



**Course Syllabus
SEMESTER
School of Nursing and Health Professions**

<i>What is it?</i>	<i>Here is the Answer!</i>
<i>Course Name:</i>	Radiologic Technology VII
<i>Course & Section Number:</i>	RAD 114-XXX
<i>Meeting Day(s) & Time(s):</i>	
<i>Credits:</i>	5
<i>Contact Hours:</i>	3 lecture, 1 lab
<i>Instructor's Name:*</i>	
<i>Student Hours (Formerly Office Hours) & Location:</i>	
<i>OCC Email:**</i>	
<i>Additional Contact Information:</i>	

**Please only use your student OCC email to contact me.

Catalog Description:

RAD 114 - Radiologic Technology IV

Examines the components, function and use of imaging equipment to perform diagnostic radiographic, mobile, fluoroscopic, tomographic and computed tomography procedures. Studies radiation protection and radiographic exposure factors including automatic exposure control. Discusses common special radiographic procedures and associated image critique. In lab, radiographic imaging procedures and the resultant image evaluation criteria of the skull, spine and trauma patient are emphasized. Simulated lab experiences are planned to provide the student opportunities to apply principles and skills learned.

Co-requisite: RAD 103 and RAD 104 and (ENG 111 or ENG 111P)

Prerequisite: RAD 102 and RAD 113 and BIO 211 and MIT 211 all with a "C" or better

Credits: 5(Lecture: 3 Lab: 6)

School: School of Nursing & Health Professions

Department: Radiography Dept

Course Materials:

1. RADIOLOGIC SCIENCE FOR TECHNOLOGISTS

BUSHONG, STEWART C.

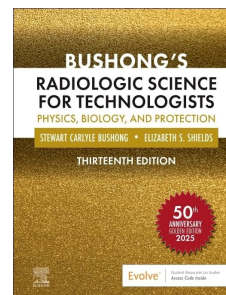
ISBN13: 978-0323765367

EDITION: 13TH

FORMAT: HARDCOVER

PUBLISHER: Mosby Inc

COPYRIGHT: May 12, 2025



2. PRINCIPLES OF RADIOGRAPHIC IMAGING AN ART AND A SCIENCE

CARLTON, RICHARD; ADLER, ARLENE; BALAC, VESNA

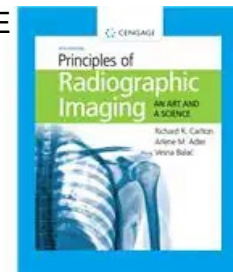
ISBN13: 9781337711067

EDITION: 6TH

FORMAT: HARDCOVER

PUBLISHER: Cengage Learning

COPYRIGHT: 1/3/2019



3. INTRODUCTION TO RADIOLOGIC & IMAGING SCIENCES & PATIENT CARE

BY ADLER, ARLENE M.; CARLTON, RICHARD R.

EDITION: 7TH

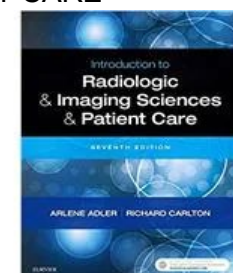
ISBN13: 9780323566711

ISBN10: 0323566715

FORMAT: PAPERBACK

PUB. DATE: 2018-10-29

PUBLISHER(S): W B SAUNDERS CO



4. Bontrager, Kenneth L. Bontrager, Radiographic Positioning and Related Anatomy, 13th Edition, Mosby-Year book, Inc. Saint Louis, MO. 2021.
ISBN:9780323653671

5. Bontrager, Kenneth L, & Lampignano, John P., Workbook for Bontrager's Textbook of Radiographic Positioning and Related Anatomy, 2021, Volume 1, Thirteenth Edition. ISBN-13: 978-0323694230 /ISBN-10: 0323694233
6. Bontrager, Kenneth L, & Lampignano, John P., Bontrager's Handbook of Radiographic Positioning and Techniques, 2021, Thirteen Edition ISBN-13: 978-0323694223 ISBN-10: 0323694225
7. RAD 114 Lab Manual. Owens Community College
8. Windows Computer with Respondus Lockdown Browser Installed and Web-Cam Access for on-line testing

OER and Owens Community College Library Resources (*Open Educational Resources are free online materials for instructor and student use. Some OER material may be available in print in the Owens Community College Library.*)

What Will I Learn in This Course:

Course Objectives:

The course

1. Presents information on the components, function and use of imaging equipment to perform diagnostic radiographic, fluoroscopic and tomographic procedures.
2. Reinforces emphasis on radiation protection and radiographic exposure factors including automatic exposure control and introduces soft tissue imaging.
3. Discusses common special radiographic procedures and associated image critique.
4. Introduces image evaluation criteria, anatomy identification and radiographic positioning of the bony thorax, skull, spine and trauma patient in lab.

Student Learning Outcomes:

Student will...

The student will:

1. Identify components, describe function, and explain the theory and physics of the production of x-radiation.
2. Identify images, describe anatomy and explain methods for performing common special radiographic procedures.
3. Describe and explain terminology and factors related to special imaging modalities, including fluoroscopy.
4. Identify and explain terminology and factors relating to the principles of radiation protection.
5. Demonstrate the application of the inverse square law, mAs compensation formula, and exposure factor conversion.
6. Identify and describe the major system components of computed tomography
7. Identify anatomical structures of the bony thorax, spine, and cranium on radiographic images.
8. Successfully perform simulations in positioning and patient care in radiographic procedures of the spine, cranium, and trauma situations in the laboratory setting.

Outcome The student will:	Where assessed (List assignments, exams, discussions, items to be graded)
1. Identify components, describe function, and explain the theory and physics of the production of x-radiation.	Worksheets 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 Test 1, Test 2, Midterm Exam. Quiz 1 and Quiz 2 and Quiz 3
2. Identify images, describe anatomy and explain methods for performing common special radiographic procedures.	Worksheets 12,13 Test 3 & 4 Final Exam. Quiz 5
3. Describe and explain terminology and factors related to special imaging modalities, including fluoroscopy.	Worksheets 1, 2, 3, 4, 5, 6, 7, 8, 9 Test 1, Test 2, Final Exam. Quiz 1 and Quiz 2 and Quiz 3 and Quiz 4
4. Identify and explain terminology and factors relating to the principles of radiation protection.	Bontrager Ch 7, Ch 12, and Ch 12 Image ID Ch 7, Ch 12, and Ch 13
5. Demonstrate the application of the inverse square law, mAs compensation formula, and exposure factor conversion.	Math Test
6. Identify and describe the major system components of computed tomography	Worksheets 14, 15 Notecard Quiz 7, 8 Quiz 6 Lecture Final
7. Identify anatomical structures of the bony thorax, spine, and cranium on radiographic images.	Image ID Ch 9, 2/8 & 10, Chapter 11, Trauma
8. Successfully perform simulations in positioning and patient care in radiographic procedures of the spine, cranium, and trauma situations in the laboratory setting.	Practicals Ch 9, 2/8 & 10, Chapter 11, Trauma .

Program Outcomes:

The following program outcomes are assessed in this course

Goal 1: Students will be clinically competent.

Goal 2: Students will utilize critical thinking skills.

Goal 3: Students will be able to communicate effectively.

Institutional General Education Competencies:

As a student at Owens Community College, you will take General Education courses as part of your degree program. While specific to the General Education courses, will be reinforced in many of your degree program major courses and may be measured in your capstone course(s) and others as identified.

1. Communicate effectively.
2. Act with professional responsibility.
3. Demonstrate sensitivity to other's beliefs and values.

4. Think analytically, critically, and creatively.

Institution General Education Competency	Where Assessed
Communicate effectively.	RAD 114 practicals, pass/fail
Act with professional responsibility.	RAD 114 practicals, pass/fail
Demonstrate sensitivity to others' beliefs and values.	RAD 114 practicals, pass/fail
Think analytically, critically, and creatively.	RAD 114 practicals, pass/fail

Technology, Lab, and File Requirements:

The Blackboard Learning System is an online course environment available for all Owens courses, even those that are not web-based. Blackboard offers students a resource where they can communicate and collaborate with instructors and fellow students outside of the physical classroom. The Radiologic Technologies Department integrates Blackboard into each course, and it is essential for all students to become familiar with the system. Check the STUDENT HELP AND RESOURCES tab on the blackboard shell for information on technical support and Software/Hardware requirements for utilizing Blackboard to complete assignments and communicate with peers and faculty.

Calculators: Please be sure that you have a calculator available as necessary for lecture class and testing sessions. Cell phones/iPads or laptops may be used for testing but may not be used as calculators. When testing, the Respondus calculator will be activated.

Specific download and installation Instructions are posted in Blackboard:

General Education Outcomes

1. **Communicate:** Students will communicate effectively.
2. **Analyze, Synthesize, and Evaluate Information:** Students will apply research skills and tools, as well as to analyze, synthesize, and evaluate information.
3. **Think Critically:** Students will think critically.
4. **Exposed to Different Perspectives:** Students will be exposed to views different than their own.

Assessment	Percentage of grade	SLO it measures	Gen Ed Assessment
Test #1	5%	SLO 1, 2, 3	2, 3
Test #2	5%	SLO 1, 2, 3	2, 3
Test #3	5%	SLO 1, 2, 3	2,3
Test #4	5%	SLO 1, 2, 3	2,3
Final Exam	14%	SLO 1, 2, 3	2,3
*Many scenario-based questions requiring			

decision-making			
Bontrager Exams *Many scenario-based questions requiring decision-making	22%	SLO 4, 5, 6	2, 3
3 Practical examinations	P/F	SLO 4, 5, 6	1,3,4

Academic Support

Disability Services Resource Center: If you have a disability or acquire one, you may be entitled to receive reasonable accommodations intended to assure you an equal opportunity to participate in and benefit from the program. To receive more information or to register for accommodations, please contact the Disability Resource Center at 567-661-7007, email disability@owens.edu, visit <https://www.owens.edu/disability/>, or stop by College Hall 124.

Tutoring Services: Owens Community College offers academic tutoring and assistance in a variety of subjects including: accounting, computing, economics, mathematics, science, and writing. For more information go to: <https://www.owens.edu/successcenters/>.

Counseling Services: Counseling Services provides assistance to students experiencing personal, educational, interpersonal/relationship, family, social, or psychological difficulties. If you feel you may benefit from this service, please contact them at counselingservices@owens.edu. More information is at <https://www.owens.edu/counseling/>.

Campus and Community Connections: The Center for Campus and Community Connections (College Hall 123) is a walk-in office created to provide retention support through resource stability initiatives and community connections. Go here for more information: <https://www.owens.edu/connection/> or contact connections@owens.edu

Owens Library: The Owens Library offers two locations (Toledo and Findlay) as well as online resources. For more information visit <https://www.owens.edu/library/>.

Students can find more information on campus resources, student support, student life, and security at this [link](#).

General Information

Student Code of Conduct: All students are expected to follow Owens Community College's [Student Code of Conduct](#), which includes academic honesty, encompassing plagiarism. See the [Board Policy](#) for more information.

Anti-Discrimination and Harassment & Title IX/Sexual Misconduct: All students, faculty, and staff are expected to follow Owens Community College's [Anti-Discrimination and Harassment Policy](#) and the College's [Title IX Policy](#)/Sexual Misconduct Procedures and Guidelines. The College strictly prohibits and will not tolerate harassment, discrimination, intimidation, or hostile/offensive working or learning environments.

Religious Accommodations: A student seeking an accommodation for an absence permitted under Ohio's Testing Your Faith Act must provide the instructor with a written email notice with the specific dates for an absence, and must do so not later than fourteen (14) days after the first day of instruction. Alternative accommodations are not retroactive, and no academic penalty will be imposed for an absence under the policy*. The request for an alternative accommodation will be kept confidential. Students with questions about a religious accommodation under Ohio's Testing your Faith Act may contact the College's Office of Academic Affairs: provost@owens.edu. The policy may be found on the Owens website: [3358:11-2-63 Accommodation](#) for a Student Absence for the Observance of Religious Beliefs and Practices Policy

Document Collection: Throughout the semester, your instructors may ask for a variety of assignments including tests and/or quizzes for student learning of institutional general education competencies or program assessment. Please save all your class materials until the end of the semester.

Classroom Admittance: OCC classes shall only be attended by the officially registered OCC students or perspective students, instructor of record, guest lecturer, or substitute. Visitors are not permitted to be in the classroom and should not be invited to attend or participate in the class. See [FERPA](#) regulations for more information. For any changes, students must talk with their instructor first and then their advisor.

Face-to-Face Classes: This course is designated as a **face-to-face course**. Students are expected to attend all scheduled lecture, lab lecture, and laboratory sessions in person unless otherwise explicitly stated in this syllabus or communicated in advance by the instructor.

On **limited, pre-scheduled dates**, certain assessments (including selected tests and the final examination) may be administered **online only**. These dates will be clearly identified in the course schedule and/or communicated via Blackboard announcements. Online testing does not change the overall face-to-face designation of the course. Lecture and lab lecture schedules are coordinated to support student success and consistency across courses. However, instructional delivery may differ between lecture and lab lecture on specific dates.

Students should not assume that if one component (lecture or lab lecture) is online, the other will automatically be online unless explicitly stated. Any deviations from in-person instruction will be communicated in advance.

Testing Policies and Expectations

All testing policies outlined in this syllabus are enforced as written. While instructors aim to support student success, **testing rules are not adjusted on an individual basis** except under documented circumstances approved in advance.

Students are expected to follow the stated testing format, timing, and delivery method. Attempts to reinterpret, challenge, or negotiate testing policies after an assessment has begun will not be considered.

Use of AI Tools: This course permits you to use artificial intelligence (AI) tools, such as chatbots, text generators, paraphrasers, summarizers, or solvers, to get guidance on assignments, as long as you do so in an ethical and responsible manner. Essentially, you can think of these tools as ways to help you learn but not to entirely create work for assignments like discussion board posts, essays, presentation slides, and so on. AI is more like your tutor or TA, not a replacement for your independent thinking.

This means that you must:

- Not use AI tools to replace your own thinking or analysis or to avoid engaging with the course content.
- Cite or explain any AI tools you use. Provide the name of the AI tool, the date of access, the URL of the interface, and the specific prompt or query you used to generate the output.
- Be transparent and honest about how you used the AI tool and how it contributed to your assignment. Explain what you learned from the AI tool, how you verified its accuracy and reliability, how you integrated its output with your own work, and how you acknowledged its limitations and biases.

You are accountable for any mistakes or errors made by the AI tool. Always check and edit the output before submitting your work. If you discover any inaccuracies or inconsistencies in the output after submission, notify the instructor immediately and correct them as soon as possible.

Using AI tools in an unethical or irresponsible manner, such as copying or paraphrasing the output without citation or transparency, using the output as your own work without verification or integration, or using the output to misrepresent your knowledge or skills, is considered a form of academic dishonesty and will result in a zero grade for the assignment and possible disciplinary action. If you have any questions about what constitutes ethical and responsible use of AI tools, please consult with the instructor **before** submitting your work.

NOTE: Some instructors will also list specific acceptable and unacceptable uses or include a statement like “All written assignments, projects, and exams must be completed independently.”

If you have any questions about what constitutes ethical and responsible use of AI tools, please consult with the instructor before submitting your work.

What Are Student & Instructor Responsibilities?

Instructor's Responsibilities:

Attendance/Class Time:

We will be respectful of your time and begin and end class on time. If class needs to be canceled for any reason, I will notify students as soon as possible by email announcement.

Grading Assignments:

Assignments that are submitted by the due date will be graded and returned/recorded in the Blackboard grade center within 7 days. Assignments that are submitted after the due date *may* take up to 10 days before I am able to grade it.

Answering Emails:

I will do my best to respond to your emails within 24 hours on weekdays and within 48 hours on weekends. Please use your Owens email account to contact me.

Announcements:

I will post any updates and/or reminders on the Blackboard Announcement page, as well as send it out to your Owens email account.

Office Hours:

These posted times (posted outside my office door, HEC 133S) are designated for me to be available to meet with and assist you, outside of normal class time, with any concerns/questions you may have regarding this course or program.

Facilitating Successful Completion of the Course:

I welcome questions, concerns, and experiences relevant to the topic, course and/or professional field. We learn from each other. If appropriate, I encourage you to share and ask during class. If not, please see me during student hours or email me. If there is a need, I will reach out to the student or class to address that need. I will make referrals to other campus resources as needed. I am aware that life is happening, and this class is not the only thing you have going on.

Student Responsibilities:

Attendance/Participation:

Class discussions, activities and participation are an integral component of learning and understanding the course material and therefore, attendance is part of your grade in this class. If you are going to be absent, please notify the appropriate instructor prior to missing the class, if possible. Please look at the assignment calendar to see what was missed (topic, assignments, etc.), review the power points and contact the instructor if you have any questions.

Class will begin on time, so please plan accordingly. We understand things happen. Lateness is defined as arriving after the scheduled class start time. Up to five (5) points may be deducted from the final course grade.

Make Up Tests

A make-up test consisting of fill in the blank questions and answers may be administered if a student misses a regularly scheduled examination. To receive maximum credit, the student should notify the instructor at least **30 minutes** prior to the scheduled testing time. If no notification is received, the student will receive a five **(5) percent** reduction from the score of the make-up examination. Students are responsible for ensuring successful email delivery. Claims of sent messages without instructor receipt will not be accepted.

Inclement Weather

In the case that the campus closes due to inclement weather, online lecture may take place at the discretion of the instructor. Communication from instructor will be sent out the day of.

Check Email/Blackboard Shell:

Any announcements and updates will be sent to your email and/or posted on the Blackboard shell. Students are encouraged to check their email *at least* once daily and to log into their Blackboard shell several times a week to remind themselves of upcoming assignments, etc.

Tests/Quizzes:

All dates for assignments and tests are listed on the assignment calendar. All tests and quizzes will be administered on Blackboard and taken during the designated class time. Please bring your laptop/tablet with you on these days with Respondus software loaded. If you do not have a device, please let us know ahead of time and we will make other arrangements for you.

Phones:

We have found phones to be a distraction in class. Please silence your phone and keep it out of sight. However, there may be circumstances you may need your phone available for personal reasons. If this is necessary, please be discreet and leave the classroom.

Contacting the Instructor:

Email is the best way to reach me, outside of student hours. Please include your course number and section in the subject line.

Asking for Help/Clarification:

I expect questions and that is ok. **Unless I am told otherwise, we will assume that every student understands everything said in class, on the Blackboard shell and through emails.** Sometimes the best thing you can say is “I am not following this concept” or “I have no idea where to begin with this assignment.” All classes, and

courses in this program, will build on and further develop the information we discuss. Please reach out as soon as you have questions or need clarification.

Instructor Discrepancies:

If at any time throughout the semester you have a problem with the course and/or instructor, contact the instructor. If the issue cannot be resolved after discussion with the instructor, see the Department Chair: NAME, OFFICE, TELEPHONE, or EMAIL.

How Will Your Grade Be Determined and What Are the Major Assignments for the Semester?

Weighted Grade Scheme:

Breakdown of Course Grades

The lecture section will be worth 50% of the course grade; divided as follows:

Worksheets	4%
Four tests (@ 5% each)	20%
Quizzes (lecture)	6%
Note card quizzes	2%
Comprehensive Midterm	9%
Comprehensive Final	<u>9%</u>
	50%

Grading Procedure:

Grading Procedure: The grading scale for the course is

93 – 100%	A
85 – 92%	B
76 – 84%	C
60 – 75%	D
59% or below	F

The course is divided into two sections:

1. Lecture 50%
2. Laboratory 50%

Students must earn a passing grade of 76% in both the lecture and laboratory components of the course. If either of the percentages earned is less than 76%, the student will earn a grade of “D or F” for the course and be removed from the program.

Lecture Class Assignments

All assignments and testing will be submitted online in the RAD114-002 course shell.

Lecture Tests:

All digital testing will utilize Respondus Lockdown Browser. All off-campus testing will utilize Respondus Lockdown Browser with Web Cam. If students are not logged into Respondus during assessments, no credit will be issued for the assessment. A repeat exam consisting of fill-in-the-blank questions on campus will be administered. It is the student's responsibility to

ensure Respondus LockDown Browser and webcam functionality prior to testing. Technical issues related to personal devices, internet connectivity, or software incompatibility do not excuse failure to complete an assessment.

Four (4) tests will be given. Each will be worth 5% of the grade.

Lecture Quizzes:

There will be 6 lecture quizzes worth 6% of the total grade. These will be given during lecture class time. **The lowest (one) quiz grade will be dropped over the full 16-week course.** The student is advised to attend class regularly and keep reading assignments and studies up to date to fully benefit from these quizzes. Make-up quizzes will not be administered. All chapter quizzes are administered in person during scheduled lecture sessions. **Quizzes are not taken at home, are not opened online outside of class, and are not made up if missed.**

Worksheets:

A series of worksheets are provided in the lecture manual and posted on Blackboard. When completed they will serve as valuable study guides. Students will need to submit answers on blackboard by the beginning of the class day and time that a worksheet is due. Students are allowed multiple attempts with the highest grade being recorded. All attempts must be completed by the day and time of the final exam. **The first attempt on a worksheet must be completed by the due date stated on the syllabus or no credit will be issued.** First attempts Worksheet numbers and due dates are listed in the syllabus along with the appropriate reading assignments. No worksheet grade will be accepted after the lecture final exam.

Note card Quizzes:

In order to allow students to be better prepared for lecture, note card quizzes will be given. These quizzes will need to be completed before the beginning of a lecture session on the topic for the day. For these quizzes, students may utilize notes they have prepared from the reading assignments posted in the lecture schedule to be used during the quiz. Students may not share notes and students may not provide notes for other students. **The lowest (one) note card quiz grades will be dropped over the full 16-week course.** No late submissions will be accepted.

Midterm and Final Exams:

A comprehensive midterm exam will be given, which will count for 9% of the course grade. This test will be over all information presented in the first 8 weeks of lecture. A comprehensive final exam will be given. This test will be over all materials presented from midterm to the end of the semester (The second 8 weeks of lecture). It will also account for 9% of the course grade.

Last Updated DATE: This is just to give you a guide as to what we are going to cover in this course and when.

114 Lecture Schedule SEMESTER

Class days	Topic	Reading Assignment
	Adler and Carlton reading assignments are from “Introduction to Radiologic Sciences and Patient Care” text. Carlton reading assignments are from “Principles of Radiographic Imaging, An Art and a Science” text.	<i>Begin working on Clinical Worksheets #1 and #2 *due by DATE</i>
1.	Electrodynamics & Waveforms	Bushong, Ch.4 &5 Carlton, Ch 3
	Electromagnetism & Transformers <i>Note card quiz #1 due</i> <i>Worksheet #1 due</i>	Bushong, Ch 5 & Ch 6 Carlton, Ch 4 pg 52-71
2.	TBD	
	Rectification <i>Note card quiz #2 due</i> <i>Worksheet #2 due</i>	Bushong Ch 6 Carlton Ch 4
3.	Tubes/Circuitry <i>Note card quiz #3 due</i> <i>Worksheet #3 due</i>	Bushong Ch 6 &7 Carlton, Ch 5, Ch 6
	AEC <i>Worksheet #4 due</i>	Bushong Ch 6 Ch 14 Carlton Ch 7
4.	Electrical Hazards in Radiology <i>Worksheet #5 due</i> QUIZ #2(IN CLASS)	
	TEST #1-Remote via Respondus	
5.	Soft tissue Radiography	Bushong Ch 18 Bontrager p 762 Carlton, Ch 35
	Radiation Protection/ Low Dose Medical Radiography <i>Worksheet #6 due</i>	Bushong Ch 38, 39, 41, 42 Carlton, Ch 9 & 10
6.	Mobile and C-arm Radiography QUIZ #2(IN CLASS) <i>Worksheet #7 due</i>	Bontrager Ch 15 Carlton, Ch 32
	TEST #2- Remote via Respondus <i>Worksheet #8 due</i>	
7.	Fluoroscopy and Image Intensification: Part I	Bushong Ch 12, 19

	<i>Note card quiz #4 due</i>	Carlton, Ch 33
	Image Intensifier Systems: Part II <i>Notecard quiz #5 due</i> <i>Worksheet #9 due</i>	Bushong, Ch 12, 19 Carlton Ch 33
8.	Fluoro tables QUIZ #3 (IN CLASS) <i>Worksheet #10 due</i>	Bushong, Ch 6
	Comprehensive Midterm Remote via Respondus	
9.	Introduction Aseptic Techniques and Sterile Preparation	Handout on Blackboard. Adler and Carlton, Ch 17&18
	Anesthesia/ Contrast Media and Reactions IV care	Adler & Carlton Ch 21 & 22
10.	Medical Law QUIZ #4 (IN CLASS) <i>Worksheet #11 due</i> <i>Note card quiz #6</i>	
	Arthrography/ Biliary duct procedures Hysterosalpingography/ Orthoroentgenography/Lithotripsy	Bontrager Chapter 12, 14 &19 Handouts
11.	TEST #3-Remote via Respondus	
	Myelogram /Laminectomy/Kyphoplasty	Bontrager Chapter 17 &19 Handouts
12.	Enteroclysis/Enterovu/fistulogram/Diaphragm fluoro VideoSwallow Study/Sitz Mark Study <i>Worksheet #12 due</i>	Bontrager pp. 12 & 13
	TEST #4 -Remote via Respondus	
13.	Bone Densitometry <i>Worksheet # 13 due</i>	Bontrager Chapter pg 782 Carlton Ch 36
	Computer Technology /CT History and Equipment Quiz #5 (in class) <i>Notecard quiz #7 due</i>	Bontrager Ch 18 Handouts Bushong, Ch 21
	CT Imaging Parameters <i>Worksheet # 14 due</i>	Bontrager, Ch 18 Bushong, Ch 21

	MSCT/Helical Computed Tomography: 3th generation and beyond. <i>Notecard quiz #8 due</i> <i>Worksheet #15 due</i>	Bushong, Ch 21 Bontrager, Ch 18
14.	Review <i>Clinic Worksheet #1 and #2 due</i> Quiz #6 (in class)	
15.	Lecture Final -Remote via Respondus	

LABORATORY SECTION

<i>What is it?</i>	<i>Here is the Answer!</i>
Course Name:	Radiologic Technology VII
Course & Section Number:	BXX
Meeting Day & Time Lab Lecture:	
Meeting Day(s) & Time Lab(s):	
Credits:	4
Contact Hours:	3 lecture, 1 lab
Instructor's Name, Student Hours (Formerly Office Hours) & Location, OCC Phone, OCC Email Additional Contact Information:	

Lab Support Staff:

****Please only use your student OCC email to contact instructors.**

What Are Student & Instructor Responsibilities?

Instructor Responsibilities:

We will be respectful of your time and begin and end lab on time. If lab needs to be canceled for any reason, We will notify students as soon as possible by email announcement.

Answering Emails:

We will do our best to respond to your emails within 24 hours on weekdays and within 48 hours on weekends. Please use your Owens email account to contact instructors.

Announcements:

We will post any updates and/or reminders on the Blackboard Announcement page, as well as send it out to your Owens email account.

Office Hours:

These posted times (posted outside instructor office doors) are designated for us to be available to meet with and assist you, outside of normal class time, with any concerns/questions you may have regarding this course or program.

Facilitating Successful Completion of the Course:

We welcome questions, concerns, and experiences relevant to the topic, course and/or professional field. We learn from each other. If appropriate, We encourage you to share and ask during lab. If not, please see us during student hours or email us. If there is a need, We will reach out to the student or class to address that need. We will make referrals to other campus resources as needed. We are aware that life is happening, and this class is not the only thing you have going on.

Student Responsibilities:

Lab expectations

The student must assume responsibility for preparing for labs. It is expected that the student will read and study the assigned material covering the unit in the text before the instructional lab session.

Students will be engaged in the lab session, focusing on lab activities ONLY. Students are expected to participate in lab lecture discussions and be prepared to answer questions at any time during the session.

Students working in the energized laboratory must wear their radiation badges at all times.

Open Lab/Common Open Lab Attendance/Participation:

Open lab sessions are scheduled to allow students more supervised practice and to provide additional developmental experiences required before taking or repeating a practical exam. Schedules are available online. Students are required to attend open lab sessions to practice imaging procedures and complete assignments. The open lab supervisors are present to assist

students and do not give primary instruction. Students are expected to log all open lab sessions on Trajecsyst.

Common open lab sessions are provided for students who want additional practice or are required to attend additional practice after failing any repeat practical attempt. Sign ups can be made on the Radiography, MRI, and CT Programs Blackboard course. Students are expected to log all common open lab sessions on Trajecsyst.

At least two students attend an open lab or common open lab session together, acting as patients for each other during the practice time. Students are expected to act as patients and practice positioning during this time. Observation-only attendance is prohibited. Students who do not actively participate will not receive credit for the open lab session.

Regular attendance at open lab sessions is crucial for your success in laboratory courses. **Students who arrive more than 10 minutes late the student will be required to complete an additional open lab.**

Missing a scheduled open lab session without prior notification will be addressed as follows:

First Offense: Written warning via email

Second Offense: An informal report. This requires a meeting to discuss attendance and expectations moving forward. Further absences may result in additional actions as outlined in the course and program policies.

Please ensure you communicate with your instructor if you are unable to attend a session due to unforeseen circumstances.

When attending open labs or common open labs, students may not bring small children who must be supervised. For the protection of the children, please make appropriate arrangements for their care.

The radiography labs provide students an opportunity to learn and apply the professional behaviors necessary in the clinical sites. Therefore, students are expected to conduct themselves in the same manner in the laboratory setting that would be appropriate in the clinical setting. Students should be prompt, polite, and courteous to everyone in the lab.

Professional appearance, attitude and behavior is expected and students not complying may be asked to leave and return at a later date. Failure to meet professional behavior expectations may result in removal from the lab session, forfeiture of participation credit for that session, and required remediation.

Students are expected to leave the laboratory in an organized fashion, putting away sponges, positioning tools etc. in the cabinets.

Please refer to the Procedure Manual for the complete laboratory attendance policy.

Inclement weather policy

If the campus closes, laboratory and lab lecture classes will be rescheduled or recorded. If the college does not close for the day but is scheduled to open at 10:00 am, 11:00 am or 12:00 noon, laboratory classes will begin at the time of campus reopening.

Breakdown of Course Grades

The laboratory section will be worth 50% of the course grade, divided as follows:

Five Bontrager Laboratory Exams @ 5 % each	25%
Final Comprehensive Laboratory Exam	7%
Five Radiographic Identification Exams @ 2 % each	10%
Final Comprehensive Image ID	3%
Math/Technique Manipulation Exam	1%
Medical Terminology x 2	2%
Laboratory Quizzes (8)	2%
5 Practical examinations	<u>P/F</u>
	50%

Class Assignments

Testing

All **Bontrager laboratory exams** are administered **online through the Blackboard RAD 114-002 course shell**. These exams may be taken **during scheduled class time or at home**, as designated by the instructor.

All **chapter quizzes** are administered **in person during scheduled lab lecture sessions**. Quizzes are not taken at home, are not opened online outside of class, and are **not made up** if missed.

Exams are opened and closed **only during the time window set by the instructor**. Students must complete each exam within the posted availability period.

Failure to comply with testing format, location, or timing will result in a score of zero unless prior approval has been granted.

Students must notify the instructor at least 30 minutes prior to the scheduled class time of their absence. If no notification is given, 5 points will be deducted from the final test score. In addition, a due date for completion of the make-up exam will be provided. No makeup examination will be administered prior to the scheduled examination date. Quizzes are not made up and are only given during the time period stated in the lab syllabus

Lab Exams

A student may not attempt to repeat a laboratory exam until the previous unit is passed. However, the student must continue to take the first exam of the subsequent chapters at the scheduled testing time. Laboratory tests will be comprehensive in nature, including several questions from chapters previously covered in this course.

Final Testing Deadlines and Proctoring (March 25 – 5:00 PM)

All chapter Bontrager exams, Image ID exams, and required laboratory testing must be successfully completed by **DATE at TIME** to remain eligible for comprehensive exam given on **DATE at TIME**

On this final testing day:

- HEC 109 will be reserved for testing, and an instructor will be assigned to manage and proctor the testing process.
- Students granted late access on this date will receive adjusted testing time. Example: A student beginning an exam at 4:15 PM will receive 45 minutes instead of the standard 60 minutes so that all exams conclude by 5:00 PM.
- Exams will close at 5:00 PM with no exceptions.

Students assume responsibility for time management. Shortened testing windows are a consequence of late access, not a penalty.

Comprehensive Laboratory Exam

The comprehensive lab exam will be given one time only over Chapters 2, 8, 9, 10, and 11 and the student will receive the actual score earned. It will not be available to students who have not completed all chapter lab exams. See the Procedure Manual for subsequent process.

Trauma Lab Exam (Chapter 15)

The trauma lab exam will be administered one time only and the student will receive the actual score earned.

Radiographic Images

Medical images pertaining to each chapter will be included in the lab manual. An electronic version will be posted on BB. **Students are required to independently identify and label the listed anatomical structures before attending an image review and critique session, where a faculty member will be available to provide guidance and assistance with identifying anatomical structures.**

Radiographic Image Identification Students will be challenged to identify and critique radiographic positions and anatomical structures from each chapter of the Bontrager text during these tests. A passing grade of 76% must be earned. Please see the Procedure manual for this sequence.

Students not earning 76% or higher on an Image ID exam must repeat the exam as soon as possible. The score earned on a repeated Image ID exam may adversely affect the course grade as each repeat attempt will result in a 5% reduction of the recorded exam grade. See the Procedure Manual for more information, including grading for repeated Image ID exams.

Students may not attempt to repeat an Image ID exam until the previous unit is passed. However, students must continue to take the first exam of the subsequent chapters at the scheduled exam time. All Image ID exams must be completed with a passing score of 76% prior to attempting the Comprehensive Image ID Exam

Comprehensive Final Image Identification

The comprehensive image I.D. is scheduled for **Monday March 30th**. This exam will be given only one time, and students will receive the actual score earned. To take the comprehensive image I.D., the student must successfully complete all image I.D. exams over Units 2,8-11B, by **March 25th at 5:00 p.m.** The comprehensive image I.D. exam will not be rescheduled for students who have not completed all chapter lab exams. If the deadline is not met

students will receive a score of “0” for the comprehensive image I.D See the Procedure Manual for subsequent process.

Trauma Image ID

The trauma image I.D. is scheduled for the **DATE**. This exam will be given one time only over all anatomy positioned for the trauma practical and students will receive the actual score earned. To take the trauma image I.D., students must successfully complete all image I.D. exams over Units 2,8-11B by **DATE at TIME**. The Trauma image I.D. exam will not be rescheduled for students who have not completed all chapter lab exams. If the deadline is not met students will receive a score of “0” for the trauma image I.D.

Comprehensive Image ID and Trauma Image ID Administration

The **Comprehensive Image ID** and **Trauma Image ID** examinations are built into the **lab lecture component**, as sufficient instructional time exists during those sessions.

- **Proctoring** will be managed by the lab lecture instructor during lab lecture time. Another instructor will be assigned to proctor outside of that time.
- **Grading** will be completed by the laboratory instructor.

Due to limited iPad availability, testing will occur in scheduled blocks. Typical testing windows may include:

- 8:00–9:30 AM
- 9:30–11:00 AM
- 12:30–2:00 PM
- 2:00–3:30 PM
- 3:30–5:00 PM

Final scheduling decisions will be coordinated by the lab lecture instructor.

Technique Manipulation Exam

Two practice quizzes will be given to the students. These provide an opportunity to reinforce skills learned in RAD 111, 112 and 113. The first quiz has an answer sheet provided. Please take the quiz, check your answers, and let your lab instructor know if you are having problems with any concepts. The second practice quiz will be reviewed during the Professional Development series labeled Math Review. Please attempt to complete the practice questions prior and bring your practice quizzes for this session.

The first time this exam is completed with a grade of 85% or greater, the score received will be recorded. If the grade is 84% or lower, no grade is recorded and the exam must be repeated. Review the material and ask for assistance before repeating the exam. If the first repeat grade is 85% or higher, a grade of 85% will be recorded. If the grade is lower, the exam must again be repeated. If the grade on the second repeated test is 85% or higher, an 80% is recorded. If the grade is lower, seek assistance before repeating it. This procedure will continue until a grade of 85% is achieved on the repeat exam. Each time the recorded grade will be 5% lower. The math test must be completed with an 85% or higher by **March 4th at 5pm**, If the deadline is not met, a score of “0” being recorded.

Math Review Session (Lab Lecture)

A math review session may be scheduled during lab lecture if deemed necessary. This session will be built into the lab schedule if offered.

The lab lecture instructor will determine whether the review is conducted personally or assigned to another qualified instructor. If scheduled, students are expected to attend and come prepared.

Medical Terminology

This course includes one practice medical terminology quiz, a medical terminology exam, and a comprehensive medical terminology exam. There is one practice quiz located in the lab handout packet designed to help students prepare and will not count toward the final lab grade.

The written competency examination over medical terminology will be on-line, the test will be open with the start of week #2 of the semester and can be taken at your convenience. First time students complete this exam if the grade is 85% or greater, the score received will be recorded. If the grade is 84% or lower, no grade is recorded, and the exam must be repeated. The student should review the material, and then ask for assistance before repeating the exam. If the first repeat grade is 85% or higher, a grade of 85% is recorded. If the grade is lower, the exam must again be repeated. If the grade on the second repeat is 85% or higher, an 80% is recorded. If the grade is lower, students should seek assistance before repeating it. This procedure will continue until students receive a grade of 85% or higher. Each time the recorded grade will be 5% lower.

The final date to complete this requirement is **DATE at TIME**. This is a course requirement. Any student not completing the requirement will receive an incomplete until the requirement is met.

Students are also required to take a Comprehensive Medical Terminology test that includes all the medical terminology learned from RAD 111, 112, 113, and 114. Students will take this test one time only on **DATE**.

Laboratory Quizzes

It is expected that students will read and study the assigned material covering the unit in the Bontrager Text before the instructional lab session. Students must assume responsibility for preparing for labs and lab lecture. Laboratory experiences are designed to clarify and reinforce positioning and radiographic anatomy skills. Quizzes covering basic positioning facts will be given at the beginning of each instructional lab lecture session. Students may utilize self-prepared notes for these quizzes. The lowest quiz score will be dropped. There will be no make-up quizzes given.

Practical Examinations

Four positioning practicals will be given. Student must have their personal lead markers, radiation monitoring badge and follow the dress code to attempt a practical exam. Hand washing prior to beginning a practical will be enforced. 3rd and subsequent repeat practical exams will be permitted after students have completed one shared hour of open lab time. If a student does not pass a 3rd attempt, the student should meet with the laboratory instructor for review of written practicals and attend additional common open lab times.

Schedules for repeat practicals, written practicals and repeat lab tests and image I.D. exams will be posted on Blackboard listing the available times. There is a maximum of 5 attempts allowed

for Ch 9, 8 and 10, 11A, and 11B. There will be a maximum of 8 attempts for the trauma practical. All practical exams on Units 9, 8 & 10, 11A and 11B must be completed by **DATE at TIME**. to be eligible to take the trauma radiography practical that encompasses all Bontrager units. On the last day, only a maximum of 2 attempts at the practical and 1 open lab will be given on this date to each student. A score of "D" or F" in the course will result if the deadline is not met.

Documentation of Practical/Bontrager/Image ID completion

For each radiographic unit presented in the laboratory, students must demonstrate competency on the practical, image identification, and laboratory examinations before documentation will be emailed to take to the clinical coordinator. After completing the above requirements, students should request that his or her laboratory instructor email the documentation to their clinical preceptor. Without this documentation, students may not perform these radiographic examinations on patients at the clinical education centers.

Trauma Laboratory Procedures

During the weeks of **DATE at TIME**, radiography of the traumatized patient will be presented in the labs. This will afford students an opportunity to become acutely aware of the areas of patient management and radiography of a trauma patient.

The practical over this material will be realistic and students will be expected to obtain the assigned positions and set correct technical factors for the condition of the patient.

All attempts for the trauma practical examination must be completed by **DATE at TIME** or students will not continue into RAD 201 and receive a grade of "D" or "F" for RAD 114. Only 2 attempts at the practical and 1 open lab will be given on this date to each student.

RAD 114 SEMESTER Lab Schedule

WEEK OF	MONDAY SESSION 8-9AM LAB LECTURE	MONDAY SESSION 9- 10AM LAB LECTURE	MONDAY SESSION 10- 11AM LAB LECTURE	MONDAY 1-4 PM WEDNESDAY 8-11 AM and 2-5 PM LAB
DATE	CH 9 quiz	CH 9 lecture	CH 9 lecture	CH 9 positioning Lumbar, sacrum, coccyx, SI joints
DATE	CH 9 Bontrager Lab Test No in-person lab lecture due to campus closure Bontrager will open on DATE at TIME and close on DATE at TIME	CH 9 Image Review and Critique Images will be recorded in the course, there will be no in- person review	*Med Term test open with Respondus *Math testing posted to BlackBoard Sign up	CH 9 Practical and Image ID Test
DATE	CH 8 quiz	CH 8 lecture	Math review	CH 8 positioning T

		Math review session TIME	session TIME	spine and C spine
DATE	CH 10 quiz	CH 10 lecture	CH 10 lecture	CH 10 positioning Ribs and Sternum
DATE	CH 8 & 10 Bontrager Lab Test	CH 8 & 10 Image Review and Critique		CH 8 & 10 Practical and Image ID Test
DATE	CH 11A quiz	CH 11A lecture	CH 11A lecture	CH 11A positioning Cranium, temporal, facial and nasal bones
DATE	CH 11 A Bontrager Lab Test	CH 11 A Image Review and Critique		CH 11A Practical and Image ID Test
DATE	CH 11B quiz	CH 11B lecture	CH 11 B lecture	CH 11B positioning Zygomatic arch, orbit, mandible and TMJ *All Math and Med Term must be completed by DATE at TIME
DATE		CH 11B Image Review and Critique	CH 11B Image Review and Critique	CH 11 B Practical and Image ID Test
DATE		Comprehensive Image and Lab Review	Comprehensive Image and Lab Review	CH 11 B Repeat Practicals in lab class *Deadline to complete all Practicals, Image ID tests and Bontragers DATE at TIME
DATE		Comprehensive Bontrager Test TIME	Comprehensive Bontrager Test TIME	Comp Image ID will be held on DATE at TIME,

				sign up is posted on BB
DATE	Trauma quiz #1	Trauma lecture and lab preparation		Trauma Week #1 positioning
DATE	Trauma quiz #2	Trauma lecture	Comp Med Term Review	Trauma Week #2 positioning
DATE	Trauma quiz #3	Trauma Review	Comprehensive Med Term Test	Trauma practical 1st attempt
DATE	Trauma Image ID Test *sign-up will be sent out Times will be TIME	Trauma Image ID Test *sign-up will be sent out Times will be TIME	Trauma Image ID Test *sign-up will be sent out	Trauma repeat practical
DATE		Trauma Bontrager Test		Trauma repeat practical's *All practical must be completed by DATE at TIME

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* Students will take the first attempt and repeat Math test in-person with a sign up on BlackBoard.

First attempt and repeat Med Term Test will be taken on-line with Respondus , there will be a sign up on BlackBoard

The Comprehensive Med Term Test is a one attempt only test and must be taken on the scheduled date of DATE.

Disclaimer: “The instructor reserves the right to amend this syllabus as deemed necessary and will communicate such amendment to the students in the course.”