

RADR 2233 : Advanced Medical Imaging

Course Information

Name	RADS 2233: Advanced Medical Imaging
Credit	2 hours
Term	Spring 2021
Time	Thursday 8:00 am – 10:50 am
Dates	January 11 – May 8
Time Commitment	Students should expect to spend 2 hours in lecture and at least 9 hours per week on course material (15 week term)

Professor

Shelby Rankin, BSRT, R.T. (R)

Radiology Professor & Clinical Coordinator

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Course Description

This course discusses advanced diagnostic and therapeutic imaging procedures. There will be an emphasis on patient care and image evaluation involving fluoroscopy, surgery, mobile, and trauma.

Course Objectives

Upon completion of this course, the student will:

- Identify accessories, radiation protection techniques, and positioning used for trauma imaging
- Describe and list the components/operation of automatic injection devices
- Differentiate between various types of catheters, needles, and contrast media needed for special procedures
- Evaluate images for proper demonstration of anatomy and related pathology

Teaching Methodology

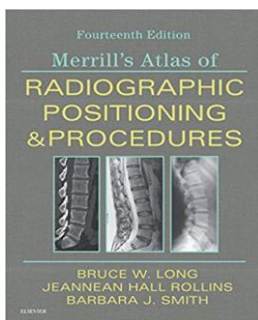
This course is taught using independent reading assignments, quizzes, classroom discussion, internet searches, and presentations.

Course Materials

Textbooks

Required

Long, B.W., Rollins, J. H., and Smith, B. J. (2018). *Merrill's Atlas of Radiographic Positions and Radiologic Procedures* (14th). Mosby: ISBN [978-0-323-56667-4]



Computer Requirements

You need access to an up-to-date computer with an internet connection in this course.

Assignments

There are four types of assignments in this course. The grading will be as follows:

1. Module Assignments	10%
2. Chapter Quizzes	5%
3. Group Project	15%
4. Module Tests (4)	35%
5. Final Examination	35%

Course Modules

Module 1: Fluoroscopy & Contrast Media

Module 2: Digestive System

Module 3: Urinary System & Special Radiographic Procedures

Module 4: Trauma, Mobile, & Surgical Radiography; Pediatric & Geriatric Radiography

Module 5: Angiography & Interventional Radiography

Important Dates

Schedule is subject to change.

Date	Reading	Quiz/Homework/Test/Project
Jan 14	Module 1	First Day of Class: Go Over Syllabus
Jan 21	Module 1	
Jan 28	Module 2	Module Assignment / Module 1 Test
Feb 4	Module 2	
Feb 11	Module 3	Module Assignment / Module 2 Test
Feb 18	Module 3	
Feb 25	Module 4	Module Assignment / Module 3 Test
March 4	Module 4	
March 11	NO CLASS	Happy Spring Break!!! (3/8/21 - 3/12/21) 😊
March 18	Module 4	
March 25	Module 5	Module Assignment / Module 4 Test
April 1	Module 5	
April 8	Module 5	
April 15	Module 5	
April 22		Module Assignment / Module 5 Test
April 29		Project Presentations
May 6		COMPREHENSIVE FINAL EXAM @ 9:00 AM

Evaluation

Grade Scale

A=100-90

B=89-80

C=79-75

D=74-60

F=59 and below

Grading Cycle

All assignments are graded together as a group to maintain a higher level of consistency. Grading begins on the first business day after a due date, outside of university holidays and professional meetings, and is typically completed before the next due date. You may track your progress through the Gradebook in CANVAS.

Feedback

Feedback varies throughout the course. The announcement section of the course is where I will send messages to the entire class. It is best to set up your CANVAS account to receive an email notification (to the email of your choice) when announcements are posted, so you do not miss important updates.

1. Click the Account tab
2. Select Notifications
3. Each notification is set to a default preference. To change a notification for a contact method, locate the notification and click the icon for your preferred delivery type.
4. Check the email address you wish to send email notifications. If you need to change this, go to the Settings Tab and enter the new email address. This email address should be an email address you check frequently.

You are welcome to email questions to clarify concepts or look for further explanations. If I come across repeated questions, I will provide feedback or supplementary resources in the Announcement section of the course so that everyone can benefit from it. You might look there first, because your question may be located there.

Late Work

The professor normally does not accept late assignments without prior approval and proper documentation for the rationale. In extreme emergencies the professor may grant an extension after the due date has passed with acceptable documentation from the student. Group projects will **never** be granted extensions. All course work must be completed in the semester the course is taken. The professor does not give incomplete grades.

Final Course Grade

This is a progression course in the radiology program. A final course score of 75% is required to pass this course. Any grade below 75% will result in the student being dismissed from the program. Any withdrawal from this course will result in the student being dismissed from the radiology program. If the student is dismissed, the student will need to reapply for program admission under the rules then in force. This course will have to be repeated.

Advanced Medical Imaging Assignment Details

Module Assignments (10%):

Each module will contain an assignment that outlines the content covered in each class. These concepts will help students better understand the topics discussed for the course. The assignments will be done through Canvas and they must be completed in its entirety by the dated posted in the syllabus. Failing to complete the entire assignment by the posted date will result in "0".

Chapter Quizzes (5%):

Each week a quiz will be given at the beginning of the class. Students will not be allowed to make up missed quizzes. Each quiz will consist of 5-10 fill in the blank/short answer type questions.

Group Project (15%):

The purpose of this activity is to reinforce the role of advanced medical imaging procedures. Students should demonstrate that they have an understanding of the procedures they are given, but perhaps more importantly, this presentation provides an opportunity for students to see how the procedures done every day in the medical imaging departments is a vital component for successful diagnosis and treatment of patients. The intended audience for the student-created presentation is the patient.

Students will prepare a presentation on a given procedure.

Topic:

Students will be divided into groups of 5 students. The instructor will present the group a piece of equipment used in advanced procedures in radiology. The students will research sources to find out what type of equipment the group has been given. The students will explore which procedure the equipment is used for and answer the following questions in terms a patient would understand.

Complete instructions can be found on Canvas.

Module Tests (35%):

There are five module tests. These tests will be made up of multiple choice and matching questions. Sources for the questions will be from: the previous quizzes and module tests; the textbook; chapter power points; and lectures. Module tests will typically have 25-35 questions and will be completed **ON CAMPUS DURING THE SCHEDULED LECTURE SESSION.**

Final Examination (35%):

The Final Examination is comprehensive. The exam will be made up of 100 multiple choice questions. Sources for the questions will be from: the previous quizzes and module tests; the textbook; chapter power points; and lectures. Students will have the two-hour final examination period to complete the examination.

Technical Difficulties

On occasion, you may experience problems with accessing Canvas, accessing class files located within Canvas, connecting with your internet service, or you may encounter other computer related problems. Make the professor aware of a technical problem as soon as possible. If a problem occurs on our end, such as Canvas failure, then a due date extension will typically be granted. **However, keep in mind it is your responsibility to have (or have access to) a working computer in this class. Assignments and tests are due by the due date, and personal computer technical difficulties will not be considered reason for the instructor to allow students extra time to submit assignments, tests, or discussion postings.**

Dropbox assignments that can be attached in an email should be emailed to the professor as soon as a problem is encountered. Failure to do so may result in points being lost, regardless of connection issues.

Attendance

Attendance is required for **all class sessions. This includes zoom or in-person.** Zoom classes will require students to have their front facing camera on at all times in a well-lit area, with no distractions. Grayson College states that a student may have up to three absences before they are dismissed from the program. Students arriving 5 minutes or later will be tardy and 3 tardies counts as 1 absence. Students leaving early will be counted as tardy. A clinical absence the day before an exam will result in an automatic 10-point deduction from the exam.

Requesting a Withdrawal

The Grayson College administration has set deadlines for withdrawal from any college course. These dates and times are published in the semester's schedule of classes. All withdrawals **must be initiated by the student.** After this date dropping the course results in a grade of "F". Withdrawal from this course will result in the student being dismissed from the radiology program.

Special Needs

In accordance with Section 504 of the Federal Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, Grayson College endeavors to make reasonable adjustments in its policies, practices, services, and facilities to ensure equal opportunity for qualified persons with disabilities to participate in all educational programs and activities.

The Office of Disability Services (ODS) provides information and assistance, arranges accommodations, and serves as a liaison for students, professors, and staff. The ODS has assistive devices such as books on tape, recorders, and adaptive software which can be loaned to qualified individuals. A student/employee who seeks accommodations based on disability must register with the Office of Disability Services in the Student Success Center; Room 115. Documentation of disability from a competent professional is required.

Individuals with grievances related to discrimination or lack of accommodation based on a disability are encouraged to resolve the problem directly with the area involved. If the matter remains unresolved, the Office of Disability Services for resolution will provide advice and/or assistance.

The contact for the Office of Disability Services is:

Jeffri Hodge: (903)463-8751 or hodgej@grayson.edu

Academic Integrity

RADR 2313 and all radiology course work adheres to a higher standard.

In particular, academic dishonesty, however small, creates a breach in academic integrity. A student's participation in this course comes with the expectation that his or her work will be completed in full observance of the academic integrity.

All components of RADR 2313 are designed to represent the efforts of each student individually and are NOT to be shared, copied, or plagiarized from other sources. When students submit their efforts for grading, they are attesting they abided by this rule.

An online plagiarism service may be used in this course. Student assignments may be uploaded to the service for identification of similarities to other student papers and published works.

Cheating includes, but is not limited to

- Use of any unauthorized assistance in taking quizzes, tests, or examinations;
- Dependence upon the aid of sources beyond those authorized by the professor in writing papers, preparing reports, solving problems, or completing other assignments; or
- The acquisition of tests or other academic materials belonging to the university faculty or staff without permission.

Plagiarism includes, but is not limited to

- The use of, by paraphrase or direct quotation without correct citation in the text and in the reference list,
- The published or unpublished works of another person.
- Students may NOT submit papers and assignments that they have previously submitted for this or other courses.
- The use of materials generated by agencies engaged in "selling" term papers is also plagiarism.

Academic dishonesty (cheating, plagiarism, etc.) will not be tolerated in this class. Whenever a student is unsure of whether a particular situation will be interpreted as academic dishonesty, he/she should ask the professor for clarification. If students are guilty of academic dishonesty, a grade of zero (0) will be given for the quiz, assignment, etc.

Students are encouraged to review the tutorials and suggested websites for more information about plagiarism. If you have any questions about what constitutes plagiarism, please consult:

- The University Academic Dishonesty Policy
- The website Plagiarism.Org, or
- The professor