North Central State College

MASTER SYLLABUS	2025-2026

A. Academic Division: Health Sciences

B. Discipline: Radiological Science

C. Course Number and Title: RADS 1251 Radiologic Procedures 2

D. Assistant Dean: Heidi Kreglow, PT

E. Credit Hours: 3
Lecture: 2
Laboratory: 3

F. Prerequisites: RADS 1151
Co-requisites: RADS 1221m, RADS 1270m, RADS 1275m

G. Last Course/Curriculum Revision Date: Spring 2024 Origin date: Fall 2025

H. Textbook(s) Title:

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

- Author: Long, Rollins, & Smith
- Copyright Year: 2022
- Edition: 15th
- ISBN: 9780323832793

Quick and Easy Medical Terminology
(Purchased in RADS 1151)

- Author: Leonard
- Copyright Year: 2020
- Edition: 9th
- ISBN: 978032359599

Radiographic Pathology for Technologists

- Author: Mace-Kowalczyk
- Copyright Year: 2022
- Edition: 8th
- ISBN: 9780323791298

- *RadTechBootCamp - Clover Learning Student Plan, electronic resource*
- Vendor: Clover Learning Inc.
- Copyright Year: 2023
- Edition: n/a
- ISBN: 9781951294038

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

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

- Author: Frank
- Copyright Year: 2022
- Edition: 15th
- ISBN #: 9780323832830

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

- Author: Long, Rollins, Smith & Curtis
- Copyright Year: 2022
- Edition: 15th
- ISBN: 9780323832793

J. Course Description: Radiographic procedures of the pelvic girdle, shoulder girdle, bony thorax and spine will be presented. Special imaging procedures of the joints (Arthrography) and of the spine (Myelography) will be introduced. Concepts of Pediatric Radiography will be covered in this course. An introduction to Radiographic Pathology will be presented. Students will learn to recognize 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 procedures 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
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

Outcomes	Assessments – How it is met & When it is met
7. Adapt radiographic procedures for special conditions	Simulation Rubric; Lab practice and exercises weeks 3-10, lab practice mobile equipment
8. Choose the correct radiographic contrast agents used in diagnostic radiologic examinations.	Lab exercise weeks 4 and 9; course exam week 11; final exam
9. Recognize the signs, symptoms and radiographic appearance of diseases associated with diagnostic medical imaging	Lab image analysis exercises weeks 10-12; 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	Below Average
67–69	D+	1.33	Below Average
63-66	D	1.00	Below Average
60-62	D-	0.67	Poor
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 Science	**Discipline:**	Radiological Sciences
Course Coordinator:	Dorie Ford		
Course Number:	RADS 1250-910	**Course Title:**	Radiologic Procedures 2
Semester / Session:	Spring/2026	**Start / End Date:**	01/12/2026 – 05/04/2026

Instructor Information

Name:	Dorie Ford	**Credentials:**	M.ED, R.T.(R)(M)
Phone Number:	419-755-4886	**E-Mail Address:**	Dford@ncstatecollege.edu
Office Location:	150 HS	**Office Hours:**	Monday 10:00 am -11:00 am, Tuesday 11:00 am to 12:00 pm and Thursday 11:00 am – 2:00 pm

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

Weeks	Topics	Assignment	Due Date
1 1/12/26	Introduction To the Course Radiology of the Pelvis and Hip	Anatomy of the pelvic girdle note assignment Routine Projections note assignment (Pelvis) Routine Projections note assignment (Hip) Special Projections note assignment (Hip) Lab practice and signoffs	1/12/26
2 1/19/26	MLK Day No Class –	RTBC pre-lab pelvis RTBC pre-lab hip	1/16/26
3 1/26/26	Radiology of the Shoulder Joint	Anatomy of the shoulder girdle note assignment Routine and special projections note assignment (Shoulder) RTBC pre-lab shoulder Lab practice and signoffs ***Lab Simulation: pelvis and hip*** ***Med Term test CH 13-Nervous System***	1/23/26
4 2/2/26	Radiology of the Shoulder Girdle (Clavicle, Scapula and AC Joints)	Routine projections note assignment (clavicle, scapula and AC joints) RTBC pre-lab AC joints, scapula and clavicle Lab practice and signoffs ***Lab Simulation: shoulder joint*** ***Test #1- Pelvic Girdle and Hip***	1/30/26
5 2/9/26	Radiography of the Bony Thorax	Routine projections note assignment (ribs, sternum, SC joints) RTBC pre-lab ribs RTBC pre-lab sternum Lab practice and signoffs ***Lab Simulation: (1) clavicle and AC joints (2) scapula*** ***Test #2- Shoulder and Shoulder Girdle***	2/6/26
6 2/16/26	Vertebral Column Anatomy	Anatomy of the vertebral column note assignment Anatomy of the vertebral column lab assignment ***Lab Simulation: Ribs***	2/13/26

Course Number: _____ **Course Title:** _____
Semester / Session: _____ **Start / End Date:** _____

Weeks	Topics	Assignment	Due Date
7 2/23/26	Radiology of the Thoracic Spine	Routine projections note assignment (thoracic spine) RTBC pre-lab thoracic spine Lab practice and signoffs ***Lab Simulation: Sternum*** ***Test #3- Bony Thorax***	2/20/26
8 3/2/26	Radiology of the Cervical Spine	Routine projections note assignment (cervical spine) RTBC pre-lab cervical spine Lab practice and signoffs ***Lab Simulation: Thoracic Spine*** ***Test #4- Spine Anatomy***	2/27/26
Break 3/9/26			
9 3/16/26	Radiography of the Lumbar Spine	Routine Projections note assignment (lumbar spine) Functional studies note assignment (lumbar spine) RTBC pre-lab lumbar spine Lab practice and signoffs ***Lab Simulation: Cervical Spine*** ***Test #5- Cervical and Thoracic Spine***	
10 3/23/26	Radiography of the Sacrum, Coccyx and SI Joints	Routine Projections note assignment (sacrum and coccyx) Routine Projections note assignment (SI joints) RTBC pre-lab sacrum and coccyx RTBC pre-lab SI Joints Lab practice and signoffs ***Lab Simulation: Lumbar Spine***	
11 3/30/26	Pathology of the Skeletal System-Part 1	Pathology of the skeletal system note assignment (congenital and hereditary diseases) Pathology of the skeletal system note assignment (vertebral anomalies and injuries) Student note/reading assignment scoliosis survey Lab practice and signoffs-scoliosis survey ***Lab Simulation: (1) sacrum and coccyx, (2) SI Joints*** ***Test #6- Lumbar, Sacrum, Coccyx and SI Joints***	
12 4/6/26	Pathology of the Skeletal System-Part 2	Pathology of the skeletal system note assignment (infectious and inflammatory diseases) Pathology of the skeletal system note assignment (neoplastic diseases) Lab practice and signoffs-scoliosis survey Lab Practice Revisit- Hip fracture AP, Danelius Miller and Clements-Nakayama	
13 4/13/26	Fractures	Fractures Note Assignment Image Matrix for fractures Lab practice and sign offs – portable ortho upper limb – revisit trauma elbow (coyle) ***Lab Simulation: scoliosis survey*** ***Test #7- Skeletal System Pathology***	

Weeks	Topics	Assignment	Due Date
14 4/20/26	Pathology of the Respiratory System-Part 1	Pathology of the respiratory system note assignment (congenital and hereditary, inflammatory and COPD) Respiratory Image Matrix Lab practice and signoffs-portable ortho lower limb ***Lab Simulation: portable ortho upper limb***	
15 4/27/26	Pathology of the Respiratory System-part 2	Pathology of the respiratory system note assignment (pneumoconiosis and neoplasms) Respiratory Image Matrix Lab practice and signoffs- chest decubitus positions ***Lab Simulation: portable ortho lower limb***	
16 5/4/26	Final Exam		

II. Grading and Testing Guidelines:

Final Grade Calculation

Activity	Qty	Points	Percentage
Exams	8	260	60
Final Exam	1	145	20
Lab Simulations and Attendance	15	480	10
Other Graded Items			10
23 note assignments (approx.)	23	460	
11 RTBC video assignments (approx.)	11	110	
2 image matrixes	2	40	

1. **Radiography of the Pelvis and Hip**
   a. Anatomy
   b. Positioning
   c. Trauma Positioning
   d. Image Evaluation
2. **Radiography of the Shoulder Girdle**
   a. Anatomy
   b. Positioning
   c. Image Evaluation
3. **Radiography of the Bony Thorax**
   a. Anatomy
   b. Positioning
   c. Image Evaluation
4. **Anatomy of the Spine**
   a. Anatomy
   b. Image Evaluation
5. **Radiography of the Spine**
   a. Cervical positioning
   b. Thoracic positioning
   c. Lumbar positioning
   d. Sacrum and Coccyx positioning
   e. SI Joints positioning
   f. Image Evaluation

6. **Pathology of the Skeletal System Part 1**
   a. Congenital and Hereditary Diseases
   b. Vertebral Anomalies and Injuries
   c. Scoliosis Survey
   d. Image Evaluation
7. **Pathology of the Skeletal System Part 2**
   a. Infectious and Inflammatory
   b. Neoplasm
   c. Image Evaluation
8. **Fractures**
   a. Types of Fractures
   b. Mechanism of Injuries
   c. Trauma imaging of fractures
   d. Image Evaluation
9. **Pathology of the Respiratory System Part 1**
   a. Congenital and Hereditary
   b. Inflammatory
   c. COPD
   d. Decubitus Chest Imaging
   e. Image Evaluation
10. **Pathology of the Respiratory System Part 2**
    a. Pneumoconiosis
    b. Neoplasm
    c. Image Evaluation

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:
   a. First missed test = minus 5% from the earned score
   b. Second missed test = minus 10% from the earned score
   c. Third missed test = minus 15% from the earned score
   d. Additional missed tests= zero score

2. A student who logs in late 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:
   a. Personal illness or illness of immediate family (doctor's excuse required)
   b. Personal hospitalization or hospitalization of an immediate family member (documentation required)
   c. 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.
   a. Each exam on Canvas creates a real-time log of the student's activities while in the exam tab. Exam logs are randomly checked by faculty after each test.
   b. Navigation away from the exam tab while taking the exam is not permitted for any reason.
   c. Any student who navigates from the exam tab during the exam:
      1. The first time= receives a zero on the test and a written warning from the faculty

2. The second time=receives a zero on the test and will be subject to the Academic Misconduct Process of the college.

Lab Grading Policy

1. 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, study and practice the lab manual prior to lab and complete any pre-lab assignments.

2. 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:
    a. The student did not prepare for the lab simulation in advance by reviewing and practicing or:
    b. The student has weaknesses that must be identified and corrected so that these weaknesses do not degrade clinical performance.
3. Students who do not pass a lab simulation will be required to perform a repeat simulation. Repeat simulations are usually scheduled for the next scheduled lab.
    a. 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**.
    b. If the student fails the repeat simulation, the student will receive a **zero** for that simulation
    c. The student will be required to practice and simulate until the student has demonstrated, to the instructor, satisfactory skills on the exam.
4. If the student experiences an injury or undergoes a surgical procedure, the student must present a physician's release to participate in lab activities.

IV. Class Attendance and Homework Make-Up Policy:

1. Students are expected to attend every class. Attendance is taken.

2. 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.

3. The instructor will contact the student via Canvas later in the day with instructions for the make-up test or class activity that was missed.
    a. Make-up tests are scheduled as close as possible to the date of the missed test.

4. Homework and other assignments receive full credit only when submitted on or before the due date and time.
    a. Late homework will receive a 50% deduction.
    b. Homework received late due to technology interruptions may receive a 50% deduction
    b. Homework will not be accepted after seven days post assignment due date.
    c. Homework may be excused if the student has the required documentation as mentioned above.

5. Students who fail to log in to class or log in late due to technology interruptions will be counted late or absent from the class and receive the deductions

6. Students who experience frequent technology interruptions will be asked to attend the virtual lectures from the college.

7. Students must attend every lab and wear the required dress code. Attendance is taken.

1. Students who arrive late to lab will receive a late deduction

V. Classroom Expectations:

1. Hybrid course delivery guidelines

a. It is expected that you have a designated learning space in your home, or wherever you receive your virtual course lecture.

b. This would be a space free of distractors such as pets, children, spouses, 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. Zoom Lecture Expectations. Students will:

a. Be dressed, sitting up, and have the camera on unless otherwise instructed
b. Go to the bathroom and remove your pets from the Zoom area before class
c. Hoodies and blankets are not permitted during class or testing
d. Mute your mic unless you would like to talk or ask questions.
e. Complete the required weekly content before class and be prepared to participate in class
f. Read the textbooks as directed and supplement class notes.
g. Complete assignments by the due date. Pay attention to due dates.
h. Have the required material on hand at the time of class (notes, books, etc.)
i. Participate in class discussions, ask and answer questions.
j. Review the day's material or complete other assignments as you wait for others to finish the test.
k. Stay on task when given in-class activities and group assignments. Review material if done early.
l. Demonstrate professional oral and written communication (discussion boards, emails to the instructor, class discussions, group activities)
m. Cell phone use is not permitted in hybrid courses or labs.
n. Treat classmates and the instructor with respect

3. Course Resources

a. Use all available resources wisely for class and lab activities, homework and exam preparation. The following are acceptable course resources:

1. Recorded lectures/notes
2. RTBC- any videos, lesson quizzes, assessments
3. Practice Quizzes
4. Worksheets
5. Group Activities
6. Discussion boards/class discussions
7. Lab Manuals
8. Tutoring/Instructors
9. PowerPoint presentations
10. Image Evaluation files/Lab Matrixes

4. Artificial Intelligence (AI)

a. Students are not permitted to use artificial intelligence (AI) for any course or lab activities unless permitted by the instructor.

b. If the instructor permits the use of AI, it will be communicated in writing on the assignment and an AI Acknowledgement Statement will be included https://ncstate.instructure.com/courses/1880576/files/331042541?wrap=1

c. Students who are caught using AI without permission for homework, notes or activities in class or lab will receive a zero for that assignment and a written warning.

5. **Communications**

a. Students must keep an open line of communication with Radiology faculty. At the beginning of the program, students will be assigned a radiology faculty advisor.

b. It is the student's responsibility to notify their faculty advisor if they would like to be referred to college services such as disability services, mental health services, financial aid, the resource navigator, TRIO, tutoring or any other services. In addition, if the program faculty sends an alert on the student's behalf, the student is expected to follow through with the recommendations resulting from the alert.

c. If the student is experiencing chronic health issues or an injury that influences their performance in class or lab, the student is expected to inform the course instructor.

d. The program faulty encourage open communication, however:

1. Communication to faculty after 9 pm on weekdays will be monitored, and if not deemed an emergency by the instructor, it will be answered the next business day.
2. Weekend communication to faculty will be monitored, and if not deemed an emergency or related to homework or a test on the next business day, will be answered on the next business day.
3. Turn-around time for communication from the faculty to student is usually very prompt, however, faculty have up to 48 hours to respond to messages