

Xavier University

## Exhibit

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Radiologic Technology Syllabi Fall 2020

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2020

### RADT 170 Principles of Radiographic Exposure I

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**PRINCIPLES OF RADIOGRAPHIC EXPOSURE I**  
**RADT 170 / 2 cr. hours**

**Instructor:** Donna J. Endicott, M.Ed., R.T. (R), 188e Cohen Hall  
(513) 745-3358 office or (513) 310-4086 cell or [Endicott@xavier.edu](mailto:Endicott@xavier.edu)  
**Office Hours:** Monday, 11:00 to 12:00 am or by appointment or see me after class to schedule a time.  
**Text:** “Principles of Radiographic Imaging” by Carlton, 6<sup>th</sup> Edition

**Mission Statement**

The mission of the Radiologic Technology Program is to prepare the student to enter diagnostic imaging as an entry-level radiographer. Consistent with the Jesuit tradition of rigor and compassion based on the highest ethical standards, graduates of the Xavier University Radiologic Technology Program have the necessary skills to integrate theoretical knowledge and essential clinical skills to perform radiologic procedures and provide appropriate patient care.

**Goal:** This course is design to provide students theoretical basics for production and control of x-radiation for diagnostic and radiation safety purposes. Learn and demonstrate how to manipulate the radiographic control panel, table and ancillary equipment. Explain the radiation interactions between x-ray and matter, and their relationships with technical factor selections. Identify the difference types of beam restriction and their importance in radiation protection.

**Objectives:** Upon completion of this course, the student should be able to:

1. List and evaluate ways to protect the patient and worker from unnecessary radiation. (Ck, Ce)(A)
2. Explain how x-radiation is produced. (Cc)
3. List the properties of x-radiation. (Cc)
4. Manipulate the radiographic control panel and radiographic table. (Cc) (P)
5. Diagram and explain the components of the x-ray tube. (Cc)
6. List and discuss the types of interactions of radiation with matter. (Ck, Ce)
7. Compute the Inverse Square Law and mAs problems. (Cs)
8. Explain how technical factor selections will change the x-ray interactions with matter. (Ck)
9. Identify and explain the different types of beam restriction. (Ck, Cc)
10. Discuss the purpose of beam restriction and their importance to reduce the patient’s radiation dose.

<b>REQUIREMENTS:</b>	Participation points	50	
	Test (5)	500	
	Final Exam	200	(comprehensive)



**Plagiarism, cheating and dishonesty** are not acceptable at any time or on any assignment. The following are some examples of plagiarism and/or cheating: copying sentences or phrases from any print or internet source, copying from others tests or assignments, using crib sheets, using the work of other students and passing it on as your own. In accordance with Xavier's Academic Honesty policy, any infraction at all will cause at least a grade of "0" on the test and will likely result in an F for the course, at my discretion and in consultation with the dean. If you have any questions about what is an inappropriate behavior – ask me before you do it!

**Missed Tests.** If you know you will miss a test for any reason, please let me know as soon as possible and we will arrange to reschedule the test. Most likely, you will need to take the test before the next scheduled class time. All make-up tests will be given in my office – Cohen 188e.

**Cell phones** will be turned off during class time. If you have a cell phone or another electronic device out during a test, I will view this as cheating and take your test. I will take your test away and you will receive an "F" for the test. If your phone rings during a class, I reserve the right to answer your phone. In case of emergencies, see me before class starts.

### *Office of Student Success*

The Office of Student Support offers tutoring, Supplemental Instruction (SI), and study groups. For information about these services, contact Stephanie Daniels at 745-3214 or [danielss3@xavier.edu](mailto:danielss3@xavier.edu). The OAS is located on the fifth floor of the Conaton Learning Commons, Suite 514.

### *Students with Disabilities*

Xavier University is committed to providing equal opportunity and access to the educational experience through the provision of reasonable accommodations. For students who have an accommodations letter from Disability Services, it is essential that you email the letter and meet with me as soon as possible to discuss your disability-related accommodation needs for this course.

If you have not yet met with Disability Services to arrange accommodations, it is necessary that you do so as soon as possible as accommodations are not retroactive. If you would like information regarding eligibility for academic accommodations due to barriers associated with a potential disability, please contact Cassandra Jones, Director of Disability Services, by phone at 513-745-3280, in person on the Fifth Floor of the Conaton Learning Commons, Room 514, or via e-mail at [jonesc20@xavier.edu](mailto:jonesc20@xavier.edu) to coordinate reasonable accommodations as soon as possible. Please contact Disability Services well in advance of needing an accommodation as the registration process can take several weeks.

- It is important to note that any disability-related information including accommodations is confidential.

### *Mental Health Resources*

#### *Undergraduate*

Life at college can get very complicated. Students sometimes feel overwhelmed, lost, experience anxiety or depression, struggle with relationship difficulties or diminished self-esteem. However, many of these issues can be effectively addressed with a little help. TriHealth Counseling Services

(Located in the United Health Building - Health and Wellness Center is located on the first floor) and the Psychological Services Center (located at the Sycamore House) help students cope with difficult emotions and life stressors. TriHealth Counseling Services and the Psychological Services Center are staffed by therapists, counselors, and other staff who are attuned to the needs of college students. The services are FREE and completely confidential. Find out more at <http://www.xavier.edu/health-wellness/counseling/index.cfm> and <http://www.xavier.edu/psychologicalservices/welcome.cfm> or by calling (513) 745-3022 for McGrath or (513) 745-3531 for Psychological Services Center.

## PRINCIPLES I 2020 Fall Semester

<b>DATE:</b>	<b>TOPIC:</b>
Aug. 17	Introduction
19	Discovery of X-ray (#2) wavelength
26	properties of X-radiation, atoms
24	X-Ray Tube (#5)
26	x-ray tube
31	x-ray tube
Sept. 02	x-ray tube ( <b><i>Labor Day – CLASSES ARE IN SESSION!</i></b> )
07	x-ray tube
09	x-ray tube
14	<b>TEST</b>
15	<b><i>NOTE: Tuesday, 9/15 Academic Holiday – no clinicals</i></b>
16	X-ray equipment (#6)
21	X-ray equipment
23	X-ray equipment (Equipment Assignment DUE)
28	X-ray equipment
30	<b>TEST</b>
Oct 05	X-radiation Production (#8)
07	X-radiation Production
12	Filtration (#11)
14	<b>TEST</b>
19	Prime Factors – (#12)
21	<b><i>Academic Holiday – No classes</i></b>
26	Prime Factors
28	Prime Factors
Nov. 02	<b>TEST</b>
04	X-ray Interactions (#12)
09	X-ray Interactions
16	Beam Restriction (#15)
18	continue
23	<b>TEST</b>
25-29	<b><i>Thanksgiving Break – No Classes and no clinicals</i></b>
Nov. 30-Dec. 4	Final Exam Week: Remote Week

**Wed., Dec. 11 from 8:00 to 9:50 am**

*NOTE: This schedule is subject to change by the discretion of the instructor.*