.
  - Findings on any form of background check may prevent the student from being assigned to some and/or all clinical practice settings. Reference the Criminal Background Check Policy in the NCMC Radiologic Technology Program Student Handbook.

If the student fails to comply with any of the items constituting Clinical Eligibility, the student will not be allowed to attend the clinical setting until compliance has been established. The time missed due to noncompliance will factor into the student's total absences for the clinical practice course in which they are enrolled.

## CLINICAL OBLIGATIONS

- It is the student's responsibility to achieve and maintain Clinical Eligibility status.
- It is the student's responsibility to ensure all Clinical Practice Education Documentation is completed and submitted by the due dates. All required clinical forms are found on the Trajecs clinical tracking

system. In the extremely unlikely event that Trajecsyst system is unavailable for an extended period of time; hard copies of all clinical forms are maintained in the Clinical Coordinators office.

- Site Orientation
- Equipment Orientation
- Time Records
- Daily Log Sheet
- Repeat Log (hard copy can be printed from the Trajecsyst “Documents”)
- Evaluation of Student’s Clinical Competency
- Competency Evaluation
- Evaluation of Clinical Coordinator
- Evaluation of Clinical Instructor
- Student Evaluation of Clinical Setting
- Terminal Competency Evaluation
- The student must be familiar with and comply with all JRCERT Standards and NCMC policies, including radiation safety practices. Refer to the Radiation Safety policy in the NCMC Radiologic Technology Program Student Handbook for JRCERT Standards and NCMC policies related to radiation safety practices.
  - Students **MUST NOT** hold patients or image receptors during any radiographic procedure.
- The student must be familiar with and comply with all JRCERT Standards and NCMC policies, including student supervision. Refer to the Student Supervision policy in the NCMC Radiologic Technology Program Clinical Handbook for JRCERT Standards and NCMC policies related to clinical supervision of the student.
  - Students must perform procedures under the direct supervision of a qualified radiographer until a student achieves competency. (5.4)
  - Students must perform procedures under the indirect supervision of a qualified radiographer after a student achieves competency. (5.4)
  - Students must be directly supervised by a qualified radiographer when repeating unsatisfactory images. (5.4)
  - Students must be directly supervised by a qualified radiographer when performing mobile procedures, regardless of level of competency.
- The student must be familiar with and comply with JRCERT Standard 4.4 “the student to radiography clinical staff ratio must be 1:1. However, it is acceptable that more than one student may be temporarily assigned to one technologist during uncommonly performed procedures.” Only one student is to be assigned to a technologist or to a room at one time.
- Students must follow the appropriate **steps to demonstrate competency**. Students must complete the following, in the order indicated, prior to “Testing for Competency”.
  1. The student will receive classroom instruction on the anatomy, physiology, patient care considerations, radiation protection, and the procedural steps related to the examination.
  2. The student will demonstrate knowledge of the procedure and related content on a written examination and scored 75% (C) or greater.
  3. The student will observe a Radiologic Technology faculty member demonstrate the examination in the program lab.
  4. The student will participate in supervised and independent practice performing the examination on a class-mate in the program lab.
  5. The student will simulate the examination in the program lab under the direct supervision of a Radiologic Technology Program faculty member.
  6. At the discretion of the Clinical Instructor, the student is now eligible to Test for Competency in the clinical environment. After the testing is complete, the testing technologist will record the students’ performance on the Competency Evaluation form described in the Clinical Practice Education Documentation section of the NCMC Radiologic Technology Program Clinical Handbook.

- The student must follow the ALARA (As Low As Reasonably Achievable) concept and practice the Cardinal Rules of Radiation Protection (Time, Distance, Shielding). The student must comply with the Radiation Safety rules in the NCMC Radiologic Technology Program Student Handbook.
- The student must follow the Clinical Dress Code while in the clinical setting.
- The student must arrange for reliable transportation that will permit prompt and dependable reporting for each clinical education assignment. The NCMC has affiliated clinical sites in diverse geographic locations. The student may be required to travel distances up to 90 miles from NCMC.
- The student must follow the Clinical Call in Procedure if they will be tardy, absent, or partially absent.
- The student must not alter the Clinical Practice rotation schedule and/or shift start and stop time. In very select circumstances, Clinical Schedule Change Request form may be submitted. Refer to the Clinical Schedule in the NCMC Radiologic Technology Program Clinical Handbook.
- The student must exhibit professional and ethical behavior at all times, to include but not limited to:
  - Be prompt and be in the assigned work area at the beginning of the clinical shift.
  - Student's should anticipate small delays and arrive 15 minutes early to clock in on Trajecsys.
  - Follow the Clinical Dress Code and be well groomed.
  - Treat everyone with respect; patients, technologists, nurses, and fellow students alike.
  - Be careful of what you say and how you say it. Consider how others will perceive and interpret your words.
  - Exhibit excellent work ethic and positive attitude.
  - Treat the Clinical Education Practice as an extended job interview.
  - Mirror the Standards of Ethics set forth by the American Registry of Radiologic Technologists (ARRT).

Failure to fulfill all Clinical Obligations may result in the student being removed from the clinical site and/or may prevent the student from successfully completing the NCMC Radiologic Technology Program. Additional disciplinary action may be taken as described in the NCMC Radiologic Technology Program Student Handbook.

## **CLINICAL DISMISSAL**

Reasons a clinical site may reject a student for clinical rotations or ask that a student be removed from their facility (include but are not limited to):

- Failure to meet clinical eligibility requirements.
- Failure to meet clinical obligations.
- Failure to comply with published hospital policies.
- Failure to comply with published hospital protocols.
- Endangering a patient or other facility personnel.
- Any other reasons determined by the clinical facility.

Students rejected/dismissed from a clinical facility for any of the above reasons may or may not be provided an alternate clinical assignment. This determination is dependent on the nature of the violation. The student has full access to the college's due process to appeal any such decision regarding clinical placement.

## **ADVANCED MODALITY ROTATIONS**

As a component of the RT 220 Imaging Modalities didactic course and coordinated with the Clinical Practice Education, the student will spend a short observational rotation through a variety of modalities. Additional time in any modality can be arranged at the student's request at the discretion of the Clinical Coordinator.

**Mandatory Observations:**

- Magnetic Resonance Imaging 1 day
- Radiation Therapy 1 day
- Nuclear Medicine 1 day
- Sonography 1 day
- Computed Tomography 3 days
- Angiography 1 day

**Elective Observations:**

- Mammography 1 day

The mammography observation is an elective observation only. Each student will be given the opportunity to complete a mammography observation; however, it is not required for any student. If a student wishes to rotate through a mammography department, NCMC has adequate clinical affiliates that are willing to allow a male or female observer rotate through the mammography department. A list of clinical sites willing to provide an equal mammography observational experience for males and females is maintained in the Clinical Coordinator's office.

**CLINICAL DRESS CODE**

To promote health, safety, and a professional image, all students are required to follow the NCMC Radiologic Technology Program dress code during their Clinical Practice Education.

If any student is unsure of what is permitted, contact the Clinical Coordinator.

If the NCMC dress code conflicts with the student's assigned clinical site, the clinical coordinator may amend the dress code for a specific rotation.

	<b>Appropriate</b>	<b>Inappropriate</b>
<b>Scrub Top and Pants</b>	Program approved ceil blue scrubs. Optional knit undershirt may be short or long sleeved and white, gray, or black in color.	Dirty, torn, or stained uniforms. Wrinkled and worn uniforms. Pants that are too long or dragging the floor. Undershirt that is not the approved style or color.
<b>Lab Coat</b>	Program approved black lab coat.	Dirty, torn, or stained uniforms. Wrinkled and worn uniforms. Hooded sweatshirts, fleece/sherpa jackets, or jackets that are not the approved style or color.
<b>Shoes</b>	White, gray, or black leather duty shoes or leather tennis shoes. Small amount of color is allowed.	Canvas shoes, high heels, sandals, boots, shoes with excessive amounts of color. Dirty or torn shoes.
<b>Jewelry</b>	Engagement/wedding rings. Watches. Post earrings (limited to 2 per ear).	Large rings, large earrings, facial piercings, tongue piercings, dermals, bracelets, necklaces. Smart watches.

<b>Undergarments</b>	Not visible.	Bright colors and patterns that show through scrubs or become visible when squatting, bending, or reaching.
<b>Name Tags</b>	School issued name tag.	No name tag.
<b>Anatomical Markers</b>	Left and right markers must be carried at all times. Markers should include three initials.	Missing one or both markers. Markers with additional lead items (besides initials) that will be projected onto image.
<b>Personal Dosimetry Badge</b>	Dosimetry badge worn at the collar.	No dosimetry badge or another person's dosimetry badge.

### Grooming Requirements:

- Uniform must be clean and ironed.
- Students must practice good personal hygiene.
- Long hair (below shoulder length) must be put up or tied back.
- Haircut must not be of a style, cut, and/or color considered eccentric by the Program Director, Clinical Coordinator, or Clinical Site.
- Fingernails cannot be longer than ¼ inch past the tip of finger.
- Artificial nails are not permitted.
- Fingernail polish must be neat and not chipped.
- Make-up may not be heavy or excessive.
- Avoid cologne or perfume.
- Tattoos/body art must remain completely covered at all times and not be visible to patients or staff.
- Men should be clean shaven daily. Neatly trimmed beards and moustaches are permitted as long as acceptable to the clinical site.

The clinical dress code will be strictly enforced. Students will not be allowed to remain in the clinical setting if the dress code is not followed. The time missed due to a violation of the Clinical Dress Code will factor into the student's total absences for the clinical practice course in which they are enrolled.

## STUDENT SUPERVISION POLICY

The NCMC Radiologic Technology Program has adopted and strictly enforces the policies for student supervision as set forth by the JRCERT Standards. JRCERT Standards on student supervision are defined in JRCERT Radiography Standard 5.4.

<https://www.jrcert.org/accreditation-information/accreditation-standards-2021/>

### Direct Supervision:

Each student will undergo **Direct Supervision** until such time as the student achieves competency for a given procedure. **JRCERT Standard 5.4 “Assures that medical imaging procedures are performed under the direct supervision of a qualified radiographer until a student achieves competency.”** The definition of direct supervision will be as follows:

1. An ARRT Registered Technologist in good standing with the ARRT reviews the procedure in relation to the student's achievement;



2. An ARRT Registered Technologist in good standing with the ARRT evaluates the condition of the patient in relation to the student's knowledge;
3. An ARRT Registered Technologist in good standing with the ARRT is physically present during the conduct of the procedure;
4. An ARRT Registered Technologist in good standing with the ARRT reviews and approves the procedure and/or image.

#### **Direct Supervision (Repeat Images):**

Each student will undergo **Direct Supervision** when repeating **ALL** unsatisfactory images. Regardless of the student's level of competency, 100% of repeated images must occur under Direct Supervision. **JRCERT Standard 5.4 "Assures that students are directly supervised by a qualified radiographer when repeating unsatisfactory images."**

During repeated images, the presence of a qualified radiographer during the repeat of an unsatisfactory image assures patient safety and proper educational practices.

- At no point during the clinical education training may a student perform a repeat image without the Direct Supervision of a registered technologist.
- The student must have the supervising ARRT Registered Technologist initial a Repeat Log. The Repeat Log will be turned in to the Clinical Coordinator and will be maintained in the student's clinical file to document compliance with Standard 5.4.

#### **Indirect Supervision:**

Each student will undergo **Indirect Supervision** on imaging procedures the student has achieved and demonstrated competency. **JRCERT Standard 5.4 "Assures that medical imaging procedures are performed under the indirect supervision of a qualified radiographer after a student achieves competency."** The definition of indirect supervision will be as follows:

1. An ARRT Registered Technologist in good standing with the ARRT is "immediately available" to assist students regardless of the level of student achievement;
  - a. Immediately available is interpreted as the physical presence of a qualified radiographer adjacent to the room or location where a radiographic procedure is being performed.
  - b. Immediately available has also been interpreted by JRCERT as a qualified radiographer being within "voice distance" of where the procedure is being performed.
2. This availability applies to all areas where radiation equipment is in use.
3. Indirect supervision only applies to those procedures the student has achieved competency on.
4. The process of demonstrating the achievement of competency is described in the NCMC Radiologic Technology Clinical Handbook under Clinical Practice Education Documentation.
  - a. The student is deemed competent and may perform a procedure under indirect supervision after they have Tested for Competency and achieved a rating of "Pass" on the Competency Evaluation.
5. By NCMC Radiologic Technology Program policy, this does NOT include the use of surgical and mobile equipment. By NCMC Program policy, the use of surgical and mobile equipment must ALWAYS be under Direct Supervision, even after competency is achieved on those procedures.

**Failure to comply with the JRCERT and the NCMC supervision policies as stated above may result in disciplinary action up to and including dismissal from the program.**

## MALPRACTICE

Liability insurance is included in the overall Radiologic Technology Program fees.

Students are advised that they may be held personally responsible for acts of negligence while in the clinical setting and judgements may be made against them in a court of law.

Therefore, it is a requirement of this division that each student purchase liability insurance, to be paid at the time of enrollment, the first semester of each year.

## ACCIDENT OR INJURY

In the event of an accident or injury while on the premises of an affiliated clinical setting, the student should seek treatment at the nearest appropriate institution at the expense of the student, unless otherwise indicated by the clinical setting. Accident report forms should be completed and submitted to the Radiologic Technology Program Clinical Coordinator as soon as possible following an incident.

## TRANSPORTATION

It is the student's responsibility to arrange for transportation that will permit prompt and dependable reporting for each Clinical Practice Education assignment. **The student may be required to travel distances up to 90 miles from NCMC-Savannah Campus.** The geographic location of the student's residence will be considered when determining clinical assignments; however, the primary determinant will be the clinical experience needed by the individual student. Requests for change in clinical assignment based on the student's transportation arrangements or drive time will not be considered.

## STUDENT EMPLOYMENT

The following steps must be strictly followed for all students that are employed or seeking employment while enrolled in the NCMC Radiologic Technology Program.

1. Due to the amount of time a student must devote to academic and clinical obligations, students are encouraged to refrain from holding outside jobs, but are not prohibited from doing so. NCMC Radiologic Technology Program requirements, didactic and clinical, take precedence over students outside work, and no special consideration will be given to students who do choose to work. Nothing identifying an individual as an NCMC student may be worn in a working capacity outside of program training. Additionally, the personal dosimetry device issued to the student by the NCMC Radiologic Technology Program must not be worn while performing any activity other than training conducted by, and supervised by NCMC. If employed as a student technologist, the employer must provide a separate personal dosimetry device.
2. Students employed by NCMC clinical sites must not be on paid time during their scheduled clinical education times. If requested, documentation must be provided verifying the student is not receiving wages for clinical training hours (ex. time care, pay stub).
3. Students must not apply any paid work activities to clinical hours, clinical competencies, or record of procedures performed. Clinical education experiences and work experiences must be kept completely isolated and any activity performed during work time cannot be applied to any aspect of the clinical education directed by NCMC.
4. When accepting work, and scheduling work hours, students must remain aware that periodic changes in class schedules and clinical rotation assignments do occur. Class and clinical schedules do not take a

students work schedule into consideration and special requests related to outside work assignments will not be accommodated.

5. Violation of any of the above employment policies will be considered as an attempt to fraudulently report information and appropriate disciplinary action will take place.

## **FALSIFICATION OF RECORDS**

Integrity and transparency is paramount in any medical profession. Falsification of any records, clinical/programmatic and/or electronic/hard-copy, may lead to immediate dismissal from the program.

## **VALIDITY**

Validity is an online screening and compliance service that the NCMC Radiologic Technology Program uses to manage student clinical compliance records such as vaccinations, criminal background checks, hospital competency test results, BLS certification, health insurance, confidentiality statements, etc.

Registration with Validity requires a one-time fee paid by the student that covers the entirety of the 2-year Radiologic Technology program.

# CLINICAL EDUCATION SETTING STUDENT EVALUATION

## CLINICAL PRACTICE EDUCATION DOCUMENTATION

During each clinical practice rotation, the student will be responsible for maintaining accurate and current documentation related to various aspects of their Clinical Practice Education. It is imperative and required that the student complete the documentation in a timely manner and when indicated by the Clinical Coordinator. Failure to complete the requisite documentation on time may hinder the student's successful progression through the program. A large amount of the necessary clinical education documentation will be completed and maintained on the on-line clinical tracking system, Trajecsyst. Arrangements have been made with clinical sites so that students may have limited access to computers for clinical documentation purposes. Falsification of any record or documentation, digital or hard-copy, is a serious infraction and may result in dismissal from the program.

Accurate completion of all Clinical Practice Education Documentation is a Clinical Obligation. Failure to do so may result in the student being removed from the clinical site and/or may prevent the student from successfully completing the NCMC Radiologic Technology Program. Additional disciplinary action may be taken as described in the NCMC Radiologic Technology Program Student and Clinical Handbooks.

Failure to meet due dates will follow the Late Assignment policy and may prevent the student from successfully completing the program.

### **Site Orientation:** (beginning of each new clinical site)

The Site Orientation form is found on the Clinical Instructor's Trajecsyst site and must be completed by the clinical instructor during the first week a student is at a new clinical setting. Completion of the Site Orientation documents the student is cognizant of the clinical site's policies and procedures, including: hazards (fire, electrical, chemical), emergency preparedness, medical emergencies, HIPAA, and Standard Precautions.

The Clinical Instructor is responsible for completing the Site Orientation; however, it is the student's responsibility to ensure the form is completed. After completed, the student can view the Site Orientation and make appropriate comments.

### **Equipment Orientation:** (beginning of each new clinical site)

The Equipment Orientation form is found on the Clinical Instructor's Trajecsyst system and must be completed by the Clinical Instructor during the first week a student is at a new clinical site or is working with new equipment. The Equipment Orientation documents the student has been familiarized with the equipment for safe and efficient operation.

The Clinical Instructor is responsible for completing the Equipment Orientation; however, it is the student's responsibility to ensure the form is completed. After completed, the student can view the Equipment Orientation and make appropriate comments.

### **Time Records:** (daily)

#### ***Clock In/Out***

Students functioning in the capacity of an NCMC Student must maintain a record of all time within the clinical setting. Time records will be maintained on the student's Trajecsyst system. The student will Clock In at the beginning of the clinical education shift and Clock Out at the end of the day. The Trajecsyst system will record the exact time the student submits the Clock In or Clock Out. It is important that the student select the correct clinical site prior to submitting the time stamp. The student must enter time with the Clock In/Out function

using a clinical site computer and are strictly prohibited from using any personal device not owned by the clinical site. The Clinical Coordinator will verify that the student's time record is linked to an IP address owned by the clinical setting. Using the Clock In/Out function on a personal device will constitute Falsification of Records.

Failure to Clock In/Out will result in disciplinary action.

- First occurrence of failure to Clock In/Out will result in the student receiving a verbal warning.
- Second occurrence of failure to Clock In/Out will result in the student receiving a written warning.
- Any additional occurrences of failure to clock in/out will result in program/clinical probation.

### ***Time Exception***

In the event the student is unable to record time with the Clock In/Out function, the student may submit a Time Exception. With a Time Exception the student will manually enter the time in or out, and the Clinical Instructor will verify if the time entered by the student is accurate. The student should complete the Time Exception at the first available opportunity. The Time Exception should be made using a clinical site computer; however, a personal device may be used in the event the student left the clinical setting without clocking out, or computer access was not available to Clock Out. In this instance, the student should contact the clinical coordinator. It is the student's responsibility to use the Clock In/Out functions as designed and the Time Exception should only be used in select circumstances. The Clinical Coordinator will investigate excessive use of the Time Exception function or any entries that appear out of the ordinary. Submitting a Time Exception that is not accurate will constitute Falsification of Records.

If the student is going to be tardy, absent, or leave early, the Clinical Call in Procedure must be followed. Failure to do so is a violation the NCMC Program policy, refer to the NCMC Radiologic Technology Program Clinical Handbook (Attendance Policy).

Clocking In after the scheduled clinical education shift start time will constitute a tardy and will follow the Attendance Policy. Time not accounted for in the student's Time Records, (Clocking In late or Clocking Out early) will follow the Attendance Policy. If a student is working with a patient at their scheduled end of the clinical day, the student should complete the exam they began prior to Clocking Out. Any additional Clock In time beyond the scheduled 8 hours does not accrue and cannot be used at a later date. It is viewed as a professional responsibility to the patient and the clinical setting.

It is absolutely not acceptable for anyone to clock a student in or out other than that student. If the student is unable to Clock In or Clock Out due to extenuating circumstances, the student must use the Time Exception function. It is not allowable for the Clinical Instructor, a technologist, another student, or anyone else to clock a student in or out. A student allowing or asking someone else to clock them in or out will constitute Falsification of Records. If it occurs without the student's knowledge or consent, the student must immediately notify the Clinical Coordinator to avoid being charged with Falsification of Records.

**Per JRCERT Standard 4.4- clinical assignments cannot exceed ten (10) hours in any one day and the total didactic and clinical involvement cannot exceed forty (40) hours per week.**

### **Daily Log of Exams/ Repeat Log: (daily)**

Daily Log of Exams: Daily recording of the student's clinical experience verifies the volume and variety of procedures being performed. The Clinical Coordinator will analyze this report to ensure constant alignment of the program course content and the corresponding clinical education.

The student should record each procedure in an easily accessible format; however, the information will be duplicated into the student's Trajecsyst system for a permanent record. Information entered into Trajecsyst

includes: date, number of instances of a procedure, number of repeats, type of procedure, participation level (observed, assisted, performed), and any necessary comments. The Daily Log sheet should be updated daily; however, must be updated at least weekly.

The student must maintain a hard copy document with a HIPAA compliant method of identifying procedures performed by the student. The student must be able to locate procedures they have performed upon the Clinical Coordinator's request.

**Repeat Log: JRCERT Standard 5.4 "Assures that students are directly supervised by a qualified radiographer when repeating unsatisfactory images."** The student will maintain, and turn in, a hard-copy Repeat Log to document compliance with JRCERT Standard 5.4. The Repeat Log form is uploaded in Trajecsyst and can be printed from the Documents tab. Items that must be documented by the student on the Repeat Log are: HIPAA compliant patient ID, Examination/view, reason for the repeat, and the supervising technologists initials. The technologist must physically initial the form. It is not acceptable for the student to enter the technologist's initials. The Repeat Log must be turned in to NCMC at a date indicated by the Clinical Coordinator.

### **Evaluation of Student's Clinical Competency:**

The Evaluation of Student's Clinical Competency form is found on the Clinical Instructor's Trajecsyst system and must be completed by the Clinical Instructor at designated times during the student's Clinical Practice Education. The Evaluation of Student's Clinical Competency form is used to evaluate and document the student's overall clinical performance. The form focuses on a variety of qualities and skills that are required of a Radiologic Technologist. The form is designed to identify student strengths and deficiencies. With deficiencies identified, they can be appropriately addressed by the student, Clinical Instructor, Clinical Coordinator, Program Director, and Radiologic Technology faculty. The end goal of any student evaluation is to maximize each student's individual learning outcomes.

The Clinical Instructor is responsible for completing the Evaluation; however, it is the student's responsibility to ensure the form is completed. After completed, the student can view the Evaluation on the Trajecsyst site. After analyzing the completed form, the student must comment on the evaluation. The comments must be professional and constructive in nature and should include an action plan for improvement.

In the event a student achieves an Evaluation of Student's Clinical Competency score less than 75% (C), the student, Clinical Instructor, and Clinical Coordinator will develop a cooperative action plan for correction. The Clinical Instructor and Clinical Coordinator will conduct frequent counseling sessions with the student until areas of concern have adequately improved.

### **Competency Evaluation: (when Testing for Competency)**

As part of the NCMC Radiologic Technology Program, students must demonstrate competence in the clinical activities identified in the Radiography Clinical Competency Requirements listed in the ARRT Radiography Certification Handbook. The Competency Evaluation form is found on the Clinical Instructor's Trajecsyst system and must be completed by the clinical instructor when a student demonstrates Competency on a procedure. Prior to demonstrating Competency on a particular procedure, Direct Supervision standards must be followed.

All Competency Evaluations must be done by a Clinical Instructor (CI) designated by NCMC or a qualified ARRT registered Radiologic Technologist designated by the clinical site's Clinical Instructor. The Competency Evaluation process is complete only after the Clinical Instructor has completed the Competency Evaluation form, and only at that time may a student perform that particular procedure under Indirect Supervision standards.

Regardless of demonstrating competency, **ALL** repeat images and mobile studies are to still be performed under Direct Supervision standards. For supervision standards, refer to the Student Supervision Policy in the NCMC Radiologic Technology Program Clinical Handbook.

Students must complete all prior **steps to demonstrate competency** outlined in Clinical Obligations before Testing for Competency.

The necessary steps of Testing for Competency are:

1. Upon receiving the procedure order and prior to initial patient contact, the student must verbally declare, to an authorized Technologist, the desire to Test for Competency. Once the request has been made and approved, the student must Test for Competency unless otherwise directed by the testing Technologist. The Clinical Instructor or authorized ARRT registered Technologist may deny the request to “Test for Competency” if it is not felt the student is prepared or abort the testing procedure at any time, for any reason.
2. The student must independently perform the approved Test for Competency without assistance. Any assistance from anyone will immediately terminate the testing sequence.
  - a. The student must independently perform every aspect of the examination, including: patient care activities, room preparation, technique selection, patient instruction, image evaluation, patient post instructions, and follow-up activities.
  - b. The student must make initial contact with the patient and another individual may not bring the patient to the examination room.
  - c. The evaluating technologist must observe only and may not prompt, assist, or talk to the student during the examination.
  - d. More than one student may not Test for Competency on a patient with multiple procedures ordered. (Example- A patient presents with orders for T-spine and an L-spine images. A student may Test on the T-spine and/or L-spine; however, one student may not Test on the T-spine and another student Test on the L-spine.)
3. The Evaluating technologist will observe, compare, and evaluate the student’s performance based on the ARRT’s standards of competency.
4. The Evaluating technologist will complete the Competency Evaluation form and critique the student’s performance on the necessary activities required for successful and competent completion of the procedure. To complete the Competency Evaluation process, the evaluator will indicate if the student has achieved competency by marking “Competent” or “Not Competent”
  - a. “Competent” (Pass) indicates the evaluating technologist finds the student competent on the procedure evaluated.
    - i. The student may now perform this procedure under Indirect Supervision standards, with the exception or repeat images and mobile studies.
  - b. “Not Competent” (Fail) indicates the evaluating technologist finds the student is not competent on the procedure and will need further experience prior to subsequent attempts to Test for Competency on the procedure.
    - i. The student must continue to perform this procedure under Direct Supervision standards.

**Evaluation of Clinical Coordinator:** (end of RT 190 Clinical Practice II & RT 260 Clinical Practice V)

The Evaluation of Clinical Coordinator form is found on the student’s Trajecsyst site and must be completed by the student at the end of Clinical Practice II & V. This evaluation process allows the student to critique the Clinical Coordinator’s performance in a variety of categories necessary to effectively coordinate and evaluate the student’s clinical education. The information will be used to improve student relations and program effectiveness by identifying areas in need of improvement.

The submission of the Evaluation of Clinical Coordinator is anonymous and the student's name submitting the evaluation cannot be identified. The student is encouraged to be completely candid and honest; however, comments must remain professional and constructive in nature.

**Evaluation of Clinical Instructor:** (at the end of each clinical setting assignment)

The Evaluation of Clinical Instructor form is found on the student's Trajecsyst site and must be completed by the student at the end of each clinical setting assignment. This evaluation process allows the student to critique the Clinical Instructor's performance in a variety of categories necessary to effectively deliver the student's clinical experiences.

The submission of the Evaluation of Clinical Instructor is anonymous and the student's name submitting the evaluation cannot be identified. The student is encouraged to be completely candid and honest; however, comments must remain professional and constructive in nature. After the student has been removed from the clinical setting, evaluation results will be shared with the Clinical Instructor and areas in need of improvement will be addressed by the Clinical Coordinator.

**Student Evaluation of Clinical Setting:** (at the end of each clinical site assignment)

The Student Evaluation of Clinical Setting form is found on the student's Trajecsyst site and must be completed by the student at the end of each clinical setting assignment. This evaluation process allows the student to critique the Clinical Setting in a variety of categories necessary of an environment conducive to the NCMC competency-based program.

The submission of the Student Evaluation of Clinical Setting is anonymous and the student's name submitting the evaluation cannot be identified. The student is encouraged to be completely candid and honest; however, comments must remain professional and constructive in nature. After the student has been removed from the clinical setting, evaluation results will be shared with the Clinical Setting's Clinical Instructor and areas in need of improvement will be addressed by the Clinical Coordinator.

**Terminal Competency Evaluation:** (end of RT 260 Clinical Practice V)

The Terminal Competency Evaluation form is found on the Clinical Instructor's Trajecsyst site and must be completed by the clinical instructor at the end of Clinical Practice V. The Terminal Competency Evaluation is an affective evaluation and contains many of the attitudes, abilities, and characteristics necessary to function as an entry level Radiologic Technologist. When completing the Terminal Competency Evaluation, the student's final Clinical Instructor will consider the student's comprehensive performance while under their direction. This is the last evaluation conducted on the student's clinical performance.

The Clinical Instructor is responsible for completing the Terminal Competency Evaluation; however, it is the student's responsibility to ensure the form is completed. After completed, the student can view the completed Terminal Competency Evaluation and make appropriate comments.

## **CLINICAL COMPETENCY REQUIREMENTS**

As part of the NCMC competency based program, students must demonstrate competence in the clinical activities identified in the Radiography Didactic and Clinical Competency Requirements published by the ARRT.

“Demonstration of clinical competence requires that the program director or director's designee has observed the candidate performing the procedure independently, consistently, and effectively during the course of the candidate's formal educational program. As a part of the educational program, candidates must demonstrate competence in the clinical activities identified below:



- Ten mandatory general patient care activities;
- 36 mandatory imaging procedures;
- 15 elective imaging procedures selected from a list of 34 procedures;
- One of the 15 elective imaging procedures must be selected from the head section; and
- Two of the elective imaging procedures must be selected from the fluoroscopy studies section

### Didactic and Clinical Competency Requirements - ARRT

The following Clinical Competency Goals have been established to encourage students to progress at a rate necessary for the timely completion of the NCMC Radiologic Technology Program and to meet ARRT clinical competency requirements. The student should complete the indicated number of Competency Evaluations by the end of the corresponding Clinical Practice course. The Competency Evaluation process and form is described in the Clinical Practice Education Documentation section of the NCMC Radiologic Technology Program Clinical Handbook.

#### **Competency Evaluations will contribute to the student's course grade in Clinical Practice:**

- RT 150 Clinical Practice I- 8 Competency Evaluations
- RT 190 Clinical Practice II- 25 Competency Evaluations
- RT 210 Clinical Practice III- 35 Competency Evaluations
- RT 240 Clinical Practice IV- 55 Competency Evaluations
- RT 260 Clinical Practice V- Remaining ARRT Competency Evaluations

It is the student's responsibility to keep track of which and how many Competency Evaluations they have completed in a given Clinical Practice course. The Clinical Coordinator will track all aspects of the student's clinical performance, and will evaluate the number of Competency Evaluations completed by each student; however, each student is responsible for meeting the Clinical Competency Goals for each Clinical Practice course. If the student exceeds the goal for a given Clinical Practice course, the excess competencies will be applied to the following quarter.

### **CLINICAL GRADING**

The student's clinical performance will be evaluated based upon the following criteria. The grading scale for all Clinical Practice courses is the same as didactic courses. The Explanation of Letter Grades can be located in the NCMC Radiologic Technology Program Student Handbook.

#### **For RT 150 Clinical Practice I, RT 190 Clinical Practice II, RT 210 Clinical Practice III, RT 240 Clinical Practice IV:**

Evaluation of Student's Clinical Competency: 80% of final grade  
(Evaluation of Student Clinical Competency will be done triweekly throughout the Clinical Practice courses with the exception of RT 210 Clinical Practice III which will be done biweekly)

Competency Evaluation Goal (refer to the scale below): 20% of final grade

#### Scale for RT 150 Clinical Practice I

100pts = 8 or more comps \*\*

75pts = 6 - 7 comps

50pts = 4 - 5 comps

25pts = 2 - 3 comps

0pts = 1 - 0 comps

Scale for RT 190 Clinical Practice II

100pts = 25 or more comps \*\*

75pts = 20 - 24 comps

50pts = 15 - 19 comps

25pts = 10 - 14 comps

0pts = 9 or less comps

Scale for RT 210 Clinical Practice III

100pts = 35 or more comps \*\*

75pts = 30 - 34 comps

50pts = 26 - 29 comps

25pts = 25 - 29 comps

0pts = 24 or less comps

\*\*additional competency evaluations will be credited to the following quarter.

Scale for RT 240 Clinical IV

100pts = 55 or more comps \*\*

75pts = 50 - 54 comps

50pts = 45 - 49 comps

25pts = 36 - 44 comps

0pts = 35 or less comps

\*\*additional competency evaluations will be credited to the following quarter.

**For RT 260 Clinical Practice V:**

Evaluation of Student's Clinical Competency: 80% of final grade

(Evaluation of Student Clinical Competency will be done triweekly throughout the Clinical Practice courses with the exception of RT 210 Clinical Practice III which will be done biweekly)

Terminal Competency: 20% of final grade

**CLINICAL COMPETENCY EVALUTION SYSTEM**

The NCMC Radiologic Technology Program provides students and Clinical Instructors with a private, individual account to the online evaluation system Trajecsyst. Trajecsyst allows each student and Clinical Instructors instant access to all Radiologic Technology Program Student and Clinical Handbooks, clinical documents, evaluations, and reports described under Clinical Practice Education Documentation.

Access to Trajecsyst is obtained by the student/Clinical Instructor providing their name, user name, password, address, phone number, and valid e-mail address. Select NCMC faculty can assist the student in editing account personal information, and can reset the student's password upon request.

The Trajecsyst Corporation website is found at <http://trajecsyst.com/>. The homepage will be displayed and a link is provided for the student/Clinical Instructor to register as well as for subsequent Log In's to the student's individual account. (Figure 1.1)



Figure 1.1

NORTH CENTRAL MISSOURI COLLEGE

DIVISION OF HEALTH SCIENCES

Submit as required

I, \_\_\_\_\_, hereby certify that I have read the Health Science Division – Radiologic Technology Program Student and Clinical Handbook 2024-2025 and the College Catalog for the academic year of 2024-2025. I realize my signature indicates that I understand that I am responsible for and will be held accountable to the standards and guidelines therein. I understand the process and have had the opportunity to ask questions for clarification. I further authorize North Central Missouri College to provide the necessary documentation, to individual clinical affiliates to verify my eligibility to participate in the clinical experience. Failure to comply with the policies/guidelines may result in disciplinary action and/or dismissal from the program.

\_\_\_\_\_  
Applicant Signature

\_\_\_\_\_  
Date

**STATE OF** \_\_\_\_\_

**COUNTY OF** \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_, before me, \_\_\_\_\_,

(Notary)

Notary Public in and for said state, personally appeared, \_\_\_\_\_, known to me to be

(Student)

the person who executed the within instrument and acknowledged to me that he/she executed the same for the purposes therein stated. IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal the day and year last above written.

\_\_\_\_\_  
Notary Public Signature

\_\_\_\_\_  
My commission expires