North Central State College

MASTER SYLLABUS	2026-2027

A. Academic Division: Health Sciences

B. Discipline: Radiological Science

C. Course Number and Title: RADS 2421 Clinical Practicum/Seminar 4

D. Assistant Dean: Dr. Jason Tucker, Ph.D.

E. Credit Hours: 3
Practicum: 2
Seminar: 1

F. Prerequisites: RADS 2322
Co-requisites: RADS 2450m, RADS 2470m

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

H. Textbook(s) Title: None

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

Radiologic Sciences Policy and Procedure Manual (provided to the student in the first semester of the program)

J. Course Description: Clinical Practicum is designed to provide students with practical application of material learned in didactic courses. In this course students will apply their expanding knowledge of radiographic procedures to the field by positioning patients for exams, practicing radiation protection and providing patient care under the appropriate level of supervision by qualified radiographers. Students will continue to develop equipment manipulation skills in surgery and portable imaging and begin to assist with contrasted studies and fluoroscopy. Clinical hours will include a rotation to a large pediatric hospital as well as rotations through special imaging modalities. A Level One trauma center rotation is included and students will focus on trauma imaging. The image evaluation process will continue and be applied to various exams within the clinical setting. Students will continue to complete clinical objectives and perform clinical competencies. Seminar time will be provided on campus and students will complete a second proposal on their Capstone Project. In addition, concepts in CT will be presented and are used during clinical rotations through the CT department. Various pathologies common to the field of radiographic imaging will be reviewed.

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	Research Outline and References for Capstone Case Study
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. Use effective oral, written and nonverbal communications skills when interacting within the health care field.	Image evaluation rubrics weeks 4-14; Clinical Preceptor evaluation rubric week 8- 15; Capstone outline and references review in seminar week 1 and 15; Outline and References for Case Study week 3; Review of technologist evaluations and clinical competency rubrics
2. Perform medical imaging procedures under the appropriate level of supervision	Clinical Preceptor evaluation week 8 and 15; review of competencies, technologist evaluation rubrics and procedures logs week 15;
3. Provide patient-centered, clinically effective care for all patients regardless of age, gender, disability, special needs, ethnicity or culture.	Review of technologist evaluations and clinical competency rubrics week 8 and 15; Clinical Preceptor evaluation rubric week 8 and 15
4. Demonstrate competency in the principles of radiation protection standards	Review of technologist evaluations, clinical competency rubrics and procedures logs week 8 and 15; Clinical Preceptor evaluation rubric week 8-15
5. Position patients for exams using correct positioning skills	Review of technologist evaluations, clinical competency rubrics and procedures logs week 8 and 15, Clinical Preceptor evaluation rubric week 8 and 15; clinical final exam week 16; Image evaluation rubrics weeks 4-14
6. Operate medical imaging equipment correctly	Review of technologist evaluations, clinical competency rubrics and completed clinical objectives week 8 and 15; Clinical Preceptor evaluation rubric week 15
7. Input and retrieve data correctly while using the clinical facility's HIS/RIS system	Review of technologist evaluations, clinical competency rubrics and the Clinical Preceptor evaluation week 8 and 15; Image evaluation rubrics in seminar week 4 a-14; Case Study outline and references in seminar weeks 1-15
8. Select technical factors to produce quality diagnostic images with the lowest radiation exposure possible	Review of technologist evaluations, clinical competency rubrics and completed procedures logs week 8 and 15; Clinical Preceptor evaluation week 8 and 15; Image evaluation rubrics in seminar week 4-14
9. Evaluate images for appropriate anatomy, image quality and patient identification	Image evaluation presentation rubric weeks 4-14 in seminar; Review of technologist evaluations, clinical competency rubrics and Clinical Preceptor evaluation rubric week 8 and 15; clinical final exam week 16

Outcomes	Assessments – How it is met & When it is met
10. Integrate the appropriate personal and professional values into clinical practice.	Review of technologist evaluations and clinical competencies week 8 and 15; Image evaluation rubric in seminar weeks 4-14; Clinical Preceptor evaluation week 8 and 15; Capstone outline and references review weeks 1-15

M. Recommended Grading Scale:

This class is graded as Pass or No Pass. Students must obtain and 85% or higher in the course to receive a Pass. Students who do not pass will not be able to remain in the Radiological Sciences program.

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:	Heidi Chambers		
Course Number:	RADS 2421	**Course Title:**	Clinical Practicum & Seminar 4
Semester / Session:	Fall 2026 / Full 16 Week Session	**Start / End Date:**	8/17/2026 thru 12/11/2026

Instructor Information

Name:	Heidi Chambers	**Credentials:**	BRST, R.T. (R)
Phone Number:	419-755-4809	**E-Mail Address:**	hchambers@ncstatecollege.edu
Office Location:	152 Health Sciences Building	**Office Hours:**	By appointment, in person or via zoom Wednesday and Thursday

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

Weeks	Topics	Assignment / Activity	Dates
1	Pediatric Radiography	Akron Children's Rotation Nationwide Children's Rotation Clinical Practice, objectives and Competency Pediatric Technique Chart	Various rotation dates week 1-14 no later than Nov 25
2	Pediatric Radiography Soft Tissue Neck Computed Tomography (CT)	Clinical Practice and Competency Clinical Practice and Competency Seminar Note Packet | RTBC Video Lessons & Quizzes	 Aug 27
3	CT continued Intro to Contrast & Swallowing Studies Trauma Best Practices	Seminar PowerPoint Sectional Anatomy Clinical Objectives, Practice & Competency Grant Medical Center Rotation (Level 1 Trauma Center) Clinical Practice, Objectives and Competency	Sept 3 Various rotation dates week 4-15
4	Trauma Best Practices Abdomen Review Upper Gastrointestinal (UGI)	Clinical Objectives, Practice & Competency Seminar PowerPoint Sectional Anatomy | RTBC Clinical Objectives, Practice & Competency	 Sept 10
5	Small Bowel Follow Through (SBFT) Geriatric Review	Clinical Objectives, Practice & Competency Clinical Objectives, Practice & Competency	
6	Hepatobiliary	Clinical Practice	
7	Barium Enema (BE)	Clinical Objectives, Practice & Competency	
8	BE continued		
	Fall Break Oct 12-16		
9	Resume Writing		
10	Skull Radiography	Clinical Practice & Competency Seminar PowerPoint Sectional Anatomy | RTBC	 Sept 29
11	Orbit Radiography	Clinical Practice & Competency	
12	Sinuses Radiography	Clinical Practice & Competency	
13	Facial and Nasal Radiography	Clinical Practice & Competency	
14	Mandible/TMJ Radiography	Clinical Practice & Competency	
15	Mandible/TMJ Radiography	Clinical Practice & Competency	
16	Clinical Final (Contrasted Exams & Headwork)	Exam – In Person/On Campus	TBD

II. Grading and Testing Guidelines:

Final Grade Calculation

Activity	Qty	Points	Percentage
1. Daily Tech Evaluations	30		10%
2. Competencies	14		25%
3. Clinical Instructor Evaluation – Mid Term and Final	2		30%
4. Seminar			10%
5. Clinical Test	1		25%
		Total	100%

- **Note**: Quantity and point activity may be subject to change based on clinical/course needs.

1. The student's designated clinical preceptor will complete an evaluation of Activities 1-3

2. Program faculty will proctor Activities 4 and 5 of the final grade calculations.

3. The overall clinical course grade is weighted. If a student does not pass clinical course with an 85% or higher, they will receive a no pass. The student will not be permitted to continue clinical courses and therefore cannot continue in the radiology program.

III Clinical Final Examination Policy:

1. The Clinical Final is administered in person, on campus. Students must attend on the scheduled date. If a student does not attend, the following deduction will be applied:
   - Missed Clinical Final → minus 5% from the earned score

2. A student who arrives late to the Clinical Final for any reason may not be permitted to take the exam at that time. The exam will be treated as a make-up exam with the following deduction from the earned score:
   - Late arrival → minus 5% from the earned score

3. The reasons for which a student may be excused from the Clinical Final and not receive a deduction in score are as follows:
   - Hospitalization (with documented verification)
   - Death in the immediate family (with documented verification)
   - Personal illness or illness in immediate family - (doctor's excuse required).

4. Any student who misses the Clinical Final (for any reason) is responsible for contacting the instructor prior to the scheduled exam time through Canvas to let the instructor know the reason for absence and schedule the make-up exam. Make-up exams are scheduled as close as possible to the missed date. In cases of **extreme** illness or hospitalization, contact should be made no later than 24 hours from the date of absence. If the student does not contact the instructor within the allotted time, the student may be subjected to a zero on the exam.

IV. Clinical Competency Policy:

1. Students will be expected to perform clinical competencies throughout the semester
   a. The student must pass a clinical simulation at NCSC before attempting any competency exam.
   b. The student must receive a score of two in all applicable starred areas of the competency AND
   c. The student must receive an 85% or higher to pass.

2. A student who does not receive a score of two in all applicable starred areas and/or receives less than 85% total will be required to retake the competency.
   a. All repeat competencies must be completed with the designated clinical preceptor.
   b. On repeat, 10% will automatically be deducted from the final score.
   c. A student must receive an 85% or higher to pass repeat competency.

3. Fourteen clinical competencies are required for this semester.

a. The student will demonstrate required competencies through any clinical procedure listed in the current semester's topical timeline or from previous semester's topics, provided the competency has not be previously completed.
b. The student is responsible for alerting their designated clinical preceptor of their wish to perform all competencies. The preceptor may delegate another certified technologist if unavailable.
c. On completion of fourteen successful competencies, a student may perform **5** additional competencies in the "**Free Zone."** Free zone competencies will be applied to next semester requirements.
d. All Free zone competencies must be completed with the students designated clinical preceptor.

V. Clinical Attendance and Make-Up Policy:

1. Clinical attendance is necessary in obtaining a high level of competency.

2. Students are responsible for attending all clinical rotation days.
   a. The student will clock 30 clinical days/225 hours.
   b. The student will clock time (in and out) through Trajecsys.
   c. The student will be on time and not clock out before the end of the clinical day.

3. Clinical absences, unverified clock times, early clock outs are documented as an occurrence.
   a. The student will refer to the NCSC Radiological Sciences Policy and Procedure Manual for Clinical Education for a complete list of occurrences.
   b. All missed time from occurrences require make up time.

4. If a student misses clinical time for any reason, a Clinical Make-Up plan will be coordinated and approved with the designated clinical preceptor.
   a. The make up plan must reflect the same or similar hours missed and be the same or similar clinical rotation missed.
   b. All make up time must be completed before the end of semester date to avoid a No Pass for a clinical grade.
   c. Make up time cannot occur during weekend or holiday hours.
   d. Program faculty and clinical preceptors reserve the right to schedule or deny make-up plan requests.

VI. Clinical Expectations:

1. The NCSC Student Radiographer is expected to:

a. Adhere to all policies and procedures written in the student policy and procedure manual for clinical education.
b. Adhere to all policies of NCSC in the student handbook
c. Adhere to all policies and procedures required by the sponsoring clinical facility.
d. Demonstrate professionalism required in the hospital setting and in the health care field:
   - Dress professionally
   - Act professionally
   - Speak and write in a professional manner using terminology essential to the profession
   - Treat patients with dignity and respect according to the Patient's Bill of Rights
   - Display excellent attendance
   - File and/or complete all required clinical documentation in a timely manner

e. Practice radiation protection according to the **ALARA (as low as reasonably achievable)** principle

For Patients:
- Minimal repeat exposures
- Provide shielding for all patients and staff
- Use smallest collimation size without interfering with the completed image
- Chose correct technical factors appropriate for the patient's size and age

For Worker/Students:
- Employ Cardinal Principles: Minimize time, maximize distance and shielding
- Limit amount of time near radiation source
- Maintain minimum of 6ft distance from radiation source

- Wear lead aprons and thyroid shields when standing close to radiation source, during fluoroscopy, surgical c-arm procedures and portable exams
- Record exposure values from radiation monitoring reports promptly

f. Use lead markers (right and left) correctly and place them on the image **prior** to exposure.
g. Minimize annotations of laterality (right and left) on all images after the image has been exposed.

h. Perform exams following the guidelines of the Joint Review Committee on Education in Radiologic Technology (JRCERT):
   * Perform repeat exposures under direct supervision with technologist in the room checking the image prior to exposure
   * Record repeat exposures on the student tally sheet and have the R.T. initial the exposure indicating direct supervision

i. Have all images approved by a technologist before releasing the patient from the department and submitting images to the Radiologist for a reading

j. Maintain patient safety in accordance with the patient safety policy in the (PPM)

k. Maintain patient confidentiality standards and meet HIPAA requirements