

## Quality Improvement and Efficacy in Health

### Spring 2026 Syllabus

**The instructor reserves the right to change the syllabus at any time**

#### **HPEM 5360 Quality Improvement and Efficacy in Health**

**Credit Hours: 3**

**Semester:** Spring

**Year:** 2026

**Class Days/Times:** Asynchronous

**Location:** Online

#### **Course Information**

The HPEM 5360 Quality Improvement and Efficacy in Health is a fully online course.

#### **Course description**

This course will develop the foundations of quality and process improvement that lead to higher levels of efficacy, efficiency and effectiveness in health organizations and programs. This course will explore the basis of Quality Improvement (QI) consisting of systematic and continuous actions that lead to measurable improvement in health care services and the health status of targeted patient groups. The methodology of the course will begin with “how things are done now,” considering health care performance as defined by an organization's efficiency and outcome of care, and level of patient satisfaction. Quality is directly linked to an organization's service delivery approach or underlying systems of care throughout the continuum of care. The student will understand that to achieve a different level of performance (i.e., results) and improve quality and efficacy, an organization's current system needs to change. Lastly, this course will focus on a successful QI culture that incorporates the following four key principles: QI work as systems and processes; focus on patients and community groups, especially rural areas; focus on being part of the team; and focus on use of the data and analyses of information.

#### **Instructor Information**

|   |  |
|---|--|
| Dr. Jessica Escareno, PhD, MPH                    | <a href="mailto:Jessica.escareno@uthct.edu">Jessica.escareno@uthct.edu</a> |
| Room 243, Building H: Office Hours by appointment | 903-877-7397   |

#### **Course Objectives**

As a result of this course, you will

1. Describe the evolution of health care quality improvement. [PLOs 1.4 and 2.4; A.2 and A.8]
2. Employ process analysis tools to examine and improve health care operations. [PLOs 2.2 and 5.3; A.1, A.3, A.5, and A.8]
3. Employ Lean tools. [PLOs 2.2 and 5.3; A.1, A.3, A.5, and A.8]
4. Build and interpret statistical process control charts. [PLOs 2.2 and 5.3; A.1, A.3, A.5, & A.8]

5. Determine process capability. [PLOs 2.2 and 5.3; A.1, A.3, A.5, and A.8]
6. Explain DMAIC as a problem-solving approach within the context of Lean Six Sigma. [PLOs 2.2; A.2 and A.8]
7. Trace the natural flow of patients through a health care practice using Visio. [PLOs 2.2 and 5.1 – 5.3; A.3, A.5, and A.8]
8. Build a value stream map. [PLOs 2.2 and 3; A.1, A.3, A.5, and A.8; B.1, B.2 and B.3]
9. Develop an action plan to improve patient flow. [PLOs 4 and 6; A.10, B.1, B.2 and B.3]

### Course Materials

Brook, Q. (2020). *Lean Six Sigma & Minitab: The complete toolbox guide for business improvement*, 6<sup>th</sup> ed. Hampshire, UK: OPEX Resources.

Ross, Thomas K. (2014). *Health care quality management: Tools and Applications*. San Francisco, CA: Jossey-Bass.

### Recommended Text:

Ross, Thomas K. (2021). *Applying Lean Six Sigma in health care*. Burlington, MA: Jones & Bartlett Learning.

Additional required readings will be provided on the learning management system.

### Course Assessment/Assignments

**Weekly Quizzes/Homework:** Each week, you will complete a quiz or homework assignment covering the assigned readings and LSSGB job aids. These are designed to reinforce key concepts, ensure understanding of weekly material, and help you prepare for the exams.

**Exam 1:** Covers Chapters 1–9. The exam includes multiple-choice, true/false, and matching questions. It is online and unproctored, allowing you to complete it within the allotted time at your convenience.

**Exam 2:** Covers Chapters 10–15. Like Exam 1, it includes multiple-choice, true/false, and matching questions. This exam is also online and unproctored.

**Extra Credit – LSSGB Exam:** You have the opportunity to take the Lean Six Sigma Green Belt (LSSGB) certification exam for \$75. Successfully completing this exam allows you to earn 15 extra points that can be applied to either Exam 1 or Exam 2. This is the only opportunity for extra credit in the course, and I highly encourage taking it while the material is fresh. Weekly assignments and quizzes are designed to prepare you for this exam.

### Grading Scale

| Assignment         | Description              | % Of Grade |
|--------------------|--------------------------|------------|
| <b>Exam 1</b>      | Ch 1-9                   | 30%        |
| <b>Exam 2</b>      | Ch 10-15                 | 30%        |
| <b>Quizzes/ HW</b> | Weekly assigned material | 40%        |

|              |               |                            |
|--------------|---------------|----------------------------|
| Extra Credit | LSSGB attempt | 15 points added to an exam |
|--------------|---------------|----------------------------|

## Class Policies

### Student Resources:

- [UT Tyler Student Accessibility and Resource \(SAR\) Office](#) (provides needed accommodations to students with document needs related to access and learning)
- [UT Tyler Writing Center](#)
- [The Mathematics Learning Center](#)
- [UT Tyler PASS Tutoring Center](#)
- [UT Tyler Supplemental Instruction](#)
- [Upswing \(24/7 online tutoring\) - covers nearly all undergraduate course areas](#)
- [Robert Muntz Library](#) and [Library Liaison](#)
- [Canvas 101](#) (learn to use Canvas, proctoring, Unicheck, and other software)
- Digital Support Toolkit (for supported courses only. Students are automatically enrolled in the toolkit for supported courses)
- LIB 422 -- Computer Lab where students can take a proctored exam
- [The Career Success Center](#)
- [UT Tyler Testing Center](#)
- [Office of Research & Scholarship Design and Data Analysis Lab](#)

### Resources available to UT Tyler Students

- [UT Tyler Counseling Center](#) (available to all students)
- [MySSP App](#) (24/7 access to Student Support Program counseling through phone or chat and online wellness resources available in a variety of languages)
- [Student Assistance and Advocacy Center](#)
- [Military and Veterans Success Center](#) (supports for our military-affiliated students)
- [UT Tyler Patriot Food Pantry](#)
- [UT Tyler Financial Aid and Scholarships](#)
- [UT Tyler Student Business Services](#) (pay or set up payment plans, etc.)
- [UT Tyler Registrar's Office](#)
- [Office of International Programs](#)
- [Title IX Reporting](#)
- [Patriots Engage](#) (available to all students. Get engaged at UT Tyler.)

### University Policies and Information

#### Withdrawing from Class

Students may [withdraw](#) (drop) from this course using the [Withdrawal Portal](#). Withdrawing (dropping) this course can impact your Financial Aid, Scholarships, Veteran Benefits, Exemptions, Waivers, International Student Status, housing, and degree progress. Please speak with your instructors, consider your options, speak with your advisor, and visit the One-Stop Service Center (STE 230) or email

[enroll@uttyler.edu](mailto:enroll@uttyler.edu) to get a complete review of your student account and the possible impacts to withdrawing. We want you to make an informed decision. UT Tyler faculty and staff are here for you and often can provide additional support options or assistance. Make sure to carefully [read the implications for withdrawing from a course and the instructions](#) on using the [Withdrawal portal..](#)

Texas law prohibits students from dropping more than six courses during their entire undergraduate career\*. The six courses dropped includes those from other 2-year or 4-year Texas public colleges and universities. Consider the impact withdrawing from this class has on your academic progress and other areas, such as financial implications. We encourage you to consult your advisor(s) and Enrollment Services for additional guidance. **CAUTION #1:** Withdrawing before census day does not mean you get a full refund. Please see the [Tuition and Fee Refund Schedule](#). **CAUTION #2:** All international students must check with the [Office of International Programs](#) before withdrawing. All international students are required to enroll full-time for fall and spring terms. **CAUTION #3:** All UT Tyler Athletes must check with the Athletic Academic Coordinator before withdrawing from a course. **CAUTION #4:** All veterans or military-affiliated students should consult with the [Military and Veterans Success Center](#).

\* Students who began college for the first time before 2007 are exempt from this law.

### **Artificial Intelligence Statement**

UT Tyler is committed to exploring and using artificial intelligence (AI) tools as appropriate for the discipline and task undertaken. We encourage discussing AI tools' ethical, societal, philosophical, and disciplinary implications. All uses of AI should be acknowledged as this aligns with our commitment to honor and integrity, as noted in UT Tyler's Honor Code. Faculty and students must not use protected information, data, or copyrighted materials when using any AI tool. Additionally, users should be aware that AI tools rely on predictive models to generate content that may appear correct but is sometimes shown to be incomplete, inaccurate, taken without attribution from other sources, and/or biased. Consequently, an AI tool should not be considered a substitute for traditional approaches to research. You are ultimately responsible for the quality and content of the information you submit. Misusing AI tools that violate the guidelines specified for this course is considered a breach of academic integrity. The student will be subject to disciplinary actions as outlined in UT Tyler's Academic Integrity Policy. For this course, **AI is not permitted in this course at all.** The work submitted by students in this course will be generated by themselves. This includes all process work, drafts, brainstorming artifacts, editing, and final products. This extends to group assignments where students must create collaboratively create the project. Any instance of the following constitutes a violation of UT Tyler's Honor Code: a student has another person/entity do any portion of a graded assignment, which includes purchasing work from a company, hiring a person or company to complete an assignment or exam, using a previously submitted assignment and/or using AI tools (such as ChatGPT).

### **Final Exam Policy**

Final examinations are administered as scheduled. If unusual circumstances require that special arrangements be made for an individual student or class, the Dean of the appropriate college, after consultation with the faculty member involved, may authorize an exception to the schedule. Faculty

members must maintain student final examination papers for a minimum of three months following the examination date.

### Incomplete Grade Policy

If a student, because of extenuating circumstances, is unable to complete all of the requirements for a course by the end of the semester, then the instructor may recommend an Incomplete (I) for the course. The "I" may be assigned in place of a grade *only when all of the following conditions are met*: (a) the student has been making satisfactory progress in the course; (b) the student is unable to complete all coursework or final exam due to unusual circumstances that are beyond personal control and are acceptable to the instructor, and (c) the student presents these reasons before the time that the final grade roster is due. The semester credit hours for an Incomplete will not be used to calculate the grade point average.

The student and the instructor must submit an Incomplete Form detailing the work required and the time by which the work must be completed to their respective department chair or college dean for approval. The time limit established must not exceed one year. Should the student fail to meet all of the work for the course within the time limit, then the instructor may assign zeros to the unfinished work, compute the course average for the student, and assign the appropriate grade. If a grade has yet to be assigned within one year, then the Incomplete will be changed to an F, or NC. If the course was initially taken under the CR/NC grading basis, this may adversely affect the student's academic standing.

### Grade Appeal Policy

Disputes regarding grades must be initiated within sixty (60) days from the date of receiving the final course grade by filing a Grade Appeal Form with the instructor who assigned the grade. A grade appeal should be used when the student thinks the final course grade awarded does not reflect the grades earned on assessments or follow the grading scale as documented in the syllabus. The student should provide the rationale for the grade appeal and attach supporting document about the grades earned. The form should be sent via email to the faculty member who assigned the grade. The faculty member reviews the rationale and supporting documentation and completes the instruction section of the form. The instructor should return the form to the student, even if a grade change is made at this level. If the student is not satisfied with the decision, the student may appeal in writing to the Chairperson of the department from which the grade was issued. In situations where there is an allegation of capricious grading, discrimination, or unlawful actions, appeals may go beyond the Chairperson to the Dean or the Dean's designee of the college from which the grade was issued, with that decision being final. The Grade Appeal form is found in the [Registrar's Form Library](#).

NOTE: The Grade Appeal Form is different from the Application for Appeal form submitted to the Student Appeals Committee, which does not rule on grade disputes as described in this policy.

### Disability/Accessibility Services

In accordance with Section 504 of the Rehabilitation Act, Americans with Disabilities Act (ADA) and the ADA Amendments Act (ADAAA), the University of Texas at Tyler offers accommodations to students with learning, physical, and/or psychological disabilities. If you have a disability, including a non-visible

diagnosis such as a learning disorder, chronic illness, TBI, PTSD, ADHD, or a history of modifications or accommodations in a previous educational environment, you are encouraged to visit <https://hood.accessiblelearning.com/UTTyler/> and fill out the New Student application. The Student Accessibility and Resources (SAR) office will contact you when your application has been submitted and an appointment with the Assistant Director Student Accessibility and Resources/ADA Coordinator. For more information, including filling out an application for services, please visit the SAR webpage at <https://www.uttyler.edu/disability-services>, the SAR office located in the Robert Muntz Library, LIB 460, email [saroffice@uttyler.edu](mailto:saroffice@uttyler.edu), or call 903.566.7079."

### **Military Affiliated Students**

UT Tyler honors the service and sacrifices of our military-affiliated students. If you are a student who is a veteran, on active duty, in the reserves or National Guard, or a military spouse or dependent, please stay in contact with your faculty member if any aspect of your present or prior service or family situation makes it difficult for you to fulfill the requirements of a course or creates disruption in your academic progress. It is important to make your faculty member aware of any complications as far in advance as possible. Your faculty member is willing to work with you and, if needed, put you in contact with university staff who are trained to assist you. The [Military and Veterans Success Center \(MVSC\)](#) has campus resources for military-affiliated students. The MVSC can be reached at MVSC@uttyler.edu or via phone at 903.565.5972.

### **Students on an F-1 Visa**

To remain in compliance with Federal Regulations requirements you must do the following:

- Traditional face-to-face classes: Attend classes on the regular meeting days/times.
- Hybrid Classes: Attend all face-to-face classes convened by the instructor according to the schedule set for your specific course.
- Online course: Only one online course can count toward your full-time enrollment. Students are expected to be fully engaged and meet all requirements for the online course.

### **Academic Honesty and Academic Misconduct**

The UT Tyler community comes together to pledge that "Honor and integrity will not allow me to lie, cheat, or steal, nor to accept the actions of those who do." Therefore, we enforce the [Student Conduct and Discipline policy](#) in the Student Manual Of Operating Procedures (Section 8).

### **FERPA**

UT Tyler follows the Family Educational Rights and Privacy Act (FERPA) as noted in [University Policy 5.2.3](#). The course instructor will follow all requirements to protect your confidential information.

### **Absence for Official University Events or Activities**

This course follows the practices related to [Excused Absences for University Events or Activities](#) as noted in the Catalog.

### **Absence for Religious Holidays**

This course follows the practices related to [Excused Absences for Religious Holy Days as noted in the Catalog](#).

### **Absence for Pregnant Students**

This course follows the requirements of Texas Laws SB 412, SB 459, SB 597/HB 1361 to meet the needs of pregnant and parenting students. Part of the supports afforded pregnant students includes excused absences. Faculty who are informed by a student of needing this support should make a referral to the Parenting Student Liaison. NOTE: Students must work with the Parenting Student Liaison in order to receive these supports. Students should reach out to the Parenting Student Liaison at [parents@uttyler.edu](mailto:parents@uttyler.edu) and also complete the [Pregnant and Parenting Self-Reporting Form](#).

### **Campus Carry**

We respect the right and privacy of students who are duly licensed to carry concealed weapons in this class. License holders are expected to behave responsibly and keep a handgun secure and concealed. More information is available at <http://www.uttyler.edu/about/campus-carry/index.php>.

### **Course Policies:**

*Communications:* Students are responsible for monitoring Canvas Announcements, postings to the Canvas Inbox, and email on a frequent basis. The Patriot account should be used as the primary email account.

*Attendance:* Regular and punctual attendance is expected. If a student misses a class or lab, the student is responsible for obtaining any information distributed during those times. Make-ups are possible only under certain instances (labs cannot be made up). Arrangements for any make-ups and/or missed labs should be discussed directly with the instructor for that day's class.

*Participation:* Attendance and participation in class is important. Students will be frequently asked to review concepts and online presentations prior to the scheduled class, so that class time can be used for hands-on activities and work on assignments. Students will often be building Excel, Visio, and simulation models with the Instructor.

*Late Work Policy:* Assignments are expected to be submitted by the specified deadline. Late submissions will incur the following penalties:

- 1 day late: 10% deduction from the total possible points.
- 2-3 days late: 20% deduction from the total possible points.
- More than 3 days late: Assignments will not be accepted, and a grade of zero will be recorded.

Exceptions to this policy will only be made under extenuating circumstances, such as a documented medical emergency or other significant life events. In such cases, students must notify the instructor as soon as possible to discuss potential accommodations.

**Makeup Exam Policy:** Makeup exams are generally not offered except in cases of documented emergencies or university-approved absences. If you know in advance that you will miss an exam due to an approved reason, please notify the instructor at least one week prior to the exam to arrange a makeup.

In the event of an emergency on the day of the exam, you must contact the instructor within 24 hours to discuss your situation. Documentation will be required to support your request for a makeup exam.

Please note that makeup exams may differ in format from the original exam and must be completed within one week of the original exam date unless otherwise arranged with the instructor.

**Note: The Instructor retains the right to change this syllabus.**

## Course Calendar

| Week/Date | Topic   | Readings     | Assignments |
|-----------|---|--------------|-------------|
| 1: 1/12   | Quality in Health Care  | Chapter 1    | Quiz 1      |
| 2: 1/20   | Error and Variation   | Chapter 2    | Quiz 2      |
| 3: 1/26   | Regulating the Quality and Quantity of Health Care  | Chapters 3   | Quiz 3      |
| 4: 2/2    | Process Analysis Tools<br>Root Cause Analysis   | Chapters 4-5 | Quiz 4      |
| 5: 2/9    | Statistical Process Control for Monitoring System Performance<br>Statistical Process Control for Monitoring Failure Rates | Chapters 6-7 | Quiz 5      |
| 6: 2/16   | Statistical Process Control for Monitoring Nonconformities<br>Exploring Quality Issues with Statistical Tools             | Chapters 8-9 | Quiz 6      |
| 7: 2/23   | <b>Exam 1</b>   |              |             |
| 8: 3/2    | Failure Mode and Effects Analysis   | Chapters 10  | Quiz 7      |
| 9: 3/16   | Practice Policies   | Chapters 11  | Quiz 8      |
| 10: 3/23  | Case, Disease, and Outcomes Management  | Chapters 12  | Quiz 9      |

|                           |  |             |         |
|---------------------------|--|-------------|---------|
| <b>11: 3/30</b>           | Profiling, Economic Credentialing, and Risk Adjustment | Chapters 13 | Quiz 10 |
| <b>12: 4/6</b>            | Benchmarking and Implementation                        | Chapters 14 | Quiz 11 |
| <b>13: 4/13</b>           | The Future of Quality Management in Health Care        | Chapters 15 | Quiz 12 |
| <b>14: 4/20</b>           | <b>Exam 2</b>  |             |         |
| <b>15: 4/27</b>           | <b>LSSGB exam</b>                                      |             |         |
| <b>May 5<sup>th</sup></b> | <b>Grades are up!</b>                                  |             |         |