



Robert D. & Carol Gunn College of  
Health Sciences & Human Services  
The Shimadzu School of Radiologic Sciences  
Revised January 2022

### Course Title:

## Mammography

Course: RADS-4753 Credits: 3 Semester: Spring 2022

### Faculty:

**Stephanie Johnston, MSRS, RT(R)(M)(BD)(BS), FASRT**

Centennial Hall, Room CE430P

Tel: 940-397-4337 or Toll Free 866-575-4305

Fax: 940-397-4845 Email: [stephanie.johnston@msutexas.edu](mailto:stephanie.johnston@msutexas.edu)

### Course Overview:

The purpose of this course is to provide the student with a portion of the educational and clinical requirements necessary to perform mammography exams as a qualified mammographer. This course contains five modules that will cover Patient Management, Anatomy and Physiology & Introduction to Positioning, Image Acquisition & Quality Assurance, Pathology & Treatment, Breast Density & Other Breast Imaging. Course content includes a non-clinical component with specific non-clinical coursework and a clinical component with a portion of the required clinical competencies for both the Mammography Quality Standards Act (MQSA) Initial Training and the American Registry of Radiologic Technologist's (ARRT) Mammography certification exam requirements. Students must complete the Class Project Survey to be placed in clinical or non-clinical aspect of the course.

**To fulfill ALL necessary requirements for MQSA Initial Training and eligibility to sit for the ARRT certification test this course must be completed concurrently or in addition to RADS-4763. Only the successful completion of both RADS-4753 and RAD-4763 will meet the above requirements. Non-clinical student may take this course independently and are required to complete all non-clinical assignments. Taking this course alone will not meet MQSA or ARRT requirements.**

## Course Objectives:

Upon completion of this course the student will be able to:

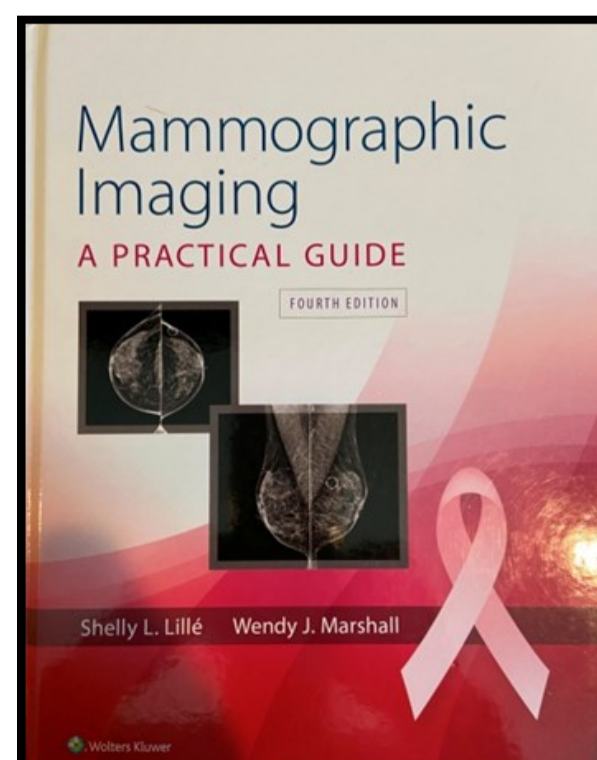
- Learn the history and background of mammography
- Learn how to explain the benefits of screening and early detection to patients
- Learn the guidelines for screening, breast self-examination and clinical breast examination
- Learn the etiology of breast cancer and how that relates to breast cancer
- Learn the internal and external anatomy of the breast
- Learn the mammographic appearance of normal breast verses benign and malignant processes
- Learn the technologist's role in acquiring quality mammography
- Learn the established imaging requirements for the craniocaudal and mediolateral views
- Learn mammography equipment the proper use during an exam
- Identify the components of the digital mammography machine and their function
- Learn how a digital mammography image is created, processed, stored, transmitted and retrieved
- Learn the purpose and scope of a quality assurance program
- Learn the various surgical treatments and which may be the appropriate choice based on the diagnosis
- Learn the differences in chemotherapy, hormonal therapy and radiation treatment
- Learn the meaning and mammographic appearance of breast density
- Learn other breast imaging modalities

Looks like this!

## Textbook:

Lille, S.L., Marshall, W.J., (2019).  
*Mammographic Imaging: A Practical Guide* (4th ed.). Wolters Kluwer.  
[ISBN 978-1-49635-202-6]

Additional references will be provided throughout the course



## **Methodology/Teaching Strategies:**

This course is an online delivery with asynchronous interactions between students and teacher, and application activities. This strategy gives students the ability to work at their pace and interact with the instructor as necessary.

This course contains a clinical component that must be completed in a setting where the student has access to real patients and it must be set up at the beginning the course. It also contains a non-clinical component for students that do not have a clinical setting or have not desire to obtain mammography certification.

## **Communication with the Instructor:**

Communication will be primarily through D2L and the student's Midwestern State University email account. An email account is created for every MSU student. If you have not accessed this account yet, please do so by logging into the Portal and clicking the student email account icon located in the Portal. You have the option to have any messages sent here to be forwarded to the email account of your choice.

The instructor will respond or at least acknowledge messages from students within a maximum of three (3) business days when MSU is in session. Beyond standard university holidays and breaks, the instructor will notify students of any extended periods of time when email contact is not practical (professional meetings, etc.).

**When emailing the instructor, please include your full name, course and section number, and a thorough explanation in your message. This will help expedite your request or needs.**



## **Class Meeting Date and Time:**

This is an online course and *may* have mandatory face-to-face sessions based on your degree plan. Please complete the Class Project Survey located under the Read First tab on the Content page in D2L to determine your specific requirements. Student should regularly check D2L for messages from the instructor to ensure they are received in a timely manner. This course is on a schedule that will be strictly adhered to. See the Course Schedule on page 6 of this syllabus for specific information about activities and due dates. The instructor can be available to meet with a student if necessary. Meetings must be confirmed by email ahead of time with the instructor.



## **Student Responsibilities:**

As a student enrolled in this course, you will be responsible for adhering to and meeting posted deadlines and due dates (please see page 6). Activities such as assignments and quizzes have expiration dates. Please take note that expiration dates for quizzes will differ from deadlines for assignments and other activities. Quizzes and assignments/activities are spaced out in a manner that will allow you ample time to complete them. All activities/ assignments will be accepted on or before the posted due date and must be submitted in a drop box within D2L. See the Course Schedule on page 6 for the specific due dates and deadlines.

All students are required to complete the Mammography Course Project. You **MUST** complete the Class Project Survey located under the Read First tab on the content page and determine the Clinical and Non-clinical Class Project pathway. Specific details for each project can be found in D2L under the subfolders Mammography Class Project—Clinical Project OR Non-clinical Project.

If a student cannot complete a course activity by the indicated due date, **the student must contact the course instructor immediately**. Students must contact the instructor for pre-approval of late submissions. If a student has emergency issues, then the student must contact the instructor as soon as possible (within a day or two). Otherwise, any activity not completed and submitted by the due date will receive a grade of 0.



## **Assignments/ Quizzes:**

Each unit has a reading assignment and fill in the blank worksheet assignment to be completed and loaded into D2L. Once graded and released these worksheet should serve a preparation and study material for the final exam and mammography certification exam if you are pursuing certification. These assignments are a portion of the grade. All assignments are to be submitted as instructed in each unit through D2L. Assignments must be received prior to the deadline. A zero will be recorded for assignments not submitted or meeting the final deadline.

Unit quizzes will be given within D2L. These quizzes are open book, open note but you will only have one hour to complete them and must be prepared as there will not be enough time to research every answer. Quizzes must be completed prior to the expiration dates. Quiz grades and answers will be released after the deadline of each quiz. Specific questions regarding the quizzes may be addressed to the instructor.

***Quizzes MAY NOT be made up if missed and a zero will be recorded.***

No extra credit activities are available.



## Mammography Course Project:

All students are required to complete the Mammography Course Project for RADS-4753. In D2L under the above titled folder is the Clinical Project for student seeking a clinical pathway and is Non-clinical Project for those seeking a non-clinical pathway. These projects have components that require research and citations of references are required.

In order to determine which project to follow, each student is required to complete the Class Project Survey located in the Read First folder in D2L to determine which project pathway you will take. There is a deadline to complete this survey. All projects are weighted equally. All projects must be uploaded to the drop box for evaluation on or before the project deadline. Please see the class calendar located on page 6 for due dates.

## Comprehensive Proctored Final:

The final exam is a comprehensive proctored exam and will be administered within D2L. **The Proctored Final is to be taken without the benefit of books, notes or references and by using LockDown Browser and Respondus Monitor.**

This course requires the use of LockDown Browser and a webcam for online exams. The webcam can be the type that's built into your computer or one that plugs in with a USB cable. See instructions and guidelines on page 9 of the syllabus. There will be a practice session to ensure compatibility.

## Evaluation Method:

Percentage Distribution	Value
Unit Worksheets/ Assignments	25%
Unit Quizzes	20%
Mammography Course Project	30%
Comprehensive Final Exam	25%

## Grading Scale:

Grade	Range
A	90-100
B	80-89
C	70-79
D	60-69
F	59 or less



## Tentative Course Schedule

Date	Activity
January 10	Classes begin
January 17	<b>MLK Day-Class Holiday</b>
January 24	Unit 1 Worksheet Assignment Due
January 30	Class Project Survey Due
January 31	Unit 1 Quiz Due
February 7	Unit 2 Worksheet Assignment Due
February 14	Unit 2 Quiz Due
February 28	Unit 3 Worksheet Assignment Due
March 7	Unit 3 Quiz Due
March 14-18	<b>Spring Break-Holiday</b>
March 21	Last Day of class & to Drop with a 'W'
March 28	Unit 4 Worksheet Assignment Due
April 4	Unit 4 Quiz Due
April 11	Unit 5 Worksheet Assignment Due
April 14-15	<b>MSU Holiday</b>
April 18	Unit 5 Quiz Due
April 28	Mammography Course Project Due
April 29	Final Exam Opens
May 4	Final Exam Closes



## **Conduct/Honesty/Honor System:**

RADS-4753 adheres to the MSU Code of Conduct. 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/her work will be completed in full observance of the MSU Code of Student Conduct. A student should consult the Student Handbook for answers to any questions about the code.

Students are encouraged to take full advantage of many resources available including Internet sites, handouts, other textbooks & journals, faculty, and peers. This interactive collegial learning environment is conducive to life-long learning.

Specific components of RADS-4753 are designed to represent the efforts of each student individually and are NOT to be shared. These components include the written assignment submitted for a grade. Submitting someone else's work as your own or improperly cited work constitutes plagiarism. Please see the Midwestern State University Catalog for further discussion of plagiarism. Plagiarism will constitute in an F for the course and the student will be referred to administration for further action. When students submit their efforts for grading, they are attesting they abided by this rule. ***Quizzes and exams are not to be copied in any form or shared in any form. Students caught engaging in such activity will receive an F for the course and be referred to University administration for dismissal.***

Cheating includes, but is not limited to:

- (1) use of any unauthorized assistance in taking quizzes, tests, or examinations;
- (2) dependence upon the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or completing other assignments; or
- (3) 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 on 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. Students are encouraged to review the tutorials and suggested websites for more information about plagiarism.

By enrolling in this course, the student expressly grants MSU a limited right in all intellectual property created by the student for the purpose of this course. The limited right shall include but shall not be limited to the right to reproduce the students work product in order to verify originality and authenticity, and for educational purposes.



## Special Needs:

In accordance with Section 504 of the Federal Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, Midwestern State University 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 Support Services (DSS) provides information and assistance, arranges accommodations, and serves as a liaison for students, instructors, and staff. The DSS has assistance devices such as books on tape, recorders, and adaptive software which can be loaned to qualified individuals. A student/employee who seeks accommodations on the basis of disability must register with the Office of Disability Support Services in the Clark Student Center Room 168 or call 940-397-4140 for more information. Documentation of disability from a competent professional is required.

Individuals with grievances related to discrimination or lack of accommodation on the basis of a disability are encouraged to resolve the problem directly with the area involved. If the matter remains unresolved, advice and/or assistance will be provided by the Office of Disability Services for resolution. The grievance procedure may be found in the Student Handbook and Activities Calendar.

The ADA Coordinator may be contacted at (940) 397.4140, or 3410 Taft Blvd., Clark Student Center Room 168.



## Writing Proficiency Requirement:

All students seeking a Bachelor's degree from Midwestern State University must satisfy a writing proficiency requirement once they've earned 60 hours. You may do so by passing either the Writing Proficiency Exam or English 2113. Please keep in mind that, once you've earned over 90 hours, you lose the opportunity to take the \$25 exam and have no option but to enroll in the three-credit hour course. If you have any questions about the exam, visit the Writing Proficiency Office website at [Writing Proficiency Exam](#), or call (940) 397-4131.

## Campus Carry Policy:

Senate Bill 11 passed by the 84th Texas Legislature allows licensed handgun holders to carry concealed handguns on campus, effective August 1, 2016. Areas excluded from concealed carry are appropriately marked, in accordance with state law. For more information regarding campus carry, please refer to the University's webpage at [Campus Carry Policy](#)





## LockDown Browser + Webcam Requirement

This course requires the use of LockDown Browser and a webcam for online exams. The webcam can be the type that's built into your computer or one that plugs in with a USB cable. Watch this brief video to get a basic understanding of LockDown Browser and the webcam feature.

<https://www.respondus.com/products/lockdown-browser/student-movie.shtml>

### Download Instructions

- Select the quiz in the course
- Under Quiz Requirements you will see "To take this quiz you must use the Respondus LockDown Browser"
- Below this will appear: "You can use the button below if you have not already downloaded Lock Down Browser". Click the button to go to the download page and then follow the instructions
- Use the link to download Respondus LockDown Browser to your computer; follow the installation instructions
- Return to the Quiz page in Brightspace (it may still be open in another tab) and select the quiz
- Select "Launch LockDown Browser"

The quiz will now start

**Note:** LockDown Browser only needs to be installed once to a computer or device. It will start automatically from that point forward when a quiz requires it.

### Guidelines

When taking an online quiz, follow these guidelines:

- Ensure you're in a location where you won't be interrupted
- Turn off all other devices (e.g. tablets, phones, second computers) and place them outside of your reach
- Before starting the test, know how much time is available for it, and also that you've allotted sufficient time to complete it
- Clear your desk or workspace of all external materials not permitted - books, papers, other devices
- Remain at your computer for the duration of the test
- If the computer, Wi-Fi, or location is different than what was used previously with the "Webcam Check" and "System & Network Check" in LockDown Browser, run the checks again prior to the exam
- To produce a good webcam video, do the following:
  - Avoid wearing baseball caps or hats with brims
  - Ensure your computer or device is on a firm surface (a desk or table). Do NOT have the computer on your lap, a bed, or other surface where the device (or you) are likely to move
  - If using a built-in webcam, avoid readjusting the tilt of the screen after the webcam setup is complete
  - Take the exam in a well-lit room, but avoid backlighting (such as sitting with your back to a window)

Remember that LockDown Browser will prevent you from accessing other websites or applications; you will be unable to exit the test until all questions are completed and submitted

### Getting Help

Several resources are available if you encounter problems with LockDown Browser:

- The Windows and Mac versions of LockDown Browser have a "Help Center" button located on the toolbar. Use the "System & Network Check" to troubleshoot issues. If an exam requires you to use a webcam, also run the "Webcam Check" from this area
- [As applicable, insert information about your institution's help desk, including details about how to contact them. Some help desks want students to run the "System & Network Check" and the "Webcam Check" before they are contacted - and even, to forward the results of these checks at the time of opening a ticket.]
- Respondus has a Knowledge Base available from [support.respondus.com](https://support.respondus.com). Select the "Knowledge Base" link and then select "Respondus LockDown Browser" as the product. If your problem is with a webcam, select "Respondus Monitor" as your product

**If you're still unable to resolve a technical issue with LockDown Browser, go to [support.respondus.com](https://support.respondus.com) and select "Submit a Ticket". Provide detailed information about your problem and what steps you took to resolve it.**



## Administrative Process:

Unresolved issues related to this course should be addressed between the student and the course instructor. If there is no resolution, students must follow this sequence.

1. Department Chair: Dr. Beth Vealé (940) 397.4611
2. College Dean: Dr. Jeff Killion (940) 397.4594
3. Dean of Students: Matthew Park (940) 397.7500




## Important Dates:

Student Registration: January 7-9, 2022  
Classes Begin: January 10, 2022  
Last Day for "W": March 21, 2022  
Projects Due: April 28, 2022  
Final Examinations begin: April 29, 2022  
Spring Commencement: May 7, 2022

Please refer to the Undergraduate Bulletin for details about receiving a grade of "Incomplete" in a course. In an emergency or extenuating circumstance, a student may request a grade of "Incomplete" in a course before grades are submitted.

If the instructor grants the "Incomplete," the student has until thirty (30) days after the beginning of the next long semester to complete the course requirements. If the student does not complete the course requirements within the deadline, the grade of "Incomplete" will automatically convert into a grade of "F."



*Your success in this course is dependant on the energy you put into it. It is labor intensive but rewarding at the end.*

*Find your passion in Mammography!*