Course Syllabus: RADS 4703 Principles of CT

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

Department of Radiologic Sciences

Course Information

Name	RADS 4703x12-Principles of Computed Tomography (online)
Credit	3 hours
Term	Fall 2022
Dates	August 22-December 2, 2022
Time Commitment	You should expect to spend at least 9 hours per week on course material in a 15-week term or 12 hours per week in a 10-week term
Prerequisites	None

Professor

Kimberly Onstott EdD, RT(R)(CT)(MR) Assistant Professor, Radiologic Sciences

E-mail: kimberly.onstott@msutexas.edu

Use this format in the subject line: 4703_your last name_topic of the message

E-mail is the best way to reach me. If I haven't responded within 72 hours, please email me again.

Phone: (940) 397-4332

Office location: Midwestern State University

3410 Taft Blvd

Centennial Hall 430Q

Wichita Falls, TX 76309

Office hours: Tuesdays 12:00-13:00, Wednesdays 12:00-15:00, and Thursdays 12:00-13:00. Please make an appointment by e-mail to be sure I am not meeting with another student at the same time. Zoom meetings, phone meetings, and any additional hours can be arranged by email request.

Communicating with the Professor

I prefer email, so there is a record of the communication, and often I am away from my desk. Phone calls may be answered by email when appropriate. I typically respond to emails within 72 hours or sooner. If you do not hear from me within 72 hours, please email me again to be sure I received your email. If this time period is longer because I am out of town or for another reason, a news item will be posted online in D2L for the class. Please always give me the time asked to respond before repeating your request.

Include the format below for your email subject line so I can quickly search for particular course questions and answers.

4703X12_your last name_topic of message
Example: 4703X12_Smith_Final Exam question

When there is a need to contact a student, the professor will use the student's MSU email account. The professor is not responsible for sending emails to any other email account (set up your email to forward messages to an email you often check to avoid potentially missing any correspondence). Likewise, faculty members will not be responsible for keeping up with other email addresses for students. If you have not established this account or you need help forwarding messages, do so as soon as possible by contacting information systems.

Course Description

This course focuses on computed tomography protocols and procedures, contrast media, physics, sectional anatomy, and patient care. This course meets the 16 hours of structured education required by the American Registry of Radiologic Technologists (ARRT).

Course Objectives

Upon completion of this course, you will:

- Understand and apply the best standards in patient care.
- Describe appropriate CT radiation safety practices.
- Discuss dose reduction techniques.
- Identify and define CT procedures.
- Discuss image production, including evaluation and archiving.

Teaching Methodology

This course uses independent reading assignments, D2L module quizzes; a computed tomography project; and a comprehensive proctored final examination.
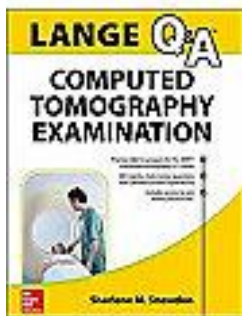
Course Materials

Textbooks

Required

Romans, L.E. (2018). *Computed tomography for technologists: A comprehensive text*. Baltimore, MD: Wolters Kluwer Health – Lippincott Williams & Wilkins. [ISBN 9781496375858]. ($54.00+)
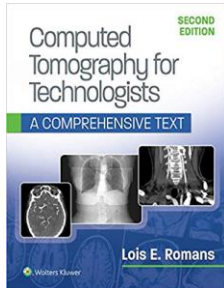
Recommended

Snowdon, S.M. (2016). *LANGE Review: Computed Tomography Examination*. New York, NY: McGraw-Hill Education. (ISBN 9780071843867). ($48.75+)

Recommended

MedOne Radiology (Free to MSU students)

This online resource is free to MSU students. Access MedOne Radiology through the Moffett Library online databases. Log in to the MSU portal and access the Library Resources. Then, under the Research Databases tab, click on Health Sciences and scroll down to MedOne.

MedOne Radiology is a comprehensive online reference for all medical imaging specialists. It provides extensive case libraries, diagnostic guidance for those in training, and essential references and procedural guidelines for the qualified specialist in clinical practice.

Recommended

American Psychological Association. (2010). Publication manual of the American Psychological Association (7th Ed.) [ISBN 978-1433832161]. ($14.00+)
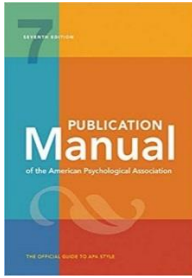
Computer Requirements

You need access to an up-to-date Windows-based or Mac computer with an internet connection in this course. Chromebooks will not work. D2L does not work well with Internet Explorer. Please use Chrome or Firefox browsers when working in D2L.

ProctorU Specifications

- Web Camera 640x480 resolution minimum, 1280x720 resolution recommended.
- PC Users: A well-working computer running Windows Vista or higher (Windows 10 S is not supported).
- Mac Users: A well-working computer running Mac OS X 10.5 or higher. Mac OS X 10.10 Yosemite recommended
- A reliable high-speed internet connection
  - minimum download .768 Mbps
  - minimum upload .384 Mbps
- A functioning microphone (sometimes web cameras have built-in microphones)
- One of the following compatible web browsers:
  - Google Chrome (preferred)
  - Mozilla Firefox
  - Safari
- The following plugins for your web camera:
  - Adobe Flash Player v12
  - Adobe Shockwave player

Detailed instructions for ProctorU are in the RADS 4703X12 D2L course shell under the section labeled Final Examination.

Course Modules

Module 1: Radiographic Physics Review
Module 2: Physics and Instrumentation
Module 3: Patient Care
Module 4: Quality Control and Post Processing
Module 5: Neurologic & Musculoskeletal Anatomy and Imaging
Module 6: Thoracic & Abdominopelvic Anatomy and Imaging
Module 7: Advanced CT Topics
Final Examination

Important Dates

All times are MSU campus time.

Date	Assignment
August 22	**Class opens** **All quizzes open** **Review course syllabus** **Begin Module 1: Radiographic Physics Review**
September 6	**Survey Complete by 11:59 pm** **Introductions due by 11:59 pm** **Module 1 Quiz due by 11:59 pm**
September 13	**Module 2 Quiz due by 11:59 pm**
September 27	**Module 3 Quiz due by 11:59 pm** **Virtual Scenarios open**
October 11	**Module 4 Quiz due by 11:59 pm**
September 20-October 18	**Midterm Examination closes on October 19 at 11:59 pm** **(50 random multiple-choice, short answer, and true/false questions)**
October 24	**Last day to withdraw with a "W" grade by 4:00 pm campus time**
October 25	**Module 5 Quiz due by 11:59 pm**
November 8	**Module 6 Quiz due by 11:59 pm**
November 22	**ProctorU Scheduling Deadline for Final Examination** **CT Course Project due by 11:59 pm in the dropbox** **Module 7 Quiz due by 11:59 pm**
November 29	**CT Virtual Scenarios Worksheet due by 11:59 pm in the dropbox**
November 22-December 6	**Final Examination closes on December 6 at 11:59 pm** **(100 questions random multiple-choice, short answer, and true/false questions)**

Information contained in the course syllabus, besides the grade and absence policy, may be subject to change with advance notice, as deemed appropriate by the instructor.

Principles of Computed Tomography Assignment Details

Assignments

- 25 %   D2l Module Quizzes (7)
- 15 %   CT Course Project
- 10 %   Virtual Scenarios
- 20 %   Midterm Examination
- 30 %   Comprehensive Final Examination

D2L Module Quizzes (7) 25%

You should complete the reading assignments, answer the chapter objectives, and review the questions at the end of the chapter before attempting the module quizzes.

When you have reviewed a module and are ready for the quiz, you should log into D2L and receive a customized timed module quiz consisting of randomized multiple choice questions. Quizzes contain 30 random questions, and students will have 30 minutes to complete them.

Each quiz may be attempted up to three times. The final score for any module quiz will be the average of all attempts made. Knowing the module content before attempting the quizzes is essential since they are timed. Quiz scores will be available immediately after you submit them for grading.

Each quiz has requirements that must be completed before the quiz will open.

Before the Module 1 quiz can be taken, you must complete all of the following:

- New Student Survey must be completed

For subsequent quizzes and the final Examination, you must on the previous module quiz:

- Score a 75% or greater on any one attempt; or
- Complete three attempts of the module quiz (the final quiz score will be an average of all attempts)

For example, to take the Module 2 quiz, you must either score 75% on any attempt of the Module 1 quiz, or complete three of the Module 1 quiz. To take the final Examination, you must score 75% on any attempt or complete three attempts of the Module 6 quiz.

If you find a faulty quiz item or believe a quiz question has been scored incorrectly, you should send an email to me that includes the following:

- Module Quiz Number (1-7) or Midterm Examination
- Question stem
- The rationale supporting why your answer is correct
- Include page numbers when referencing the textbook

For example, you cannot send the message: "I think question number ten is wrong on quiz four" because each student gets a quiz of randomly generated test items. I must know the question stem to find the question in the database. After reviewing the situation, if I think a revision is justified, your quiz score will be revised to reflect the additional points, and the test bank will be updated.

You may not take the midterm examination until you complete module 1 – 4 quizzes.

You may not take the final Examination until all quizzes are completed.

No exceptions.

CT Course Project 15%

The course project is designed to give you experience working with CT protocols. To perform the CT Clinical Experiences, a student must have permission to perform exams on actual patients from their facility. In addition, some states regulations will not allow distance students to perform assignments at facilities within their state's borders. When you complete the New Student Survey, you will be able to determine if you can do the CT Experiences Project

There are instructions within the course for both the CT Clinical Experience Project and the Alternate CT Project.

You must submit one form of the CT Course Project to the appropriate drop box by the scheduled due date.

Virtual Scenarios 10%

There are three virtual scenarios for you to complete. Allow for several hours of work on each scenario. After all three scenarios are completed, there is one worksheet to turn into the appropriate dropbox. You should complete the appropriate section of the worksheet after completing each scenario.

Before the completed worksheet is uploaded, you are asked to complete an anonymous survey. This survey will only be used for research purposes and does not affect your grade. The dropbox will open after the survey is completed.

The scenarios are designed to enhance the learning environment after modules 1-3 in the course have been completed. Therefore, the scenarios will not open until September 20 to give students time to complete modules 1-3 before beginning the scenarios.

Complete instructions about the scenarios may be found in the course.

Midterm Examination 20%

Module 1 – 4 quizzes must be completed before the Midterm Examination.

The midterm examination must be completed by October 18, 2022, at 11:59 pm. Incomplete midterm exams will be scored a zero, and you may fail the course. If you know you will miss a due date because of extenuating circumstances, you should contact me so your situation can be dealt with individually. Acceptance of an extenuating circumstance is at my discretion. Since the midterm examination is open for one month, only the most extraordinary circumstances will be considered.

Exam Format

- The midterm exam consists of 50 random multiple-choice, short answers and true/false questions.
- The exam is a timed, 45-minute test.
- To prepare for this exam: The midterm has been derived from Modules 1-4 of this course. Review all of your quizzes and your textbook chapters. Reinforcing study materials include PowerPoint presentations.

Comprehensive Final Examination 30%

All quizzes and projects must be completed before the Final Exam is taken.

The final Examination must be completed by December 6, 2022, at 11:59 pm. Incomplete final exams will be scored a zero, and you will fail the course. If you know you will miss a due date because of extenuating circumstances, you should contact me so your situation can be dealt with individually. Acceptance of an extenuating circumstance is at my discretion. Since the final Examination is open for one month, only the most extraordinary circumstances will be considered.

You are required to have a webcam and microphone for the Final Exam. The appointment with ProctorU must be scheduled by November 22, 2022, to avoid late fees and ensure you get the appointment time you want.

Exam Format

- The proctored comprehensive final Examination is a closed book exam with 100 random multiple-choice, short answers, and true/false questions.
- The exam is a timed, 1-hour (60 min) test.
- The final exam will be administered using Desire2Learn (D2L) and ProctorU's online proctoring service.
- To prepare for this exam: The final has been derived from the entire content of this course. Review all of your quizzes and your textbook chapters. Reinforcing study materials include PowerPoint presentations.

What to Bring

- You may bring scratch paper with only ProctorU's phone number on it.
- No smart watches or any other electronic devices will be allowed.
- You are not allowed to print the final exam.
- No textbooks or notes may be used.

ProctorU Scheduling

- You may schedule your exam any time within the testing dates in the course schedule. However, you must complete ALL of your course work when you take your final, or the final will not be accessible in D2L.

- For ProctorU instructions, please read the ProctorU Student Instruction Guide in the course and visit the [MSU ProctorU Webpage](#).
- Be aware specific equipment is required. Review the ProctorU instructions as soon as possible.
- Contact a ProctorU representative to check your equipment and bandwidth in real-time before your test date. If anything changes after this check (new computer, updates, ISP changes, etc.), REPEAT the check.
- All appointments should be made at least three days in advance. To make an appointment, simply create an account by visiting the [MSU ProctorU Webpage](#). Once logged in, click on the new exam link and select the exam, date, and time you desire. You must submit payment (based on the length of the exam) at that time - usually about $25.00. You will receive an email confirming your reservation at the email address you provided to ProctorU.
- Late registrations and *Take it Now* features are subject to availability. Note: If a proctor is unavailable because you did not schedule your exam in advance, the final is considered missed, and a grade of zero will be given.
- Be mindful when you schedule your final exam. If you schedule the exam outside of the 5-day work week (M-F), there may be no one at MSU available to help if you have technical problems.

Technical Problems

- If you are disconnected during your exam, you must immediately send an email to your professor and immediately contact ProctorU by phone. All exams are monitored, and the proctor and D2L create a log.
- *All times will be documented*
- The exam must be taken within the scheduled test dates, regardless of any technical issues that may arise. This is your responsibility.
- Late submissions will not be accepted.
- I suggest taking the exam during the first days it is available (listed below) to avoid receiving a zero due to technical issues. If you have to reschedule, it must be within the scheduled dates and times.
- See the [Technical Difficulties](#) section below for help options.

All course requirements must be completed before a grade is awarded. You must complete the final and all coursework by the dates published in the course schedule (below).

Note: All assignments received are considered complete and will be graded as such. Any decision made by me is final, and no further changes will be made.

Evaluation

Grade Distribution

- 25%   D2l Module Quizzes (7)
- 15%   CT Course Project
- 10%   Virtual Scenarios
- 20%   Midterm Examination
- 30%   Comprehensive Final Examination

Grade Scale

A=100-90

B=89-80
C=79-70
D=69-60
F=59 and below

Grading Cycle

All assignments are graded together as a group to maintain a higher level of consistency. Grading begins on the first business day after a due date, outside of university holidays and professional meetings, and is typically completed before the next due date. You may track your progress through the Gradebook in D2L.

Feedback

Feedback varies throughout the course. The News section of the course is where I will send messages to the entire class. It is best to set up your D2L account to receive an email notification (to the email of your choice) when News items are posted, so you do not miss critical updates.

1. Click the down arrow in the News section on the 4703 course home page
2. Select Notifications
3. Check the box next to "News - new item available" and then check any other boxes you wish to receive an email notification.
4. Check the email address you wish to send email notifications to. If you need to change this, select "change your email settings" and enter the new email address. This email address should be an email address you check frequently.

You are welcome to email questions to clarify concepts or look for further explanations. If I encounter repeated questions, I will provide feedback or supplementary resources in the News section of the course so that everyone can benefit from it. You might look there first, because your question may be located there.

Late Work

Due Dates

Most assignments are due Tuesdays except for the last week of class (see Important Course Dates above). Assignments must be submitted by 23:59 (11:59 pm) Central time, on scheduled due dates in the course schedule. If you fail to meet a deadline, you will receive no credit for the assignment not submitted on time.

Emergency Extension

If you have a significant event such as a death in the family, illness, hospitalization, or other extenuating circumstances, email me at Kimberly.Onstott@msutexas.edu as soon as possible and on or before the scheduled due date. I will grant extensions on an individual basis. If an extension is granted, the following guidelines will typically be followed.

1. The assignment may be up to one week late and still qualify for full credit. After the one-week extension, ten percent per day can be deducted until the assignment is no longer worth any credit.
2. When the assignment is completed, you must send a follow-up email to let me know it is ready to grade. Failure to notify me could lead to a grade of zero.
3. **Avoid End of Course Late Work:** Please note there are University deadlines for submitting grades at the end of the semester. Therefore, all work must be turned in at least a week before grades must be posted.
4. If a course includes interaction between students in the discussion board, and if extenuating circumstances will prevent you from participating, an alternate assignment may be considered

at my discretion.

Final Course Grade

A final course score of 70% is required to pass this course. Letter grades of "D" or "F" cannot be used for graduation and will require the course to be repeated according to the current radiology program policies.

Technical Difficulties

Occasionally, you may experience problems accessing D2L, accessing class files located within D2L, connecting with your internet service, or other computer-related issues. Make me aware of a technical problem as soon as possible. If a problem occurs on our end, such as D2L failure, then a due date extension will typically be granted**. However, remember that it is your responsibility to have (or have access to) a working computer in this class. *Assignments and tests are due by the due date, and personal computer technical difficulties will not be a reason for me to allow you extra time to submit assignments, tests, or discussion postings.***

Dropbox assignments that can be attached in an email should be emailed to me as soon as a problem is encountered. Failure to do so may result in lost points, regardless of connection issues.
For help options:
- For D2L issues, go online go to the [Distance Education Helpdesk](#)
- Call the Distance Education office at 940-397-4868 between 8 am and 5 pm.
- Use the D2L help link in D2L.
- Contact me.
- For other computer access issues, go online to the MSU [Information Technology Website](#).

Attendance

This is a fully online course. You should be vigilant in logging in to D2L. You should expect to log in at least three times per week. Regular checks will ensure that messages from me are received promptly**.** This course is on a schedule that will be strictly adhered to. See the Important Dates section above for specific due dates.

Requesting a Withdrawal

The last opportunity to drop this course with a grade of "W" is 4:00 pm on October 24, 2022. You must initiate all withdrawals. After this date, dropping the course results in a grade of "F."

In an emergency or extenuating circumstance, you may request a grade of "Incomplete" before grades are submitted. If I grant the "Incomplete," you have until thirty (30) days after the beginning of the next long semester to complete the course requirements. If you do not meet the course requirements within the deadline, the " Incomplete " grade will automatically convert into a grade of "F".

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, professors, and staff. In addition, 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 based on 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 based on a disability are encouraged to resolve the problem directly with the area involved. If the matter remains unresolved, the Office of Disability Services for resolution will provide advice and/or assistance. The grievance procedure may be found in the Student Handbook and Activities Calendar.

The Director of the Counseling Center serves as the ADA Coordinator and may be contacted at (940)397-4618, TDD (940)397-4515, or 3410 Taft Blvd., Clark Student Center Room 108.

Administrative Process

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

1. Department Chair – Dr. Beth Vealé (940-397-4575)
2. College Dean - Dr. Jeff Killion (940-397-4594)
3. Dean of Students – Matthew Park (940-397-7500)

Honor System

RADS 4703 adheres to the MSU Code of Conduct.

In particular, however small, academic dishonesty breaches academic integrity. Your participation in this course comes with the expectation that your work will be completed in full observance of the MSU Code of Student Conduct. You should consult the current Student Handbook for answers to any questions about the code.

All components of RADS 4703 are designed to represent the efforts of each student individually and are NOT to be shared, copied, or plagiarized from other sources. Therefore, when you submit your efforts for grading, you are attesting you have abided by this rule.

An online plagiarism service may be used in this course. Student assignments may be uploaded to the service to identify similarities to other student papers and published works.

Cheating includes but is not limited to

- Use of any unauthorized assistance in taking quizzes, tests, or examinations;
- Dependence upon the aid of sources beyond those authorized by the professor in writing papers, preparing reports, solving problems, or completing other assignments; or
- 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 paraphrasing or direct quotation without correct citation in the text and the reference list,
- The published or unpublished works of another person.
- You may NOT submit papers and assignments that you have previously submitted for this or any other course.

- Using materials generated by agencies engaged in "selling" term papers is also plagiarism.

Academic dishonesty (cheating, plagiarism, etc.) will not be tolerated in this class. You should ask me for clarification whenever you are unsure whether a particular situation will be interpreted as academic dishonesty. 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:

- The University Academic Dishonesty Policy
- The website Plagiarism.Org, or
- The professor

Please Note

By enrolling in this course, you expressly grant MSU a "limited right" in all intellectual property created by you for this course. The "limited right" shall include but not be limited to the right to reproduce your work/ project 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 detect plagiarism.

Senate Bill 11

Campus Carry

Effective August 1, 2016, the Campus Carry law (Senate Bill 11) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes as prohibited. The new Constitutional Carry law does not change this process. Concealed carry still requires a License to Carry permit, and openly carrying handguns is not allowed on college campuses. For more information, visit Campus Carry.

Active Shooter

The safety and security of our campus are the responsibility of everyone in our community. Each of us has an obligation to be prepared to appropriately respond to threats to our campus, such as an active aggressor. Please review the information provided by MSU Police Department regarding the options and strategies we can all use to stay safe during difficult situations. For more information, visit Safety / Emergency Procedures. Students are encouraged to watch the video entitled "*Run. Hide. Fight.*" which may be electronically accessed via the University police department's webpage: *"Run. Hide. Fight."*

If you have questions or concerns, please contact MSU Chief of Police Patrick Coggins by email at mpatrick.coggins@msutexas.edu.