



North Central State College

MASTER SYLLABUS

2026-2027

- A. Academic Division: Health Sciences
- B. Discipline: Radiological Science
- C. Course Number and Title: RADS 2450 Radiologic Procedures 4
- D. Assistant Dean: Dr. Jason Tucker, Ph.D.
- E. Credit Hours: 3
Lecture: 2
Laboratory: 1
- F. Prerequisites: RADS 2350
Co-requisites: RADS 2421m, RADS 2470m;
- G. Last Course/Curriculum Revision Date: Spring 2024 Origin date: Fall 2025
- H. Textbook(s) Title:

Required

Merrill's Atlas of Radiographic Positioning and Procedures 3 - volume Set
(Purchased in RADS 1151)

- Author: Rollins & Curtis
- Copyright Year: 2026
- Edition: 16th
- ISBN: 9780443120411

Quick and Easy Medical Terminology
(Purchased in RADS 1151)

- Author: Leonard
- Copyright Year: 2024
- Edition: 10th
- ISBN: 9780323883955

Radiographic Pathology for Technologists
(Purchased in RADS 1151)

- Author: Kowalczyk
- Copyright Year: 2026
- Edition: 9th
- ISBN: 9780443224300

RadTechBootCamp - Clover Learning Student Plan, electronic resource
(Purchased in RADS 1151)

- Vendor: Clover Learning Inc.
- Copyright Year: 2026
- Edition: N/A
- ISBN: 9781951294038

I. Workbook(s) and/or Lab Manual:

Merrill's Pocket Guide to Radiography (OPTIONAL)
(Purchased in RADS 1151)

- Author: Jeannean Hall Rollins
- Copyright Year: 2026
- Edition: 16th
- ISBN #: 9780443116933

Merrill's Atlas of Radiographic Positioning and Procedures Workbook (OPTIONAL)
(Purchased in RADS 1151)

- Author: Rollins & Curtis
- Copyright Year: 2026
- Edition: 16th
- ISBN: 9780443116919

J. Course Description: Radiographic procedures of the neck, cranium, sinuses and facial bones will be presented. Special imaging of the digestive and biliary systems will be introduced. Students will learn to work with the various contrast material used in radiographic imaging. Diseases of the digestive system, skeletal trauma and fractures will be focused upon in this course and students will learn to identify various pathologic diseases on radiographs. Laboratory exercises in an energized lab provide the student with practical application of the classroom material. Radiation protection is emphasized. Medical terminology is correlated with the content of the course. Radiographic images will be evaluated.

K. College-Wide Learning Outcomes:

College-Wide Learning Outcome	Assessments - - How it is met & When it is met
Communication – Written	
Communication – Speech	
Intercultural Knowledge and Competence	
Critical Thinking	
Information Literacy	
Quantitative Literacy	

L. Course Outcomes and Assessment Methods:

Upon successful completion of this course, the student shall:

Outcomes	Assessments – How it is met & When it is met
1. Simulate radiographic positioning on a person or a phantom in the laboratory setting.	Simulation Rubric; Lab practice and exercises weeks 1-15
2. Manipulate the radiographic equipment correctly for any given exam.	Simulation Rubric; Lab practice and exercises weeks 1-15
3. Demonstrate correct radiation protection practices.	Simulation Rubric; Lab practice and exercises weeks 1-15
4. Use effective oral, written and nonverbal communications skills when interacting within the radiology field.	Simulation Rubric; Lab practice and exercises weeks 1-15, medical terminology tests weeks 4 and 11;
5. Identify anatomic structures on radiographic images.	Worksheets; Lab image analysis exercises weeks 1-15; course exams weeks 3, 5, 7, 9, 12, 15; final exam

Outcomes	Assessments – How it is met & When it is met
6. Evaluate medical images for diagnostic and technical accuracy.	Worksheets; Lab image analysis exercises weeks 1-15; course exams weeks 3, 5, 7, 9, 12, 15; final exam
7. Adapt radiographic procedures for special conditions	Simulation Rubric; Lab practice and exercises weeks 3-10
8. Administer the correct radiographic contrast agents during simulated fluoroscopy exams	Simulation Rubric; Lab practice and exercises weeks 3-10
9. Perform rectal tipping during a simulated exam	Observation; Lab practice and exercises weeks 3-10
10. Recognize the signs, symptoms and radiographic appearance of diseases associated with diagnostic medical imaging	Lab image analysis exercises weeks 4-10; course exams weeks 3, 5, 7, 9, 12, 15; final exam

M. Recommended Grading Scale:

NUMERIC	GRADE	POINTS	DEFINITION
93–100	A	4.00	Superior
90–92	A-	3.67	Superior
87–89	B+	3.33	Above Average
83–86	B	3.00	Above Average
80–82	B-	2.67	Above Average
77–79	C+	2.33	Average
73–76	C	2.00	Average
70–72	C-	1.67	Average
67–69	D+	1.33	Below Average
63–66	D	1.00	Below Average
60–62	D-	0.67	Below Average
00--59	F	0.00	Failure

N. College Procedures/Policies:

North Central State College believes that every student is a valued and equal member of the community.* Every student brings different experiences to the College, and all are important in enriching academic life and developing greater understanding and appreciation of one another. Therefore, NC State College creates an inclusive culture in which students feel comfortable sharing their experiences.

Discrimination and prejudice have no place on the campus, and the College takes any complaint in this regard seriously. Students encountering aspects of the instruction that result in barriers to their sense of being included and respected should contact the instructor, assistant dean, or dean without fear of reprisal.

* *Inclusive of race, color, religion, gender, gender identity or expression, national origin (ancestry), military status (past, present or future), disability, age (40 years or older), status as a parent during pregnancy and immediately after the birth of a child, status as a parent of a young child, status as a foster parent, genetic information, or sexual orientation*

Important information regarding College Procedures and Policies can be found on the syllabus supplement located at

<https://ncstatecollege.edu/documents/President/PoliciesProcedures/PolicyManual/Final%20PDFs/14-081b.pdf>



North Central State College
SYLLABUS ADDENDUM

Academic Division: Health Sciences **Discipline:** Radiologic Technology
Course Coordinator: Dorie Ford
Course Number: RADS 2450-910 **Course Title:** Radiologic Procedures 4
Semester / Session: Fall 2026 **Start / End Date:** 08/17/2025 to 12/11/2026

Instructor Information

Name: Dorie Ford **Credentials:** M.S.Ed R.T.(R)(M)
Phone Number: 419-755-4886 **E-Mail Address:** dford@ncstatecollege.edu
Office Location: 152 HS **Office Hours:** TBD

I. Topical Timeline / Course Calendar (Subject to Change):

Weeks	Topics	Assignment	Due Date
1	Pediatric Radiography	Reading Assignment Student Note Assignment (2) Canvas Quizzes (2)	08/08/26
2	Soft Tissue Neck	Student Note Assignment Worksheets (2)	08/25/26
3	Intro To Contrast Studies Esophagram Modified Barium Swallow Pathology of the Esophagus	Student Note Assignments (3) Worksheet	09/01/26
4	Abdomen Review Stomach Pathology of the Stomach	Anatomy Canvas Quiz Student Note Assignments (4) Worksheet	09/08/26
5	Small Intestines Pathology of the small intestines Geriatric Radiology	Student note Assignment Video Assignment Geriatric Discussion Board	09/15/26
6	Hepatobiliary System Pathology of the Hepatobiliary System	Student Note Assignments (4) Worksheet	09/22/26
7	Barium Enema part 1 Anatomy Exam Basics	Note Assignments (2) Video Assignment (2)	09/29/26
8	Barium Enema part 2 Procedures and Positioning Pathology	Student Note Assignments (3) Video Assignment	10/06/26
	Fall Break-No Class		10/13/26
9	Skull Anatomy and Positioning	Student Note Assignment RTBC Video Assignment Application: PBL Learning	10/20/26
10	Resume Writing	Speaker Resume Assignments (2)	10/27/26
11	Orbits Anatomy and Procedures	Student Note Assignment RTBC Video Assignment Application: Worksheet	11/03/26

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Weeks	Topics	Assignment	Due Date
12	Sinuses Anatomy and Procedures	Student Note Assignment RTBC Video Assignment	11/10/26
13	Facial Bones Anatomy and Procedures	Student Note Assignment RTBC Video Assignment	11/17/26
14	Mandible Temporomandibular Joints Anatomy and Procedures	Student Note Assignment	11/24/26
15	Trauma Radiology	Student Note Assignment	11/31/26
16	Final Exam		

1. **Pediatric Radiology**
 - a. Age-based developmental care
 - b. Preliminary steps
 - c. Routine radiography
2. **Soft Tissue Neck**
 - a. Anatomy
 - b. Routine projections
 - c. Image evaluation
3. **Esophagram**
 - a. Anatomy
 - b. Procedures
 - c. Modified barium swallow
 - d. Pathology
4. **Stomach (UGI)**
 - a. Anatomy
 - b. Procedures
 - c. Pathology
5. **Small Intestines (SBFT)**
 - a. Anatomy
 - b. Procedures
 - c. Pathology
6. **Hepatobiliary System**
 - a. Anatomy
 - b. Procedures
7. **Large Intestines (Barium Enema)**
 - a. Anatomy
 - b. Preliminary steps
 - c. Procedures
8. **Large Intestines Part 2 (Barium Enema)**
 - a. Pathology
9. **Resume Writing**
 - a. Guest speaker
10. **Skull Radiology**
 - a. Anatomy
 - b. Routine projections
 - c. Image evaluation
11. **Orbit Radiology**
 - a. Anatomy
 - b. Routine projections
 - c. Image evaluation
12. **Sinus Radiology**
 - a. Anatomy
 - b. Routine projections
 - c. Image evaluation

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13. Facial Bone Radiology
 - a. Anatomy
 - b. Routine projections
 - c. Image evaluation
14. Mandible and Temporomandibular joints (TM joints)
 - a. Anatomy
 - b. Routine projections
 - c. Image evaluation
15. Trauma Radiology

II. Grading and Testing Guidelines:

Final Grade Calculation

Activity	Qty	Points	Percentage
Exams	7	30	60%
Final Exam	1	125	20%
Other graded items	73	730	10%
Lab	12	360	10%

1. **Minimum Course Grade:**

The Radiological Department believes that a grade below C+ indicates lack of mastery of essential skills. Therefore, any student who receives less than C+ in any Radiological Science sequence course cannot continue in Radiologic Technology

III. Examination Policy:

1. Students must attend class when tests, oral presentations and written assignments are scheduled. If the student does not attend class on these days the following deductions will be applied:
 1. first missed test = minus 10% from the earned score
 2. second missed test = minus 15% from the earned score
 3. third missed test = minus 20% from the earned score
 4. additional missed tests= zero score
2. A student who arrives late to class for a test may not be permitted to take the test at that time. The test will then be treated as a make-up test with the appropriate deduction from the earned score
3. The reasons that a student may be excused from a test, oral presentation, written assignment or lab and not receive a deduction in the earned test score are as follows:
 1. Personal illness or illness of immediate family (doctor's excuse required)
 2. Personal hospitalization or hospitalization of an immediate family member (documentation required)
 3. Death in the immediate family (documentation required)
4. Course exams will be proctored over Zoom. The student will use two devices (phone and computer) while faculty proctor the exam. Each exam on Canvas creates a real-time log of the student's activities while in the exam tab. Navigation away from the exam tab while taking the exam is not permitted for any reason. Exam logs are randomly checked by faculty after each test. Any student who navigates from the exam tab during the exam will receive a zero on the test and a written warning. Any student who navigates away from the exam tab more than one time will receive a zero on the test and will be subject to the college's academic misconduct process.

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5. Mandated tutoring is required and assigned. Attendance will be taken. Points for tutor attendance will be applied to the course grade.

Lab Grading Policy

When a lab simulation is scheduled, students are expected to come to lab prepared to practice or perform the lab simulation. This means the student must read and study the lab manual prior to lab.

A student must receive **80% (24/30)** or higher to pass a lab simulation. When a student fails a lab simulation these assumptions can be made:

1. The student did not prepare for the lab simulation in advance by reviewing and practicing
- OR -
2. The student has weaknesses that must be identified and corrected so that these weaknesses do not degrade clinical performance.

Students who do not pass a lab simulation will be required to perform a repeat simulation. On a repeat simulation 10% will automatically be deducted from the final score. Students must pass the repeat simulation with **80% (24/30) after the 10% deduction**. If the student fails the repeat simulation, the student will receive a **zero** for that simulation but will be required to simulate until the student has demonstrated satisfactory skills on the exam. Additional make up labs may be scheduled by the instructor

IV. Class Attendance and Homework Make-Up Policy:

1. In any circumstance where a student will miss class or lab, the student must send a message to the instructor through Canvas prior to the start of the class. The instructor will contact the student via Canvas later in the day with instructions for the make-up test. Make-up tests are scheduled as close as possible to the date of the missed test.
2. Homework and other assignments receive full credit only when submitted on time. Late homework will receive a deduction of 50%. Homework will not be accepted after seven days post assignment due date. Homework may be excused if the student has the required accepted documentation as mentioned above. Homework will be graded within 7 days after the due date.
3. There is a close correlation between lab performance and clinical performance. When a student successfully completes a lab simulation it demonstrates that the student is ready to perform the procedure on a patient at the clinical site. Students must attend all scheduled labs (attendance is taken) The student will receive 2 points for each lab attended and 2 points for following the required lab dress code. If the student misses a lab, 4 points will be deducted. A student may be excused from missing lab if proper documentation is provided for one of the reasons mentioned above.

V. Classroom Expectations:

course delivery guidelines

Since this is a hybrid course and part of course content is delivered outside of the classroom, (i.e., your home), it is expected that you have a designated learning space. This would be a space free of distractors such as pets, children, siblings, parents, radio and television. In this space you will have adequate lighting, all electronic devices needed and textbooks and notes. **You will not be permitted to attend to these distractors during a test.**

2. For Zoom lectures:

- Be dressed, sitting up, and have the camera on unless otherwise instructed

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- Go to the bathroom and remove your pets from the Zoom area before class
- Mute your mic unless you would like to talk or ask questions.
- Complete the required weekly content before class and be prepared to participate in class
- Read the textbooks as directed and supplement class notes.
- Complete assignments by the due date. Pay attention to due dates.
- Have the required material on hand at the time of class (notes, books, etc.)
- Participate in class discussions, ask and answer questions.
- Review the day's material or complete other assignments as you wait for others to finish the test.
- Stay on task when given in-class activities and group assignments. Review material if done early.

3. Demonstrate professional oral and written communication (discussion boards, emails to the instructor, class discussions, group activities)

4. Cell phone use is not permitted in hybrid courses or labs. If a student has their cell phone out or if it rings or vibrates loud enough for others to hear, the student will pay \$1.00 to the Robert L. Garber scholarship fund.

5. Treat classmates and the instructor with respect

6. Use course resources wisely for exam preparation. Examples of resources include:

- ✓ Recorded lectures/notes
- ✓ Study Guides
- ✓ Practice Quizzes
- ✓ RTBC
- ✓ Worksheets
- ✓ Group activities
- ✓ Class discussion
- ✓ Lab

- ✓ Tutoring/Instructors as resources