A. **Academic Division**: Health Sciences

B. **Discipline**: Radiological Science

C. **Course Number and Title**: RADS2340 Radiologic Procedures/Seminar 3

D. **Course Coordinator**: Dorie Ford R.T. (R) (M), BSPA, M. Ed.
   **Assistant Dean**: Melinda Roepke, MSN, RN

**Instructor Information**:
- Name: Click here to enter text.
- Office Location: Click here to enter text.
- Office Hours: Click here to enter text.
- Phone Number: Click here to enter text.
- E-Mail Address: Click here to enter text.

E. **Credit Hours**: 1.5
   - Seminar: .5
   - Laboratory: 2

F. **Prerequisites**: RADS1220
   **Co-requisites**: RADS2320 (m), RADS2360 (m)

G. **Syllabus Effective Date**: Fall 2019

H. **Textbook(s) Title**:

*Merrill’s Atlas of Radiographic Positioning and Radiologic Procedures 3- volume Set (Purchased in RADS1140)*
- Author: Long, Rollins, & Smith
- Copyright Year: 2019
- Edition: 14th
- ISBN: 97803235566674

*Quick and Easy Medical Terminology (Purchased in RADS1140)*
- Author: Leonard
- Copyright Year: 2017
- Edition: 8th
- ISBN: 9780323359207

*Radiographic Pathology for Technologists*
- Author: Mace-Kowalczyk
- Copyright Year: 2017
- Edition: 7th
- ISBN: 9780323416322
I. Workbook(s) and/or Lab Manual:

*Merrill’s Pocket Guide to Radiography*
*(Purchased in RADS1140)*
- Author: Frank
- Copyright Year: 2015
- Edition: 13th
- ISBN #: 9780323311960

*Merrill’s Atlas of Radiographic Positioning and Procedures Workbook*
*(Purchased in RADS1140)*
- Author: Long, Rollins, Smith & Curtis
- Copyright Year: 2019
- Edition: 14th
- ISBN: 9780323597043

J. Course Description: Radiographic procedures of the neck, digestive and biliary systems will be presented. Students will learn to work with barium sulfate, gastrografin, and carbon dioxide as contrast medium for the digestive system. Laboratory exercises in an energized lab provide the student with practical application of the classroom material. Radiation protection is emphasized. Radiographic pathology of the digestive and hepatobiliary systems will be presented. Students will learn to recognize pathology of the digestive and hepatobiliary system on medical images and be able to identify imaging procedures appropriate for each body system. A one-hour seminar will cover clinical topics.

K. College-Wide Learning Outcomes:

<table>
<thead>
<tr>
<th>College-Wide Learning Outcome</th>
<th>Assessments - - How it is met &amp; When it is met</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication – Written</td>
<td></td>
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<tr>
<td>Communication – Speech</td>
<td></td>
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<tr>
<td>Intercultural Knowledge and Competence</td>
<td>Intercultural Knowledge and Competence VALUE Rubric weeks 5-8 (presentation)</td>
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<tr>
<td>Critical Thinking</td>
<td></td>
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<tr>
<td>Information Literacy</td>
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<td>Quantitative Literacy</td>
<td></td>
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</tbody>
</table>

L. Course Outcomes and Assessment Methods:

 Upon successful completion of this course, the student shall:

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Assessments – How it is met &amp; When it is met</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Position the body for radiographic procedures of the digestive tract on a person or phantom in a laboratory setting.</td>
<td>Lab exercises and lab simulations weeks 2-4 and 4-6</td>
</tr>
<tr>
<td>2. Manipulate the radiographic equipment correctly for radiographic procedures of the chest, abdomen, upper and lower limb.</td>
<td>Lab exercises and lab simulations weeks 2-4 and 4-6</td>
</tr>
<tr>
<td>3. Demonstrate correct radiation protection practices.</td>
<td>Lab exercises and lab simulations weeks 2-4 and 4-6</td>
</tr>
<tr>
<td>Outcomes</td>
<td>Assessments – How it is met &amp; When it is met</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
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<tr>
<td>4. Use appropriate and effective oral, written and nonverbal communications.</td>
<td>Class exams weeks 4 and 8, digestive system anatomy class presentation week 3, lab exercises and simulations weeks 2-4 and 4-6. Intercultural Knowledge and Competence VALUE Rubric weeks 5-8 for presentation.</td>
</tr>
<tr>
<td>5. Identify anatomic structures demonstrated on radiographic images.</td>
<td>Class exams weeks 4 and 8. Image evaluation group activities weeks 3. Presentation week 2, Pathology image matrix week 3, online modules week 3</td>
</tr>
<tr>
<td>6. Evaluate medical images for positioning, centering, appropriate anatomy and technical accuracy.</td>
<td>Class exams weeks 4 and 8. Image evaluation group activities weeks 3. Pathology image matrix week 3, online modules week 3</td>
</tr>
<tr>
<td>7. Determine the cause-and-effect relationship between positioning the body and achieving the required outcome on the completed image.</td>
<td>Class exams weeks 4 and 8. Image evaluation group activities weeks 3. Pathology image matrix week 3, online modules week 3</td>
</tr>
<tr>
<td>8. Define basic terms related to radiographic pathology of the hepatobiliary and digestive system.</td>
<td>Exams weeks 4 and 8, pathology image matrix week 3, biliary system presentation week 7</td>
</tr>
<tr>
<td>9. Recognize the signs, symptoms, manifestations, complications and radiographic appearance of diseases of the digestive and hepatobiliary systems.</td>
<td>Exams weeks 4 and 8, pathology image matrix week 3, biliary system presentation week 7</td>
</tr>
</tbody>
</table>

M. Topical Timeline (Subject to Change):

Week 1 Soft tissue neck radiography

Seminar Topic: Lower limb problem solving (weeks 1-2)

Week 2 Digestive system anatomy/Cross-sectional anatomy

Week 3 Esophagram procedures

Seminar Topic: Vertebral column problem solving

Week 4 Stomach and small intestine procedures

Week 5 Barium enema procedures

Seminar Topic: Cultural diversity Weeks 5-8

Week 6 Pathology of the digestive system

Week 7 Pathology of the hepatobiliary system

Week 8 Final exam

N. Course Assignments:

Lecture/PowerPoint presentations
Lecture note outlines
Student worksheets/homework
Small group activities
Class discussions
Lab simulations and exercises
Role playing
Supervised practice in the college lab
Independent practice in the college lab
Computer assisted instruction (Evolve modules, radiography essentials)
Written assignments
Canvas utilization for instruction and communication
Assigned readings
Review of medical images

O. **Recommended Grading Scale:**

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

P. **Grading and Testing Guidelines:**

- Exams: 65% of grade
- Lab: 15% of grade
- Homework: 15% of grade
- Participation: 5% of 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.

Q. **Examination Policy:**

Students will receive a detailed course calendar. Class exams and lab simulations will be scheduled on the course calendar.

**Policy for a missed test or oral or written presentation:**

A student will receive a zero for a missed test or an oral or written assignment if the student has not contacted the instructor prior to the event. Contact may be made through a phone call to the office (may leave message) or through an e-mail to dford@ncstatecollege.edu. **A follow up message will occur later that same day from the instructor to the student’s nestate e-mail address informing the student about make up testing, lab and/or homework. The instructor will not call the student to arrange make up.**

In addition, student absences on test days are tracked. For each test in the course that a student misses the following deductions are taken assuming the student has notified the instructor prior to the test.

- The 1st missed test/event: No deduction from score
- The 2nd missed test/event: Minus 5% from earned score
The 3rd missed test/event Minus 8% from earned score
Additional missed test/event Zero

Depending on the type of test missed and the time constraints students will make-up tests either in the Health Science Building or in the Make-Up Proctoring Service offered by the college in Kee Hall.

**Lab Grading Policy**

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.

When a lab simulation is scheduled in the lab, students are expected to come to lab prepared to perform the lab simulation. 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 will be scheduled by the instructor to accommodate repeat simulations.

R. **Class Attendance and Homework Make-Up Policy:**

Most classes include homework assignments. If a student misses a class, it is the student’s responsibility to find out from the instructor what the homework assignment was and to obtain homework papers if applicable. Students are given full credit for homework only if it is completed and in class on time. If a student would like partial credit for homework it is the student’s responsibility to present the finished homework to the instructor in the next class. The instructor will not chase down or ask for missed homework. A zero is assigned for all missing homework.

**Lab Attendance and Practice Expectations**

Students are required to attend their assigned lab each week. If a student misses an assigned lab, he/she is required to attend another lab the same week or two labs the following week to stay current with practicing and simulating the material. Arrangements with the instructor must be made in advance.

It is the responsibility of the student to master the skills that are necessary to successfully complete the assigned simulations. This usually means that the student will need to come in to the radiology lab outside of their scheduled lab times to gain additional practice. Students may spend additional time practicing in the labs on weekdays until 6:45 PM and weekends from 12:00 – 4:00 PM

S. **Classroom Expectations:**

Look at the course calendar and read assigned material before class to have a general understanding of the information presented.
Read lab assignments prior to lab. Know the material before coming to lab to avoid having to read the material during lab when hands-on practicing should occur.

Complete homework on time.

Come to class with the required material: textbooks, class notes, workbooks, notebooks, homework, assignments, etc.

Participate in class discussions, ask and answer questions.

Demonstrate professional behavior and use language appropriate for classroom learning experience.

Stay on task when given in-class activities and group assignments. If a group finished early the members should read and review material presented in class, update class notes or any other educational activity. Ask the instructor if there are any questions.

Treat other class members with respect at all times.

Cell phone use is not permitted during class unless the instructor asks you to use your cell phone for learning activities. Any student’s cell phone that rings, vibrates loudly, or is used for texting during class will result in a $1.00 fine from that student. Monies collected from cell phone fines will be donated to the Robert L. Garber Scholarship for radiology students.

**Policy on Social Media**

All course material (lectures, slides, documents, worksheets, tests, lab activities, and all other material from this course and on Evolve) is presented with a non-written copyright which prohibits students from using the material without the instructor’s permission. Students are not permitted to post course material or take pictures of lab procedures and post the information on ANY webpage or social media device. The use of the faculty name or course name is prohibited.

T. **College Procedures/Policies:**

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

https://sharept.ncstatecollege.edu/committees/1/curriculum/SiteAssets/SitePages/Home/SYLLABUS%20SUPPLEMENT.pdf

The information can also be found Choose an item.