

# Midwestern State University

Robert D. & Carol Gunn College of Health Sciences & Human Services

The Shimadzu School of Radiologic Sciences

*Revised October 2021*

**Course Number:**    **RADS 2012-201**                      **2 credit**                      **Spring 2025**

## Course and instructor information

**Course Title:**                      **Introduction to Medical Imaging and Medical Terminology**

**Professor:**        **Robert Comello, MSRS, RT(R)**  
                         **Centennial Hall, Office 430E**  
                         **Office: (940) 397.4801**  
                         **Fax: (940) 397.4845**  
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## Course Overview:

This course provides an introduction to the profession of medical imaging and a foundation of medical terminology for individuals considering entering the Radiologic Technology program.

Content includes:

Introduction – includes the historical development of medical imaging, basic principles of radiation protection, introduction to various modalities, professional communication, and a brief overview of ethical and legal issues for health care professionals.

Medical Terminology – includes basic medical word parts and terms plus terminology specific to the radiologic sciences. Areas that will be covered include:

- Word building using word roots, word parts, suffixes, and prefixes
- Words used to describe procedures and interventions and the body as a whole
- Musculoskeletal system

- Circulatory and respiratory systems
- Digestive and urinary systems
- Nervous, endocrine, and special senses
- Medical abbreviations

### **Learning Outcomes:**

The student will exhibit professional communication skills using appropriate medical terms and will demonstrate a solid foundation in the terminology unique to radiologic sciences.

### **Course Objectives:**

Upon completion of this course, a student will:

## **Introduction to Medical Imaging**

- Discuss radiologic technology history and its emerging development
- Recognize and describe various members of the healthcare team
- Describe various professional organizations related to radiologic technology
- Describe clinical education and discuss various policies related to clinical education
- Provide an overview of the administration of healthcare organizations in general and radiology departments in particular
- Describe briefly in general terms, image production and the criteria for determining radiographic quality
- Recognize and explain the manipulation of routine and fluoroscopic equipment
- Describe basic radiation protection principles

- Discuss ethical professional behavior

## **Medical Terminology**

- Define the origins of medical language and the four-word parts used to build medical terms.
- Define, build, interpret, and pronounce medical terms related to body structure, anatomic planes, abdominopelvic regions, the integumentary system, denotations of color, the respiratory system, the urinary system, the reproductive systems, the cardiovascular system, the lymphatic system, the digestive system, the ear and eye, the musculoskeletal system, the nervous system, and the endocrine system.
- Interpret the meaning of abbreviations related to body structure, directional terms, abdominopelvic quadrants, the integumentary system, denotations of color, anatomic planes, abdominopelvic regions, the integumentary system, denotations of color, the respiratory system, the urinary system, the reproductive systems, the cardiovascular system, the lymphatic system, the digestive system, the ear and eye, the musculoskeletal system, the nervous system, and the endocrine system.
- Use medical language in clinical statements and documents.
- Use radiology-related medical language in statements and documents.

## **Textbooks:**

### **Estimate price: \$65.99**

Leonard, P.C. (2017). *Quick and easy medical terminology*. (9<sup>th</sup> ed). St. Louis: Elsevier  
[ISBN – 978-0-323-59599-5]

or

ISBN: 9780323933155  
Copyright: 2024  
Publication Date: 08-31-2023  
Page Count: 496  
Imprint: Saunders  
List Price: \$65.99

### **Additional Resources:**

**\*\* It is recommended that students download Google Chrome (this is a free download through Google) or Mozilla Firefox and use one of those as your default web browser for ALL D2L courses. It eliminates 99% of technical issues often encountered with Internet Explorer, Apple Safari, etc. \*\***

**Students MUST have a reliable computer and internet access.**

### **Teaching Strategies:**

This is a hybrid course that will be taught face-to-face with all class notes and other reading material delivered through D2L. All students are expected to participate in all independent reading assignments and required practice activities. Students must be prepared when they come to class

### **Evaluation:**

Quizzes @ 10% each 70%

Final Exam 30%

**Grade Scale: (This instructor does NOT round grades.)**

A	100-90
B	89-80
C	79-75

D 74-65  
F 64 &

below

There will be no extra credit for this course. It is your responsibility to be prepared for lecture and tests.

**\*\* Note that this course requires a 75 for a grade of “C.” This is consistent with the grading policy of the BSRT Radiologic Sciences Program. This course is a prerequisite for admittance into the BSRT Radiologic Sciences Program – a grade of C or higher is required. This instructor does not give extra credit. The final course grade does not get rounded up. Final grades are determined by the first number of your final course average. Example: 90 is an A, and 89.5 is a B. Quizzes that fail to meet the deadline or incorrect file submission for the assignment will result in a grade of 0.**

### **Communication with the Professor:**

Individual questions and concerns should be handled through an email directly to the professor using the email address at the top of this syllabus. Email is the best way for contacting the instructor. **Direct email to [robert.comello@msutexas.edu](mailto:robert.comello@msutexas.edu) is better than using the D2L email.**

Students should include the course number (RADS 2012) in the subject line of the email and include his/her name in the body of the email. **If students do not use the course number, the professor will return with an email asking for more information; this will delay getting answers to students.**

Throughout the semester, the professor may post announcements on D2L. Contact information for the professor is listed at the beginning of this syllabus. Students must use the MSU Student Email system. The professor will respond or at least acknowledge email messages from students within a maximum of five (5) business days when MSU is in session. Beyond standard university holidays and breaks, the professor will notify students of any extended periods of time when email contact is not practical (professional meetings, etc).

The professor will be available to meet face-to-face with any interested students if they request it. This meeting is optional and must be confirmed by email ahead of time with the professor. **Do not just walk into the office expecting the instructor to be readily available. If the instructor can accommodate you at that time, they will. It is advisable to make an appointment for a guaranteed time.**

### **Attendance:**

The student has a responsibility to attend all classes/labs at the designated time of that class or lab. If a student does not, they will be classified as absent. The following criteria of those classifications are solely those of the instructor of this class.

#### Defined Tardiness (Lecture/Lab)

Any student that arrives to lecture 5 minutes after the starting time designated in the university catalog of lecture/lab will be considered tardy. If the student arrives tardy a total of two (2) times, the student will be penalized in the form of one (1) **unexcused absence**. **There will be no exceptions to this policy.**

#### Defined Absence (Lecture/Lab)

A student will have ten (10) minutes after the designated starting time to be present in the lecture. If the student is not present at that time, he/she will be considered absent. The student will be marked as having an **unexcused absence** from the lecture. Three (3) **unexcused absences** will result in failure of the course and possible dismissal from the program.

A student will be considered as having an excused absence from class if the following criteria have been established:

**Death of an immediate family member.** An immediate family member is considered to be a grandparent, parent, sibling, spouse, in-law, aunt, uncle, or child.

**Summons to appear in court or jury duty.** A copy of the summons is required.

**Call to military service.** A copy of your orders to report is required.

**University-sponsored event.** Members of athletic teams, college bowl participants, etc. will be excused with proper notification.

**Debilitating Illness or Disability.** Will be addressed on an individual basis.

If a student is affected by an illness that is not debilitating, (i.e. flu, virus infection) which may result in the student missing one or more consecutive class sessions, that student will be marked as unexcused for the number of days missed **unless a doctor's note is provided.** A doctor's note **must** have a statement to the effect that you were seen in the office, or you are cleared to return to classes. It **does not** have to state what you were seen for. **There will be no exception to this policy.**

## PERSONAL APPOINTMENTS

Students **must** refrain from making appointments that will take them out of class/lab. A routine doctor or dentist visits are an example of this. If you do not attend class or leave class/lab early because of an appointment, or for any other reason, the occurrence will be treated with the same regard as an unexcused absence. However, unexpected events do occur and will be addressed on an individual basis.

### Late Work

**Due Dates.** Assignments and quizzes must be submitted by the time and dates listed in the syllabus. All times are Central time. If a student fails to meet a deadline the student will receive **no (0) credit** for the assignment not submitted on time or the quiz not taken on the listed date..

**Note:** All materials submitted to this course will be considered complete and will be graded as such. Proofread your work.

**Emergency Extension.** If you have a major event such as a death in the family, illness, hospitalization, or other extenuating circumstances, email the instructor as soon as possible and on or before the scheduled due date. I will grant extensions on an individual basis.

### Technical Difficulties

On occasion, you may experience problems accessing D2L or class files located within D2L, Internet service connection problems, and/or other computer-related problems. Make the instructor aware of a technical problem as soon as possible (**preferably when it is happening via an e-mail message so there is a time stamp to verify**). If a problem occurs on our end, such as D2L failure, then a due date extension will typically be granted. *Dropbox assignments that can be attached in an email should be emailed to the professor as soon as a problem is encountered. Failure to do so may result in points being lost.*

### For help:

- Use the D2L help link in D2L

- Contact your Instructor
- And for other computer access issues, contact information systems at [MSU IT Help](#)

## **CLASS ACTIVITIES AND ASSIGNMENTS**

### **Independent Reading Assignments**

Students must read the assigned lessons and supplements.

- Introduction to Medical Imaging: Supplements found in course content

#### Medical Terminology

- Unit 1: Summary, PowerPoint notes (found in course content), and Chapters 1, 2 and 3
- Unit 2: Summary to include medical abbreviations, PowerPoint notes (found in course content), and Chapters 4 and 5
- Unit 3: Summary to include medical abbreviations, PowerPoint notes (found in course content), and Chapters 6, 7, and 8
- Unit 4: Summary to include medical abbreviations, PowerPoint notes (found in course content), and Chapters 9,10,13, 14, and 15.

**Note:** Medical Terminology Flashcards are on a PDF file found in the course content. These are an excellent way to prepare for all tests and the final.

### **Comprehensive Final Exam**

The final will be a comprehensive final exam and will be administered during the date listed at the end of the syllabus. The comprehensive final exam will contain questions that will also include material from the introduction portion of this course.



**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 Services (ODS) provides information and assistance, arranges accommodations, and serves as a liaison for students, instructors, and staff. The ODS has assistive devices such as books on tape, recorders, and adaptive software which can be loaned to qualified individuals. A student/employee who seeks accommodations on the basis of disability must register with the Office of Disability Services in the Counseling Center, Clark Student Center Room 108. 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 Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Disability Support Services in Room 168 of the Clark Student Center, at (940) 397-4140.

**Administrative Process:**

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

Interim Department Chair – Dr. Lynette Watts (940-397-4833)

College Dean – Dr. Jeff Killion (940-397-4594)

Dean of Students – Matthew Park (940-397-7500)

### **Honor System:**

RADS 2012 adheres to the MSU Code of Conduct. In particular, academic dishonesty, however small, creates a breach of academic integrity. A student's participation in this course comes with the expectation that his or her work will be completed in full observance of the MSU Code of Student Conduct. A student should consult the current Student Handbook for answers to any questions about the code.

Many components of RADS 2012 are designed to be highly interactive with students helping each other learn. Students are encouraged to take full advantage of many resources available including online resources, Internet sites, other textbooks and journals, faculty, and peers when answering objectives. This interactive collegial learning environment is conducive to lifelong learning.

Specific components of RADS 2012 are designed to represent the efforts of each student INDIVIDUALLY and are NOT to be shared or copied (plagiarized) from other sources. These components include the module activities, Blackboard Open Book Module Quizzes, and the Blackboard Comprehensive Final Exam. When students submit their efforts for grading, they are attesting they abided by this rule.

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. Papers and other assignments may be submitted to an external agency for verification of originality and authenticity.

Academic dishonesty (cheating, plagiarism, etc.) will not be tolerated in this class. Whenever a student is unsure of whether a particular situation will be interpreted as academic dishonesty,

he/she should ask the instructor for clarification. If students are guilty of academic dishonesty, a grade of zero (0) may be given for the quiz, assignment, etc. Cases may also be referred to the Dean of Students for possible dismissal from the university.

### ***PLEASE NOTE***

***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 student’s work product in order to verify originality and authenticity, and for educational purposes. Specifically, faculty may submit student papers and assignments to an external agency to verify originality and authenticity and to detect plagiarism.***

### **Use of Artificial Writing Generators**

#### **Artificial Intelligence (AI)-Declaration of Generative AI in Academic Writing**

For all writing assignments, the student will not use generative artificial intelligence (AI) to construct the content of the assignment. Doing so is similar to plagiarism, and the assignment may be subject to a grade of zero or failure of the course, depending on the severity of the incident. AI-assisted technologies should only be used to improve readability and language. If used, it is the responsibility of the student to carefully review and edit this content, as AI can generate incorrect, incomplete, or biased information. Using these technologies requires human oversight and control. Additionally, AI and AI-assisted technologies should not be listed as an author or co-author or cited as an author. If the student uses AI-assisted technologies, a disclosure must appear at the end of the document in a separate section before the references, using the following format.

#### **Declaration of Generative AI and AI-Assisted Technologies in the Writing Process**

*Statement: During the preparation of this work the author(s) used [NAME TOOL / SERVICE] in order to [REASON]. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the publication.*

Academic dishonesty will not be tolerated in this class. When unsure whether a situation will be interpreted as academic dishonesty, you should ask your professor for clarification. If you are guilty of academic dishonesty, a grade of zero (0) will be given for the quiz, assignment, etc. Cases may also be referred to the Dean of Students for possible dismissal from the University.

You are encouraged to review the tutorials and suggested websites for more information about plagiarism. If you have any questions about what constitutes plagiarism, please consult:

### **TENTATIVE Spring 2024 COURSE SCHEDULE**

**\* This schedule is subject to change. Students will be notified of any changes.\* \*  
Consult MSU Academic Calendar for school holidays, closures, etc.\***

Tentative course schedule

Date	Activity
January 21	<i>Classes Open</i>
January 21	<b>Intro to Medical Imaging</b>
January 23	<b>Conclude Intro to Medical Imaging Start Medical Terminology</b>
January 28	<b>Med. Term. Unit 1, Ch. 1,2,3</b>
January 30	<b>Med. Term. Unit 1, Ch. 1,2,3</b>
February 4 - 9	<b>ACERT Conference Review assignment criteria</b>
February 11	<b>Med. Term. Unit 1 quiz 1 to include some questions from Code of Ethics.</b> Quizzes that fails to meet the deadline or incorrect file will result in a grade of 0.
February 13	<b>Unit 2, Ch.4</b>
February 18	<b>Unit 2, Ch.4</b>
February 20	<b>Unit 2, Ch.4</b>
February 24	<b>Assignment due @ 8 am</b>
February 25	<b>Ch.4 quiz 2</b> Quizzes that fails to meet the deadline or incorrect file will result in a grade of 0.
February 27	<b>Unit 2, Ch.5</b>

<b>March 4</b>	<b>Unit 2, Ch.5 quiz 3</b> Quizzes that fails to meet the deadline or incorrect file will result in a grade of 0.
<b>March 6</b>	<b>Unit 3, ch.6</b>
<b>March 8 - 16</b>	<b>Spring Break</b>
<b>March 18</b>	<b>Unit 3, Ch.6, quiz 4</b> Quizzes that fails to meet the deadline or incorrect file will result in a grade of 0.
<b>March 20</b>	<b>Unit 3, Ch.7</b>
<b>March 25</b>	<b>Unit 3, Ch. 7, quiz 5</b> Quizzes that fails to meet the deadline or incorrect file will result in a grade of 0.
<b>March 27</b>	<b>Unit 3, Ch.8</b>
<b>April 1</b>	<b>Unit 3, Ch.8 quiz 6</b> Quizzes that fails to meet the deadline or incorrect file will result in a grade of 0.
<b>April 3</b>	<b>Unit 4, Ch. 9</b>
<b>April 8</b>	<b>Unit 4, Ch. 9 quiz 7</b> Quizzes that fails to meet the deadline or incorrect file will result in a grade of 0.
<b>April 10</b>	<b>Unit 4, Ch. 10</b>
<b>April 15</b>	<b>Unit 4, Ch. 10 quiz 8</b> Quizzes that fails to meet the deadline or incorrect file will result in a grade of 0.
<b>April 16 - 20</b>	<b>Holiday Break</b>
<b>April 22</b>	<b>Review Q &amp; A</b>

April 24	Unit 4, Ch. 13
April 29	Unit 4, Ch. 13, quiz 9 Quizzes that fails to meet the deadline or incorrect file will result in a grade of 0.
April 30	The last day to drop with a "W" by 4 pm
May 1	Ch. 14 & 15
May 6	Ch. 14 & 15 quiz Quizzes that fails to meet the deadline or incorrect file will result in a grade of 0.
May 8	Review ch. 14& 15 quiz 10 Q & A for all chapters
<b>Final On-line through Respondus Lock down Browser + webcam</b>	<b>Final -TBA</b> <b>Note: Ch. 14 &amp; 15 will not be on the final.</b>

**Note:** The last day to drop this class with a "W" is April 30 by 4 pm. Anyone dropping this class after the posted date and time will receive a grade of "WF".