

RADR 1213 : Principles of Radiographic Imaging I

Course Information

Name	RADR 1213: Principles of Radiographic Imaging I
Credit	2 hours
Term	Spring 2021
Time	Wednesday 8:00 am – 11:50 am
Dates	January 11 – May 8
Time Commitment	Students should expect to spend 1-2 hours in lecture and at least 8 hours per week on course material (15 week term)
Prerequisites	<ul style="list-style-type: none">• Successful completion of all previous radiology course work• Current enrollment in RADR 2313, 1361 & 2401

Professor

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Course Description

This course analyzes the basic principles of radiographic imaging and production. The student will define, recognize, and evaluate qualities of a radiographic image, and examine the effects of exposure variables upon image quality.

Course Objectives

Upon completion of this course, the student will:

- Describe x-ray production
- Differentiate between x-ray interactions
- Define image quality & characteristics
- Identify image quality characteristics
- Discuss the technical factors that influence image quality
- Discuss the geometric factors that affect image quality

Teaching Methodology

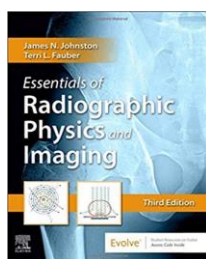
This course is taught using a hybrid of traditional lecture and group activities. There will be individual reading assignments, quizzes over reading material, discussion posts, and a closed book final examination.

Course Materials

Textbooks

Required**

Johnston, J.N., and Fauber, T.L. (2016). Essentials of radiographic physics and imaging. (3rd ed.). St. Louis, MO: Elsevier. ISBN: 978-0-323-56668-1



**I would buy this book, because you will reuse it in the Fall.

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. Chapter Quizzes	15%
2. Discussion Board	15%
3. Technique Chart	25%
4. Final Examination	45%

EXIT EXAM - Ungraded Assignment

The Exit Exam is **NOT** weighted/graded for your final grade in this class (RADR 1213). However, it is **essential for your progression in the radiology program**. It is either a pass (75 and up) or fail (74 and down) score. There are 3 attempts for each student. This Exam will have 200 questions and will be **CONDUCTED ON CAMPUS** in the computer lab. Content in the exam will cover all previously learned topics.

Important Dates

Schedule is subject to change.

Date	Lecture Topic	Zoom	In-Person	Discussion	Exam
Jan 13	First Day of Class: Go Over Syllabus Start Ch. 6 & 7	<input checked="" type="checkbox"/>			
Jan 20	Ch. 6 X-ray Production Ch. 7 X-ray Interactions with Matter	<input checked="" type="checkbox"/>			
Jan 27	Lab		<input checked="" type="checkbox"/>	Discussion Post	Ch. 6 & 7 Quiz
Feb 3	Ch. 8 Image Production Ch. 13 Exposure Technique Selection	<input checked="" type="checkbox"/>			
Feb 10	Lab		<input checked="" type="checkbox"/>	Discussion Post	Ch. 8 Quiz
Feb 17	Ch. 9 Image Quality & Characteristics	<input checked="" type="checkbox"/>			
Feb 24	Lab		<input checked="" type="checkbox"/>	Discussion Post	Ch. 9 Quiz
March 3	EXIT EXAM / Lab		<input checked="" type="checkbox"/>		EXIT EXAM
March 10	Happy Spring Break!!! (3/8/21 – 3/12/21) 😊				
March 17	Ch. 11 Radiographic Exposure Technique	<input checked="" type="checkbox"/>			
March 24	Lab		<input checked="" type="checkbox"/>	Discussion Post	Ch. 11 Quiz
March 31	Ch. 13 Exposure Technique Selection	<input checked="" type="checkbox"/>			
April 7	Lab		<input checked="" type="checkbox"/>	Discussion Post	Ch. 13 Quiz
April 14	Ch. 12 Scatter Control	<input checked="" type="checkbox"/>			
April 21	Lab		<input checked="" type="checkbox"/>	Discussion Post	Ch. 12 Quiz
April 28	Technique Chart Due	<input checked="" type="checkbox"/>			
May 5	COMPREHENSIVE Final EXAM		<input checked="" type="checkbox"/>		Final EXAM

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 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.

Principles of Radiographic Imaging I Assignment Details

Chapter Quizzes (15%):

There will be post-lecture quizzes over each chapter. The quiz will have 10 - 20 questions and will be taken **in class the following week before lecture begins for the next chapter**. The purpose of the quizzes is to ensure students studied previous material understood chapter concepts.

Discussion Board (15%):

Every week following lecture, you will be required to publish one (1) original post discussing what you understood and what you didn't from lecture for the entire week. Before the following lecture, you will need to read your fellow classmates' posts and respond to at least two (2) of these. All posts must be submitted before the start of the next lecture. Postings and responses must be meaningful, not just one or two words or "I agree." Failure to complete ALL requirements for each discussion board will result in a zero (0) for that week's discussion. There will be no exception to this policy.

Technique Chart (25%):

At the beginning of the semester, you will be put into groups within your lab period. You will work together to create a technique chart for your assigned room throughout the semester. Attendance is required for lab days, unless proper notification is given. The instructor will provide you with examples and more detailed instructions in class.

Final Examination (45%):

The Final Examination is comprehensive. The exam will be made up of 100 multiple choice questions. Sources for the questions will be from: previous quizzes, the textbook chapter power points, and lectures. Students will have the two-hour final examination period to complete the examination. There is not a final review for this exam.

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 CANAS 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 on 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 that leave early will be counted as tardy. A clinical absence the day before an exam will result in a 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 1213 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 1213 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