



**Course Syllabus: RADS 4703 Principles of CT**  
**Robert D. & Carol Gunn College of Health Sciences & Human Services**  
**Department of Radiologic Sciences**

### Course Information

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<b>Name</b>	RADS 4703x12-Principles of Computed Tomography (online)
<b>Credit</b>	3 hours
<b>Term</b>	Fall 2024
<b>Dates</b>	August 26-December 6, 2024
<b>Time Commitment</b>	You should expect to spend at least 9 hours per week on course material in a 15-week term.
<b>Prerequisites</b>	None

### Professor

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

**E-mail:** [kimberly.onstott@msutexas.edu](mailto: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 e-mail me again.

**Phone:** (940) 397-4332

**Office location:** Midwestern State University

3410 Taft Blvd

Centennial Hall 430Q

Wichita Falls, TX 76309

**Office hours:** Mondays & Wednesdays, 11-13:00, & Fridays, 11-12:00. 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 e-mail request.

## Communicating with the Professor

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I prefer e-mail, so there is a record of the communication, and often I am away from my desk. Phone calls may be answered by e-mail when appropriate. I typically respond to e-mails within 72 hours or sooner. If you do not hear from me within 72 hours, please e-mail me again to be sure I received your e-mail. 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 e-mail 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 a student needs to be contacted, the professor will use the student's MSU e-mail account. The professor is not responsible for sending e-mails to any other e-mail account (set up your e-mail to forward messages to an e-mail you often check to avoid potentially missing any correspondence). Likewise, faculty members will not be responsible for keeping up with other e-mail 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

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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

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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

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

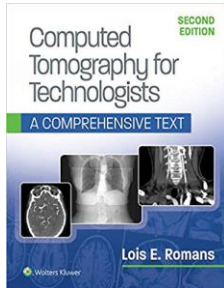
## Course Materials

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### 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+)



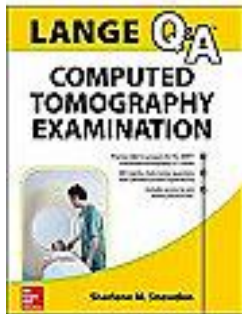
#### Recommended (Pick a study guide if you will be taking the CT Registry within a year)

ASRT **Computed Tomography Student Exam Assessment Library™ SEAL** (online at <https://www.asrt.org/ctseal> )

ASRT Members can access five free practice exams; each additional exam is \$15.00.

Non-members can access one free exam, and each additional exam is \$15.00.

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 qualified specialists in clinical practice.

### Recommended

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



### Computer Requirements

In this course, you need access to an up-to-date Windows-based or Mac computer with an internet connection. Chromebooks will not work. D2L does not work well with Internet Explorer. Please use Chrome or Firefox browsers when working in D2L. If using a MAC, documents can be saved as Word files. Video: [How to save Apple Pages document as Microsoft Word file \(.doc & .docx\)](#)

### Course Modules

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- 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

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All times are MSU campus time.

Date	Assignment
August 26	<p><b>Class opens</b></p> <p><b>All quizzes open</b></p> <p><b>Review course syllabus</b></p> <p><b>Begin Module 1: Radiographic Physics Review</b></p>
September 3	<p><b>Clinical Information Form due by 11:59 pm</b></p> <p><b>Survey Complete by 11:59 pm</b></p> <p><b>Introductions due by 11:59 pm</b></p> <p><b>Module 1 Quiz due by 11:59 pm</b></p>

<b>Date</b>	<b>Assignment</b>
<b>September 10</b>	<b>Module 2 Quiz due by 11:59 pm</b>
<b>September 24</b>	<b>Module 3 Quiz due by 11:59 pm Virtual Scenarios open</b>
<b>October 8</b>	<b>Module 4 Quiz due by 11:59 pm</b>
<b>September 17- October 15</b>	<b>Midterm Examination closes on October 15 at 11:59 pm (50 random multiple-choice, short answer, and true/false questions)</b>
<b>October 22</b>	<b>Module 5 Quiz due by 11:59 pm</b>
<b>November 5</b>	<b>Module 6 Quiz due by 11:59 pm</b>
<b>November 19</b>	<b>CT Course Project due by 11:59 pm in the dropbox Module 7 Quiz due by 11:59 pm</b>
<b>November 25</b>	<b>Last day to withdraw with a "W" grade by 4:00 pm campus time</b>
<b>November 28</b>	<b>CT Virtual Scenarios Worksheet due by 11:59 pm in the dropbox</b>
<b>November 19- December 3</b>	<b>Final Examination closes on December 3 at 11:59 pm (100 questions random multiple-choice, short answer, and true/false questions)</b>

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.

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## **Principles of Computed Tomography Assignment Details**

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### **Assignments**

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- 25 % D2L Module Quizzes (7)
- 15 % CT Course Project
- 10 % Virtual Scenarios
- 20 % Midterm Examination
- 30 % Comprehensive Final Examination

### **D2L Module Quizzes (7) 25%**

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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; 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 e-mail 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%**

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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 state's 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.

Instructions within the course are 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%

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There are three virtual scenarios for you to complete. Allow for several hours of work on each scenario. After completing all three scenarios, 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%

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

The midterm examination must be completed by October 15, 2024, at 11:59 pm. Incomplete midterm exams will result in a zero score, 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 includes PowerPoint presentations.

## Comprehensive Final Examination 30%

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

- The Final Examination must be completed by December 3, 2024, 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 to deal with your situation individually. Acceptance of an extenuating circumstance is at my discretion. Only the most extraordinary circumstances will be considered since the Final Examination is open for one month.
- You are required to have a webcam and microphone for the Final Exam. The comprehensive proctored final exam will be administered using Desire2Learn (D2L) and Respondus Lockdown Browser online proctoring with a Webcam built into D2L. **You must take the appropriate practice quiz before the Final to ensure you can use the Respondus system.**

- You must take the practice Lockdown Browser exam and all other quizzes before taking the final exam.

### What to Bring

- No textbooks or notes may be used.
- No smart watches or any other electronic devices will be allowed.
- Students are not allowed to print the final exam.

### 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.
- 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 includes PowerPoint presentations.

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

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### 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 e-mail notification (to the e-mail 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 e-mail notification.
4. Check the e-mail address you wish to send e-mail notifications to. Select "change your e-mail settings" and enter the new e-mail address if you need to change this. This e-mail address should be an e-mail address you check frequently.

You are welcome to e-mail 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 on Tuesdays (see Important Course Dates above). Assignments must be submitted by 23:59 (11:59 pm) Central Standard Time on scheduled due dates in the course schedule. If a student fails to meet a deadline, the student will receive no credit for the assignment not submitted on time.

### **Progression**

The student may progress through this course at their leisure within the time constraints set forth by the end dates and due dates in the course schedule. However, the student must consult with the professor if an assignment due date has been missed.

### **Emergency Extension**

If you have a significant event such as a death in the family, illness, hospitalization, or other extenuating circumstances, email the professor at [kimberly.onstott@msutexas.edu](mailto: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 has passed, ten points 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 the professor know it is ready to grade. Failure to notify the professor 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 the discretion of the professor.

### **HIPAA Requirement**

Do not place ANY patient name on your assignments. Any proper name that appears on an assignment other than yours will be considered a HIPAA violation, and the assignment grade may be dropped to as

low as a zero, depending on the severity of the violation.

### 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

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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. A due date extension will typically be granted if a problem occurs on our end, such as D2L failure. **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 e-mail should be e-mailed 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

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This course 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

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The last opportunity to drop this course with a grade of "W" is 4:00 pm on November 25, 2024. 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 an "Incomplete" grade 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 failing grade, "F".

### Special Needs

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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

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The student and the course professor should first address unresolved issues related to this course. If there is no resolution, students must follow this sequence:

1. Interim Department Chair – Dr. Lynette Watts (940-397-4833)
2. College Dean - Dr. Jeff Killion (940-397-4594)
3. Dean of Students – Matthew Park (940-397-7500)

## Honor System

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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 and artificial intelligence screening 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 and to detect AI-generated work.

**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
- 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 you have previously submitted for this or any other course.
- Using materials generated by agencies engaged in "selling" term papers is also plagiarism.

### **Artificial Intelligence-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:

- 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**

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### **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 the 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 "Run. Hide. Fight" video, which may be electronically accessed via the University police department's webpage: ["Run. Hide. Fight."](#)

If you have questions or concerns, please get in touch with MSU Chief of Police Chief Steven Callarman by e-mail at [Steven.callarman@msutexas.edu](mailto:Steven.callarman@msutexas.edu).