Course Syllabus
SEMESTER
School of Nursing and Health Professions

Course Name:	***Independent Study – Medical Imaging lab***
Course & Section Number:	**MIT 102-XXX**
Meeting Day(s) & Time(s):	
Credits:	**Total 1**
Contact Hours:	**3.0 lab**
Instructor's Name:*	
Student Hours (Formerly Office Hours) & Location:	
OCC Phone:	
OCC Email: **	
Additional Contact Information:	

*Please call me _____ It is my preferred name. If you have a preferred name, please let me know so I can use it.
**Please only use your student OCC email to contact me.

Catalog Description:

Examines the components, function and use of imaging equipment to perform diagnostic radiographic, mobile, and fluoroscopic procedures. Studies radiation protection and radiographic exposure factors including automatic exposure control. Discusses common radiographic procedures and associated image critique. In lab, radiographic imaging procedures and the resultant image evaluation criteria of chest, abdomen, upper extremity, lower extremity, and shoulder. Simulated lab experiences are planned to provide the student opportunities to apply principles and skills.

Prerequisites approval from Department Chair

Co-Requisites: none

Current Textbooks, Materials, Equipment (software/hardware requirements):

***New texts to be purchased.**

1. Bontrager, Kenneth, M.A., R.T. (R), Textbook of Radiographic Positioning and Related Anatomy, 10th Edition, Mosby-Year Book, Inc., St. Louis, MO, 2020.

2. Bontrager, Kenneth L, & Lampignano, John P., Radiographic Positioning and Related Anatomy Workbook and laboratory Manual, Copyright 2020, Vol 1 & 2, 10th Ed.

What you will learn in this course:

Course Objectives:

1. Presents information on the components, function and use of imaging equipment to perform diagnostic radiographic and fluoroscopic procedures.
2. Reinforces emphasis on radiation protection and radiographic exposure factors including automatic exposure control and introduces soft tissue imaging.
3. Introduces image evaluation criteria, anatomy identification and radiographic positioning of the chest, abdomen, upper extremity, lower extremity, and shoulder.

Student Learning Outcomes:

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 radiographic procedures of chest, abdomen, upper extremity, lower extremity, and shoulder.
3. Describe and explain terminology and factors related to 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 anatomical structures of chest, abdomen, upper extremity, lower extremity, and shoulder on radiographic images.
7. Successfully perform simulations in positioning and patient care in radiographic procedures of chest, abdomen, upper extremity, lower extremity, and shoulder 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.	RAD 111 Comp Bontrager
Identify images, describe anatomy and explain methods for performing common radiographic procedures of chest, abdomen, upper extremity, lower extremity, and shoulder.	RAD 111 Comp Bontrager RAD 112 Comp Bontrager RAD 111 Comp Image ID RAD 112 Comp Image ID
Describe and explain terminology and factors related to imaging modalities, including fluoroscopy.	RAD 111 Comp Bontrager RAD 112 Comp Bontrager
Identify and explain terminology and factors relating to the principles of radiation protection.	RAD 111 Comp Bontrager RAD 112 Comp Bontrager
Demonstrate the application of the inverse square law, mAs compensation formula, and exposure factor conversion.	RAD 111 Comp Bontrager RAD 112 Comp Bontrager
Identify anatomical structures of chest, abdomen, upper extremity, lower extremity, and shoulder on radiographic images.	RAD 111 Comp Bontrager RAD 112 Comp Bontrager RAD 111 Comp Image ID RAD 112 Comp Image ID
Successfully perform simulations in positioning and patient care in radiographic procedures of chest, abdomen, upper extremity, lower extremity, and shoulder in the laboratory setting.	RAD 111 Practical Competency RAD 112 Practical Competency

Program Outcomes

Goal 1: Students will be clinically competent.
Goal 2: Students will utilize critical thinking skills.
Goal 3: Students will be able to communicate effectively.

Institution General Education Outcomes

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 or others 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 (List assignments, exams, discussions; items must be graded.)
Communicate effectively.	RAD 111 and 112 practicals, pass/fail
Act with professional responsibility.	RAD 111 and 112 practicals, pass/fail
Demonstrate sensitivity to others' beliefs and values.	RAD 111 and 112 practicals, pass/fail
Think analytically, critically, and creatively.	RAD 111 and 112 practicals, pass/fail

Technology, Lab, & 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.

Academic Support

Disability Services Resource Center: If you have a disability or acquire one, you may be entitled to receive reasonable accommodation intended to assure you an equal opportunity to participate in and benefit from the program. To receive more information or to register for accommodation, 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.

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.
All written assignments, projects, and exams must be completed independently.

Student Responsibilities and Instructor Expectations

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 72 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.

Student Hours:
These posted times (posted at LOCATION) 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.

Student Responsibilities:

Attendance/Participation:

Class discussions, activities and participation are an integral component of learning and understanding the course material and therefore, attendance is expected 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. It will only become an issue if your lateness becomes habitual: 5 points *could* be deducted from your final 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 must 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) point reduction from the score of the make-up examination.

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.

Assignment submission:

Students are to be familiar with the assignment calendar and how to submit assignments (on the assignment instructions on the blackboard shell). If you are unable to submit an assignment by the end of the day on the due date (on assignment calendar), you are encouraged to still submit it. Although full credit *may not* be given if the assignment is late, you may be able to earn *at least* partial credit.

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 Backboard 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 by your instructor 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, TELPHONE, EMAIL.

Respectful Class Communication:

Our classrooms are a safe space. Faculty and students show respect for each other in class and all communication. There is also a short power point on the Blackboard info tab regarding polite, professional email communication.

Social Media Use:
The use of YouTube, Facebook, Instagram, Twitter, Discord, SMARTkapp or any other internet share site to distribute any course, campus lab, or clinical photos, audio recordings, or video recordings is prohibited unless written permission is received from all people involved. Using these sites to display comments about faculty, peers, staff, and/or patients is in conflict with our policies. Such comments may result in disciplinary action. Written permission involves completion of "OWENS COMMUNITY COLLEGE CONSENT FORM."

How Grades are determined and major assignments.

Weighted Grade Scheme:

Breakdown of Course Grades

The course grade will be divided as follows:

RAD 111 Comp Bont	25%
RAD 112 Comp Bont	25%
RAD 111 Comp Image ID	25%
RAD 112 Comp Image ID	25%
Practicals Pass/Fail	
Total	100%

Grading Procedure:

The grading scale for this course will be:

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

Students must earn a passing grade of 76% for all Bontrager and Image ID assessments to pass this course. If any assessment is less than 76%, the student will earn a grade of "D" or "F" for the course and be removed from the program. Students must pass all practical competencies by the deadline date.

Assessment	Percentage of grade/Value	Student learning outcomes assessed	Gen Ed Assessment
Bontrager Exams *Many scenario-based questions requiring decision-making	50%	SLO 1, 2, 3, 4, 5 and 6	Think analytically, critically, and creatively
Image ID	50%	SLO 2, 3, and 5	Think analytically, critically, and creatively
Practical examinations	P/F	SLO 6	Communicate effectively, act with professional responsibility, demonstrate sensitivity to other's beliefs and values, and think analytically, critically, and creatively.

Specific Course Rules

The course will adhere to the rules and procedures of the department as stipulated in the Radiologic Technology Department Procedure Manual.

No eating is permitted in the laboratory classrooms. A closed water bottle will be permitted.

Attendance:

Students are encouraged to attend all lab sessions. There may be consequences for those students who are absent more than the faculty member deems reasonable, see Procedure 3.002. Students who are absent from class must notify the faculty member at least 30 minutes prior to the scheduled class time.

LABORATORY SCHEDULE

Grade Breakdown

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

Laboratory Exams	50%
Radiographic Identification Exams	50%
Practical examinations	P/F
	100%

Lab Exams
Laboratory tests will be comprehensive which will include questions from chapters previously covered in this course. Our first responsibility must be to the patient; therefore, the unit exams covering information presented in the textbook, and the laboratory must be completed with a score of 76% or higher. Comprehensive Lab tests will be given over the material in Bontrager chapters 1-17.

Students will be given 3 attempts to pass each lab test with a score of 76% or higher. All unit exams must be successfully completed by the end of the course**.**

Radiographic Images
Medical images pertaining to each chapter will be included on the Blackboard course. An electronic version is posted on BB. Students should attempt to identify and label the anatomical structures listed in order to practice for the Image ID examinations.

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.
Image ID's will be given and will be comprehensive over chapters 1-17.

Students will be given 3 attempts to pass each Image ID test with a score of 76% or higher. All unit exams must be successfully completed by the end of the course.

Practical Examinations
Positioning practicals will be given. There are practicals to pass.

a. Practical #1: Chapters 2 and 3
b. Practical #2: Chapters 4 and 5
c. Practical #3: Chapters 6

Students 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 writtens and attend additional common open lab times.

Open Laboratory Attendance

Positioning labs are extremely important as radiographic positioning and anatomy are presented and demonstrated. The practical examination is given to allow students the opportunity to demonstrate the skills before performing on a patient. Students who are tardy to a scheduled lab, not prepared for class or leave early are disruptive to the class. Please refer to the Procedure Manual for the complete laboratory attendance policy.

Laboratory Schedule
This is an example of the progression for lab work. Create a schedule of what you would like to accomplish in the class for this 8 weeks and turn into Shelley and Christine by the end of the first week of classes. The remaining material will be added to the first 8 week MIT 101 class in the

Fall semester.

Week of	***Bontrager***	**Image ID**	***M/W Instructional labs***
1			**Ch 1, 2, 3**
2		***Image ID ch 2, 3, 17***	**Practical 2 and 3**
3	***Bontrager ch 1, 2, 3***		**Repeat Practical 2 and 3** **Practice 4 and 5**
4			**Practical 4 and 5** **Practical Ch 6**
5		**Image ID 4, 5, 6**	Repeat practical 4 and 5 Practice ch 6
6	***Bontrager ch 4, 5, 6***		Practical Ch 6
7			**Repeat Practical 6**
8	**Bontrager and Image ID** **Repeat as needed**		**Repeat Practical 6**