

## Online Course Syllabus

Course	HMGT 6332 OW1 / OPRE 6354
Term	SPRING 2026
	ONLINE
Instructor	Dr. Kannan Ramanathan
Office	Jindal School of Management, 3.622
Virtual Office Hours	Monday 2:30 pm to 3:30 pm
Email	<a href="mailto:kxr087000@utdallas.edu">kxr087000@utdallas.edu</a>
TA	Nirmanyu Batra
Office	Jindal School of Management, 14.211
Email Address	<a href="mailto:nxb210090@utdallas.edu">nxb210090@utdallas.edu</a>
Virtual Office Hours	Tuesday 12 noon - 1 pm
We are also available when you need us - but please schedule.	
All office hours will be via MS Teams.	

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### **READ THE SYLLABUS IN ITS ENTIRETY**

**The professor and TA will not respond to questions if the information is already provided in the syllabus.**

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#### **Course Description**

This course uses the Lean Six Sigma framework to discuss how healthcare organizations can improve the quality of care and implement continuous improvement in the healthcare environment. Lean manufacturing/service focuses on improving the speed of a process and the elimination of waste, primarily by reducing non-value-added steps. Six Sigma deals with improving consistency and the effectiveness with which a process meets customer requirements. Concepts from the combined framework – Lean Six Sigma – are increasingly being applied to healthcare processes.

#### **About Certification in Lean Six Sigma**

Please note that this is NOT a project-based course, i.e., the course requirements do not include the completion of a project. If you complete HMGT 6320 (The American Healthcare System), HMGT 6321 (Strategic Leadership of Healthcare Organizations), HMGT 6323 (Healthcare Informatics in Healthcare), in addition to this course (HMGT 6332), and secure a minimum 'B' grade in each course, you qualify for a Lean Six Sigma Yellow Belt Certificate. You **must** formally apply to, and be accepted into, the Yellow Belt Certificate Program, followed by applying 'to graduate' to be awarded this certificate. All academic certificate programs follow the same application and admission processes as graduate degree programs. All dates and deadlines can be on the UTD Academic Calendar. Note also that there are penalties (fees) if you do not apply for admission and graduation on a timely basis. If you have questions about the Yellow Belt, please contact Dr. Thurgood. If you have questions about the Green Belt, please contact Dr. Ramanathan.

#### **Student Learning Objectives/Outcomes**

- Identify concepts of Lean and Six Sigma as applied to healthcare processes
- Develop analytical thinking and problem-solving capability
- Cultivate ability to apply concepts and techniques to process engineering in healthcare
- Examine tools in process engineering
- Express your ideas and thoughts clearly and concisely

## Required Textbooks and Materials

1. *Textbook: Lean Six Sigma for Quality in Healthcare* by Dr. Kannan Ramanathan.  
Available on reserve (for free) in the library  
Available on [www.amazon.com](http://www.amazon.com) (for purchase) ONLY from [Amazon](http://Amazon.com).
2. In addition, some readings will need to be purchased (see list at end of syllabus)

## JSOM Virtual Learning Launchpad (VLL)

To access your course content, complete the [JSOM Virtual Learning Launchpad \(VLL\)](#) in eLearning. Follow the [VLL student video instructions](#) provided. The certificate must be completed each academic year and uploaded each semester for all synchronous / asynchronous courses. The Launchpad will be available once your course starts or before if you are registered before the first day of classes. Please see the [Academic Calendar](#) for the exact date.

## Technical Requirements

In addition to a confident level of computer and Internet literacy, certain minimum technical requirements must be met to enable a successful learning experience. Please review the important technical requirements on the [Getting Started with eLearning](#) webpage.

## Course Access and Navigation

This course can be accessed using your UT Dallas NetID account on the [eLearning](#) website.

Please see the course access and navigation section of the [Getting Started with eLearning](#) webpage for more information.

To become familiar with the eLearning tool, please see the [Student eLearning Tutorials](#) webpage.

UT Dallas provides eLearning technical support 24 hours a day, 7 days a week. The [eLearning Support Center](#) includes a toll-free telephone number for immediate assistance (1-866-588-3192), email request service, and an online chat service.

## Communication

This course utilizes online tools for interaction and communication. Some external communication tools such as regular email and a web conferencing tool may also be used during the semester. For more details, please visit the [Student eLearning Tutorials](#) webpage for video demonstrations on eLearning tools.

Student emails and discussion board messages will be answered within 3 working days under normal circumstances.

## Distance Learning Student Resources

Online students have access to resources including the McDermott Library, Academic Advising, The AccessAbility Resource Center, and many others. Please see the [eLearning Current Students](#) webpage for more information.

## Server Unavailability or Other Technical Difficulties

The University is committed to providing a reliable learning management system to all users. However, in the event of any unexpected server outage or any unusual technical difficulty which prevents students from completing a time sensitive assessment activity, the instructor will provide an appropriate accommodation based on the situation. Students should immediately report any problems to the instructor and also contact the online [eLearning Help Desk](#). The instructor and the eLearning Help Desk will work with the student to resolve any issues at the earliest possible time.

## Academic Calendar

### Class Materials

The Instructor may provide class materials that will be made available to all students registered for this class as they are intended to supplement the classroom experience. These materials may be downloaded during the course; however, these materials are for registered students' use only. Classroom materials may not be reproduced or shared with those not in class or uploaded to other online environments except to implement an approved AccessAbility Resource Center accommodation. Failure to comply with these University requirements is a violation of the [Student Code of Conduct](#).

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### Class Participation

Regular class participation is expected. Students who fail to participate in class regularly are inviting scholastic difficulty. A portion of the grade for this course is directly tied to your participation in this class. It also includes engaging in group or other activities during class that solicit your feedback on homework assignments, readings, or materials covered in the lectures (and/or labs). Class participation is documented by faculty. Successful participation is defined as consistently adhering to University requirements, as presented in this syllabus. Failure to comply with these University requirements is a violation of the [Student Code of Conduct](#).

Texas Senate Bill 17, the recent law that prohibits diversity, equity, and inclusion programs and activities at public universities in Texas, does not in any way apply to academic course instruction. Students should not feel the need to self-censor or limit their participation in academic courses pertaining to topics of race and racism, structural inequality, LGBTQ+ issues, or diversity, equity, and inclusion, and related topics.

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### Class Recordings

Students are expected to follow appropriate University policies and maintain the security of passwords used to access recorded lectures. Unless the AccessAbility Resource Center has approved the student to record the instruction, students are expressly prohibited from recording any part of this course. Recordings may not be published, reproduced, or shared with those not in the class, or uploaded to other online environments except to implement an approved AccessAbility Resource Center accommodation. Failure to comply with these University requirements is a violation of the [Student Code of Conduct](#).

### **NOTE**

**YOU SHOULD NOT EXPECT A ONE-TO-ONE MATCH BETWEEN THE TEXTBOOK AND THE RECORDED LECTURES. THIS IS DUE TO THE FACT THAT THE TEXTBOOK AND RECORDED LECTURES ARE UPDATED AT DIFFERENT TIMES, AND I ATTEMPT TO INCORPORATE THE MOST CURRENT MATERIAL (IN THE TEXT OR THE RECORDING), AS WELL AS IMPROVE THE PRESENTATION. THIS IS AN EXAMPLE OF APPLYING CONTINUOUS IMPROVEMENT.**

Assignment			Scope of quiz	Time (min)	Number of questions	% of grade
Mid-Term (closed book)	From	Thu, Mar 12, 2026	All topics up to (but not including) Basic Statistics. All questions are multiple choice. Each question carries one point.	75	75 MCQ	33%
	To	Sat, Mar 14, 2026				
Final (closed book)	From	Tue, May 05, 2026	All topics, with emphasis on Basic Statistics and Six Sigma. All questions are multiple choice. Each question carries one point.	120	70 MCQ on Six Sigma	35%
	To	Fri, May 08, 2026			30 MCQ on statistics	
Assessment Quiz	From	Mon, May 04, 2026	<b>ONE DAY ONLY</b>	10	10 MCQ	2%
(open book)	To					

**Note: For the Assessment Quiz, you have questions on both Lean and Six Sigma**

Statistics Practice	Complete before 5/2/2026	You can get up to 15% based on proportion of right answers to questions in each of three practice assignments: Practice Basic Statistics, Practice Box and Whisker Plots, Practice Normal Distribution (Total of 15%). These are timed but have unlimited attempts. The attempt with highest grade will be used to calculate your grade. You should practice with a calculator (not Excel). <b>You will not be allowed to use Excel in the exam.</b>	15%
Quizzes (open book)	Quizzes differ with respect to number of questions, time available, and deadlines. No proctoring is required.		15%
Content from these quizzes is not included in the mid-term and final.			

### Grading Policy

Grading criteria may vary from those for other courses or even this same course in other semesters.

Points Above	Letter Grade
0%	F
70%	C
75%	C+
78%	B-

Points Above	Letter Grade
81%	B
84%	B+
88%	A-
93%	A

**Note: Grades are NOT curved**

**Extra Credit Assignment (in person)**

<i>In-person Extra Credit Opportunities</i>	Sat, Feb 28, 2026 10 AM - 12 noon JSOM 2.902	You will need to come <u>in person</u> to JSOM with your textbook AND your laptop. Each time, you will get 2 marks for being present from 10-12 and <u>up to 8</u> marks for completing the assignment. (Five marks equal 1%). You will be asked to provide comments / discuss the textbook. You can ask questions about the mid-term / final exam. You will have to confirm your participation by February 15, and by April 15, by accepting meeting invite that will be sent. Your marks depend on: (a) coming punctually; (b) coming with your laptop and textbook; (c) staying for two hours; (d) providing feedback (as will be discussed in class).
<i>In-person Extra Credit Opportunities</i>	Sat, Apr 25, 2026 10 AM - 12 noon JSOM 2.902	

**Course Policies**

*Proctored Exams*

Mid-term and final MUST be taken at the UTD Testing Center (or another approved Testing Center) on the days specified (whenever you can make a reservation). Note that the UTD Testing Center is not open 24/7. **If you need to have a make-up mid-term or final for any reason, there will be a deduction of 10% points. The make-up quiz may be different (in both format and grading criteria) from the scheduled quiz. The 10% penalty will apply to the grade for the entire course. (e.g., if your course grade is 95% and you have a 10%-point penalty, your course grade will be 85%).**

**Note that ALL** proctored exam applications for a testing center other than UTD must be submitted and received by the UT Dallas Testing Center **at least 10 business days** prior to the exam date. The UT Dallas Testing Center will adhere to the 10-business day deadline for submission, **no exceptions**. For questions about remote testing – please contact [tccl@utdallas.edu](mailto:tccl@utdallas.edu).

**Exams**

- **You need to take your Mid-term and Final during the scheduled window in person**
- **If you need to have a make-up exam outside the scheduled window – for whatever reason - there will be a deduction of 10% points from the earned grade for that exam**
- **The make-up exam may be different (in both format and grading criteria) from the scheduled quiz**
- **The Mid-term will cover all material from the beginning to the end of discussions on Lean**
- **The Final will cover all material on Six Sigma, Basic Statistics, and may also have some questions regarding differences between Lean and Six Sigma**
- **Open-book quizzes do not need proctoring (i.e., do not need to be taken at a testing center)**
- **Material from open-book quizzes is not included in Mid-term and Final.**
- **Also see:**
  - [UT Dallas Testing Center - Student Guidelines](#)
  - [UT Dallas Testing Center - Distance Learning webpage](#)
  - [UT Dallas Testing Center - Applying For Off-Campus Testing PDF](#)

*Open-book Quizzes*

Readings for these quizzes are related to quality in healthcare. But each reading is NOT necessarily connected to the same topics you may be reading in the textbook or the online recorded lectures at that time.

*Extra Credit for HMGT Events*

Extra credit of up to two marks (for attending healthcare management events and/or other activities.) One mark (not percentage point) for each event attended will be added to final exam marks for a maximum of two marks for one course. Email from organizer of event is required. These points are solely at the discretion of the Professor. You MUST submit any request for such credit by April 20, 2026.

**PLEASE NOTE:**

- YOU MUST SUBMIT THE FOLLOWING OPEN-BOOK QUIZZES BEFORE THE DEADLINE
- ONLY ONE SUBMISSION IS ALLOWED; DO NOT SUBMIT ACCIDENTALLY
- NOTE: A GOOD PRACTICE IS TO COMPLETE ALL QUIZZES BELOW ASAP
- DO NOT WAIT TILL THE LAST MINUTE TO SUBMIT – DEADLINES WILL **NOT** BE EXTENDED



Reading	Complete quiz by
	11:59 PM Central Time
Q1 Making a dent in medical waste	Sun, Feb 08, 2026
Q2 Factory Efficiency Comes to the Hospital	Sun, Feb 22, 2026
Q3 Mistake-Proofing Healthcare - Why Stopping Processes Might be a Good Start	Sun, Mar 01, 2026
Q4 HealthCare Quality - Accountability	Sun, Mar 08, 2026
Q5 Applying the Lean principles of the Toyota Production System to Reduce ...	Sun, Mar 29, 2026
Q6 Writing The New Playbook For US Healthcare	Sun, Apr 05, 2026
Q7 The Impact of Six Sigma Improvement-A Glimpse into the Future of Statistics	Sun, Apr 12, 2026
Q8 Managing Quality with Process Control	Sun, Apr 26, 2026
Q9 The Normalization of Deviance in Healthcare Delivery	Sun, May 03, 2026

Readings for Q3, Q8, Q9 can be purchased from this link: <https://hbsp.harvard.edu/import/1365958>  
I will use the best eight of nine quizzes to calculate your grade.

#### Other Readings

These and other readings are available as follows. For copyright reasons you will need to obtain these on your own.

#### **Content from these readings is not included in the mid-term and final exams.**

- Q1** In a World of Throwaways, Making a Dent in Medical Waste  
*Yingfei Chen, The New York Times, July 5, 2010*
- Q2** Factory Efficiency Comes to the Hospital  
*Julie Weed, The New York Times, July 10, 2010*
- Q3** Mistake-Proofing Healthcare  
*John R. Grout and John S. Toussaint, Business Horizons (2010), 53, 149-156*  
(Purchase from link above)
- Q4** HealthCare Quality - From Data to Accountability  
*Mary Darby, National Health Policy Forum, February 1998*  
[https://hsrc.himmelfarb.gwu.edu/cgi/viewcontent.cgi?article=1002&context=sphhs\\_centers\\_nhpf](https://hsrc.himmelfarb.gwu.edu/cgi/viewcontent.cgi?article=1002&context=sphhs_centers_nhpf)
- Q5** Applying the Lean principles of the Toyota Production System to reduce wait times in the ED  
*David Ng, Gord Vail, Sophia Thomas, Nicki Schmidt, CJEM 2010; 12(1):50-7*
- Q6** Writing the New Playbook for U.S. Health Care: Lessons from Wisconsin  
*John Toussaint, Health Affairs 28, no.5 (2009):1343-1350*
- Q7** The Impact of Six Sigma Improvement-A Glimpse into the Future of Statistics  
*Gerald J. Hahn, William J. Hill, Roger W. Hoerl and Stephen A. Zincograph*  
*The American Statistician, Vol. 53, No. 3 (Aug. 1999), pp. 208-215*
- Q8** Managing Quality with Process Control  
Roy D. Shapiro, Harvard Business Publishing, Core Curriculum Readings, 8020-HTM-ENG, Sep 10, 2013  
(Purchase from link above)
- Q9** The Normalization of Deviance in Healthcare Delivery  
John Banja, Harvard Business Publishing, Mar 15, 2010, #: BH375-PDF-ENG  
(Purchase from link above)

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### *AI Policy for this Course*

No restrictions on the use of AI

### **Comet Creed**

This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

*“As a Comet, I pledge honesty, integrity, and service in all that I do.”*

### **Accommodations for Students with Disabilities**

Please review [the section](#) within the UT Dallas Syllabus Policies and Procedures webpage.

### **Academic Support Resources**

Please visit the [Academic Support Resources](#) page to view the University’s academic support resources for all students.

### **UT Dallas Syllabus Policies and Procedures**

Please visit the [Syllabus Policies](#) page to view the University’s policies and procedures segment of the course syllabus.

Please review the catalog sections regarding the [credit/no credit](#) or [pass/fail](#) grading option and withdrawal from class.

***The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.***