Course Syllabus: RADS 4633 Quality Improvement in Medical Imaging

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

Department of Radiologic Sciences

Course Information

Information	Description
Name	RADS 4633-Quality Improvement in Medical Imaging (online)
Credit	3 hours
Term	Spring 2025
Dates	January 21- May 9, 2025
Class Meeting Times and Days	Fully Online-Asynchronous
Time Commitment	Students should expect to spend at least 9 hours per week on course material (15-week term)

Professor

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

Email: kimberly.onstott@msutexas.edu

Use this format in the subject line: 4633_your last name_topic of the message.

Email is the best way to contact 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: Mondays 12-2, Wednesdays 12:30-14:30, & Thursdays 9-10

Please make an appointment by email 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.

Course Description

This course studies the principles and methodologies of continuous quality improvement. A comparison with traditional quality assurance will be included, as well as implementation standards to satisfy The Joint Commission

Course Objectives

Upon completion of this course, the student will:

- Delineate the role of the health care manager in continuous quality improvement
- Describe the 8-step model for continuous quality improvement
- Apply the tools used in implementing a continuous quality improvement program
- Identify the barriers to successful continuous quality improvement.
- Analyze a scenario for the existence of a problem, customer identification, customer needs and expectations, and possible solutions.
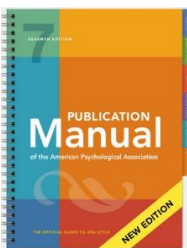- Generate solutions for a problem using relevant tools and procedures.

Course Materials

Textbooks

No textbook is required for this course

Suggested

American Psychological Association. (2019). *Publication manual of the American Psychological Association* (7th ed.). Washington, DC: Author. [ISBN 978-1433832161]. ($14.00+)

Computer Requirements

You need access to an up-to-date computer with an internet connection, a webcam, and a microphone. Additionally, D2L does not work well with Internet Explorer. Use a different browser when working in D2L. Also, **Chromebooks will not work**. Only Word documents will be submitted in this course. If using a MAC, documents can be saved as Word files. Video: How to save Apple Pages document as Microsoft Word file (.doc & .docx)

Proctor Specifications

- PC Users: A well-working computer running Windows XP or higher with 1024 MB of RAM or higher

- Mac Users: A well-working computer running Mac OS X or higher
- Headphones or working speakers connected to the computer
- Webcam and mic (for proctoring)
- A reliable high-speed internet connection (minimum 768 Kbps/384 Kbps Download/Upload)

Additional Resources (not required)

If you are studying for the QM Registry, these resources might be helpful.

Textbook

- *Quality Management in the Imaging Sciences*, 5th edition, 2015, by Jeffrey Papp, published by Elsevier

Online Resources

- *AAPM Reports*
  American Association of Physicists in Medicine
  www.aapm.org
- *DICOM Standards*
  National Electrical Manufacturers Association
  dicom.nema.org/
- *NCRP Recommendations*
  National Council on Radiation Protection and Measurements
  ncrponline.org
- *OSHA Requirements*
  Occupational Safety and Health Administration
  www.osha.gov
- *Quality Control Manuals*
  American College of Radiology
  www.acr.org
- *Safe Medical Devices Act (SMDA)*
  U.S. Food and Drug Administration
  www.fda.gov

Important Dates and Course Schedule

Important Dates

Date	Assignment
January 21	Class opens All quizzes & discussion boards are open
January 28	Introductions due by 23:59
February 4	Module 1 Discussion Board due by 23:59 Module 1 Quiz due by 23:59
February 18	Module 2 Discussion Board due by 23:59 Module 2 Quiz due by 23:59

Date	Assignment
March 4	Module 3 Discussion Board due by 23:59 Module 3 Quiz due by 23:59
March 8, 5 pm-17, 8 am	Spring Break
March 25	Module 4 Discussion Board due by 23:59 Module 4 Quiz due by 23:59
March 16, 10 pm-March 21, 8 am	Holiday Break
April 8	Module 5 Discussion Board due by 23:59 Module 5 Quiz due by 23:59
April 22	Module 6 Discussion Board due by 23:59 Module 6 Quiz due by 23:59
April 24	The last day to withdraw with a "W" grade by 4:00 pm campus time
April 15-April 29	Final exam open The last day to take the Exam is April 29, due by 23:59 *Closed Book and Proctored *All quizzes must be completed before attempting the Final Exam
May 9	Last day of the semester

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.

Evaluation

Grade Distribution

- 40% Proctored D2L unit quizzes
- 25% Discussion Board
- 35% Proctored D2L comprehensive closed book final exam

Grade Scale

- A=100-90
- B=89-80
- C=79-70
- D=69-60
- F=59 and below

NOTE: You must make a C average (70%) or above for this course to be applied to the Radiology Program degree.

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 posted75 so you do not miss critical updates.

Setting Up Notifications in D2L

1. Click the down arrow in the News section on the 4633 course home page
2. Select Notifications
3. Check the email address you wish to send email notifications to. Select "Change your email settings" and enter the new email address if you need to change this. This email address should be an email address you check frequently.
4. If you want to receive these updates on your mobile, select "Register your mobile."
5. Check the box next to "News - new item available" and then check any other boxes you wish to receive an email notification.

Steps to forward D2L email to another email address

1. Click on the **Envelope Icon** in the top menu bar.

2. Click **Email**.

3. Click **Settings** in the top right corner of the inbox.

4. Scroll down to **Forwarding Options**, type in the new email, or uncheck the box to turn forwarding off.

5. Click **Save**.

6. Remember to go to the new email and click to verify the email address.

Viewing feedback in Tests

1. Go to the place where you took the quiz,

2. Click on the down arrow next to the exam,

3. Select submissions,

4. Click on the attempt,

5. The feedback for the entire exam is displayed under Attempt Feedback

6. The feedback for each question is under the View Feedback button under each question

Viewing feedback in Assignment dropbox

Tip: You can also view assignment feedback from User Progress and Grades.

1. On the navbar, click Assignments.

2. From the Assignments page, locate your assignment and click Unread in the Evaluation Status column.

3. You can view your submission feedback, rubric assessment, and grade from the View Feedback page.

4. If your instructor added annotated feedback to the assignment, click View Inline Feedback. The annotation view opens in a new tab, displaying annotated feedback using highlighting, freehand

drawing, shapes, and associated commenting.

5. To download the annotated assignment as a PDF, click Download.

6. When you are finished viewing feedback, navigate back to the View Feedback page and click Done.

If you have technical difficulties accessing the course or any other technical issues, please contact distance.learning@msutexas.edu.

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 questions and answers may be there.

Late Work

Due Dates

Most assignments are due on Tuesdays (see Important Course Dates above). Assignments must be submitted by 23:59 (23:59) 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.

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 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 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 informing the professor that 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.

Attendance

Attendance

This is an asynchronous online course, and there are no mandatory sessions. However, the student should be vigilant in logging in to D2L. Regular checks will ensure that messages from the instructor are received in a timely manner**.**

Campus Closure Policy

In the event of campus closure due to weather or any other unscheduled event, course due dates for assignments and quizzes will remain the same. If the event prevents you from accessing a computer or the internet, use whatever means you have to send a note to your professor as soon as possible (e.g., phone message, email from phone, friend's phone).

Classroom Etiquette

You must respect the right of every student in the classroom to learn.

Mental Health

We all experience stressful and challenging events as a normal part of life. As your instructor, I believe your mental health is essential to your academic success. Success in this course depends heavily on your health and well-being. You should recognize that stress is an expected part of the college experience, and it often can be compounded by unexpected setbacks or life changes outside the classroom. I strongly encourage you to reframe challenges as unavoidable pathways to success. Reflect on your role in taking care of yourself throughout the term before the demands of exams and projects peak. Please feel free to contact me about any difficulty you may have that may affect your performance in this course as soon as it occurs and before it becomes unmanageable. In addition to your academic advisor and me, I strongly encourage you to contact the many other support services on campus that stand ready to assist you.

- Counseling Center– or call 940-397-4618 to schedule an appointment

- BetterMynd- free virtual counseling for students looking for evening appointments

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 the professor 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 considered a reason for the instructor to allow students extra time to submit assignments, tests, or discussion postings.***

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 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 940-397-4785 between 8 am and 5 pm.
- Use the D2L help link in D2L.
- Contact your professor.
- For other computer access issues, go to the MSU Information Technology Website.

Requesting a Withdrawal

The last opportunity to drop this course with a grade of "W" is 4:00 pm on April 30, 2025. The student must initiate all withdrawals. After this date, dropping the course results in a grade of "F."

In an emergency or extenuating circumstance, a student may request a grade of "Incomplete" before grades are submitted. If the professor 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 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 opportunities 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. The Office of Disability Services for resolution will advise and assist if the matter remains unresolved. 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)397-4140 or 3410 Taft Blvd., Clark Student Center Room 168.

Administrative Process

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

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

Honor System

RADS 4633 adheres to the [MSU Code of Conduct.](#)

In particular, however small, academic dishonesty breaches academic integrity. A student's participation in this course comes with the expectation that their 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.

Plagiarism

All components of RADS 4633 are designed to represent the efforts of each student individually and are NOT to be shared, copied, or plagiarized from other sources. When students submit their efforts for grading, they are attesting they abided by this rule.

An online plagiarism service will be used in this course. Student assignments will 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.
- Students may NOT submit papers and assignments previously submitted for this or other courses.
- 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. Whenever a student is unsure whether a particular situation will be interpreted as academic dishonesty, they should ask the professor for clarification. If students are guilty of academic dishonesty, a zero (0) grade will be given for the quiz, assignment, etc. Cases may also be referred to the Dean of Students for possible dismissal from the university. Students 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

Artificial Writing Generators

Using any artificial writing generator (ex, Chat GPT) is strictly prohibited. The use of artificial writing generators can and will be deemed a violation of the university's honor system. Any or all parts of a written assignment identified as having elements of writing attributed to an artificial writing source will automatically receive a zero (0) for a grade, and there will be no make-up of the assignment. This is a form of both cheating and plagiarism.

Intellectual Property

By enrolling in this course, the student expressly grants MSU a "limited right" to all intellectual property created by the student for this course. The "limited right" shall include but shall not be limited to the right to reproduce the student's 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/House Bill 1927

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. In addition, students are encouraged to watch the video "*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 get in touch with MSU Chief of Police Steven Callarman by email at steven.callarman@msutexas.edu

Communicating with the Professor

The professor's contact information is listed at the top of the first page of this syllabus. The professor prefers email, so there is a record of the communication, and often the professor is away from her desk.

Use the following format in the subject line of the email.

4633_your last name_topic of message

Example: 4633_Smith_Title Page question

When there is a need to contact a student, the professor will use the student's students.mwsu.edu 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 students' email addresses. If you have not established this account or need help forwarding messages, contact information systems as soon as possible.

The professor will respond or acknowledge all student communications within five (5) business days. If this time will be longer because the professor is out of town or for other reasons, a news item will be posted online in D2L for the class. Please always give the professor the time asked to respond before repeating your

request. Always include your course number and topic in the email's subject line.

Quality Improvement in Medical Imaging Assignment Details

Order of Content

Since this course is highly interactive between students, with much of the learning occurring in the discussion boards, students must complete the course content by the dates listed in the course schedule.

See the Course Schedule for specific information about activities and due dates. Late work is not accepted; a zero (0) will be recorded after the due date.

If extenuating circumstances occur that may cause a delay in completing an assignment or quiz by the deadline; the student should contact the professor before the assignment is due (see the section on late work above); such cases will be dealt with on an individual basis.

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.

Modules

- The course content is divided into six individual Modules. Each module contains a study guide, an associated quiz, and a discussion topic.
- See the Course Schedule at the end of this syllabus for all deadlines.
- Once you feel comfortable with the module notes, the associated pages, and any learning activities, you should complete the module exams.

Module	Topic
Module 1	Quality Improvement Development and Principles
Module 2	Characteristics and Roles of the Quality Manager and Skills That Enable Effective Quality Management
Module 3	The Management Model
Module 4	Developing Measures to Monitor Performance
Module 5	The Manager's Tool Kit - Part One
Module 6	The Manager's Tool Kit - Part Two

Independent Reading and Instructional Videos

Each module contains a study guide. These are your primary sources of instruction.

Each study guide has objectives the student should pay close attention to while reviewing each module. At the end of each study guide, there are some important key items listed that the student should review in addition to the objectives before attempting the associated quiz.

Several video files are embedded within the study guides to help you better understand the various charts, graphs, and content. When you click on these, a second window will open to display the video. When finished watching, close that window, and you can return to the course content. *Note: the videos can take up to a few minutes to load. Please be patient, as they really can be helpful. If you are unable to open them, you may have to enable pop-ups, or you may have to change your browser.*

Quizzes -40%

When a student has reviewed a module and is ready for the quiz, they will log on to D2L and receive a customized timed module quiz consisting of randomized multiple choice and/or matching questions. Knowing the module content before attempting the module quizzes is important because they are **timed.** Quiz questions will be based on information learned in the modules. Review the important key items and the objectives before attempting a quiz.

Quizzes not completed by the due dates will receive a zero (0). Students should contact the professor in extenuating circumstances before the quizzes' close date; such cases will be dealt with on an individual basis (see the section on late work). All quizzes must be completed before taking the Final Exam. See the course schedule for the quizzes' due dates.

Technical problems

If technical issues occur (cannot see an image, cannot see your grade, etc.), sometimes the easiest solution is to see if the issue can be corrected by simply changing browsers. Fewer occurrences have been noted when using Firefox or Chrome as a browser for D2L.

If students have technical difficulties during a quiz, they should use the Help link in D2L, contact the MSU Information Systems Support Staff, and email the course instructor explaining what happened. Screenshots and/or taking a picture of your screen may help diagnose the problem.

Scores

If a student finds a faulty quiz test item or believes that a quiz question has been scored incorrectly, they should send an email to the course instructor that includes the following:

- Module Quiz Number (1 -5)
- Answer the Student Thinks Should be Correct
- Rationale Supporting Why the Student's Answer is Correct
- Page numbers must be included when referencing the textbook in the rationale

After reviewing the case, if the course instructor thinks a revision is justified, the student's quiz score will be revised to reflect the additional points, and the test bank will be updated.

Discussions -25%

There are seven discussion topics in this course. Each one requires an original post, and you must reply to at least two peers.

Introductions

Introduce yourselves in the introduction discussion board and reply to at least two of your peers by the due date in the course schedule.

Module discussions (original post and two replies; there are 6 of these)

In each module, you will respond to the associated discussion prompt on the discussion board. Follow the instructions closely for each module. Once you have posted your original response, you can view everyone else's responses. Review and reply to at least two of your classmates' posts. Your replies must contain substantial information that will give your classmates something they can use in their current or future positions. Depending on the topic, you will either:

- Provide suggestions for alternative solutions,
- Share a similar experience, or
- Add to the discussion by providing a resource about the topic, such as a website, an article, or pages from a book.

Provide something your classmates can walk away with. Once someone has replied to your post, please acknowledge them with a short reply and/or further discussion if needed.

The grades for the discussions are as follows:

- Each discussion topic is an all-or-nothing grade. You will not receive any credit for partial work if you do not complete all three portions (one original post with a reply to at least two of your peers).
- Substantial information must be included in all three portions.
- Posting an original post at the last minute does not provide enough time for your peers to respond. Posting an original post in the last days a discussion is open may result in a significant loss of points. Goal dates for original posts are in the course schedule. Post your original response as close to these dates as possible.
- Professional interactions are expected. Spelling, grammar, and substance do count. Try not to veer off subject, and be respectful and considerate of your fellow students' submissions.

The discussion board counts as 25% of your grade. If you do not understand this requirement, please let me know.

Comprehensive Final Exam- 35%

*Note- All quizzes must be completed before the Final Exam. *

Exam Format

- The proctored comprehensive final examination is a closed book with no notes exam.
- The exam is a timed, 2-hour (120 min) test.
- The comprehensive exam will be administered using Desire2Learn (D2L) Lockdown Browser online proctoring service.
- The final exam consists of a scenario with eight (8) separate areas requiring you to identify the problem and work through the problem using the skills you have learned throughout the semester. (The exam

will follow course objectives exactly)
- To prepare for this exam:
  - By the end of this course, the goal is to acquire genuinely usable problem-solving skills that will work for you and help you transform your workplace. The final will challenge you and test the knowledge you have gained this semester.
  - The final has been derived from the entire content of this course. Review all of your quizzes, your study guides, and your discussion exercises.
  - You will be given directions concerning a narrow-focused problem supplied by your professor, and then you will have several tasks to complete regarding the problem.
  - You will be required to identify the problem and work through that problem using the skills you have obtained throughout the semester.
  - You will need to be able to identify your customers, prioritize them, understand the consequences of not satisfying their needs, and analyze the given problem.
  - You will need to critically look at the PDCA model and be able to work a problem thoroughly through that model.
  - You will need to be familiar with the tools you have learned about and be able to apply them to your problem.
  - The final will test you on all the problem-solving techniques and tools contained in the course.

What to Bring

- You must have a computer with a good internet or WiFi connection and a webcam and mic.
- No smartwatches or any other electronic devices will be allowed.
- Students are not allowed to print the final exam.
- No textbooks or notes may be used.
- You may bring scratch paper.

Technical problems

- You must immediately email your professor if you are disconnected during your exam. All exams taken after business hours will not have the luxury of technical help should something go wrong. Use discretion when preparing to take the exam.
- *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 the student's responsibility.
- Late submissions will not be accepted.
- A suggestion is to take the exam during the first days it is available (listed below) to avoid receiving a zero due to technical issues. If you must reschedule, it must be within the scheduled dates and times. You are cautioned that if you schedule the exam on a weekend, you do so knowing there is no technical assistance available at the university to help in case a problem arises.

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

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