UNIVERSITY OF MICHIGAN MEDICAL SCHOOL DEPARTMENT OF LEARNING HEALTH SCIENCES

Quality Improvement in Healthcare Systems LHS 641, Section 100 (online) Fall 2024

CREDIT HOURS: 3

PRE-REQUISITES: None

COURSE SCHEDULE AND LOCATION: Remote/online

FACULTY

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COURSE WEBSITE: https://umich.instructure.com/courses/710204

COURSE DESCRIPTION

This course addresses QI in healthcare using a multi-level systems perspective. The course addresses both conceptual foundations of QI and direct application of QI tools and processes. Course materials will include examples and application at Michigan Medicine. The course will help participants perform successful QI activities in healthcare settings.

Course Objectives

By completion of the course students will be able to:

- Reflect on the history of quality improvement (QI) in health care, the current policy environment driving
 QI in the U.S. system of health care, and forces driving future trends.
- Describe how QI incorporates scientific problem-solving through sequential hypothesis testing and experimentation.





- Explain the use of measures, measurement, and the display of information in carrying out data-guided QI.
- Compare and highlight the strengths and limitations of different QI approaches, models, and methods, e.g., Lean, Six-Sigma, Model for Improvement, Total Quality.
- Assess interrelationships among QI and related fields/activities, e.g., research, patient safety, implementation science, dissemination and innovation adoption, social marketing, and learning health systems.
- Examine ways in which social systems and technical systems enable successful QI initiatives and describe strategies for addressing each system.
- Describe details of using the A3 problem-solving approach to systematically address a quality problem in health care.
- Apply the A3 problem-solving approach in developing a proposed plan to address an actual problem in health care.
- Assess the quality of A3 problem-solving proposals.
- Specify how content learned in the course may be utilized in future career activities.

(Information continues next page.)





Content Topics [Module number in brackets]

General QI	Proposal for QI Activity Proposing QI Activities – A3 Format Scientific/structured problem solving [1] Problem area selection and scoping [2,3] Proposal A3 content and how to assess A3s [4] Social and technical processes involved [5] Iterative development [5]		
Foundation – Systems Systems theory and systems thinking [1] Living systems, levels, and subsystems [1] Social systems and technical systems [1] Health care system levels [1] Academic Health Centers: overlapping systems (clinical care, research, education) [3] Measuring performance: data, tools, example [4]			
Systems and QI in Health Care QI definition and dimensions [1] History and evolution [2] Research vs QI [2] Value in health care and QI [3] Continuous improvement [3] Culture and QI [5,6] Individuals and QI [6] Teams and QI [6] Leaders and QI [6] Management systems and QI [5] Training systems and QI [5] Asking helpful questions, humble inquiry [6,7] Patient/family and QI [8] Social determinants of health and QI [8] Public health and QI [10] National systems and QI (e.g., accreditation, payers, certification) [10] Low/middle income countries and QI [11] Future trends in QI for health care [12] Presenting and publishing QI [11]	Individual A3 Sections (content, tools) Title [5,6] Background/importance [5,6] Current situation and problem statement (process, performance data, gap) [5,6] Goal(s) [7,8] Analysis/root causes [7,8] Countermeasures [9,10] Action plan [9,10] Follow-up plan [9,10]		
Frameworks for Action/Change (focus, concepts, tools) Quality improvement frameworks [5]: • Model for Improvement • Lean • Six-sigma Implementation science [7] Social marketing [8] Innovation dissemination/adoption [8] Learning health systems [8] Patient safety – high reliability [9] Multiple-organization collaboratives [12]	Student's Proposal A3 Activities For each A3 section (sequential, iterative) • Draft own sections [5,6,7,8,9,10] • Comment on other student's sections [6,8,10] Formally assess example A3 [11] For student's drafts of complete A3s • Formally assess own A3 (formative) [12] • Present A3 to other students [13] • Comment on other student's A3s [13] • Submit final A3 for summative assessment [14]		





Teaching Methods

This is an online course, which will be delivered via Canvas. It is also your learning environment, where you will interact with a community of your classmates and the instructors. Within the course Canvas site, you will access the learning materials and syllabus, discuss issues, submit assignments, email other students and the instructors, participate in online activities including small groups, and display your projects. This course will be taught using multiple methods, including, but not limited to: readings, discussions, assignments, and hands-on development of a proposal A3. You will also develop and share videos. The course is organized around two broad themes that will run throughout each module: general quality improvement topics and A3 problem solving.

Required Texts and Other Materials

All materials are available through the Canvas site by link or embedded PDF. However, individuals may wish to purchase personal copies of the required textbook:

Johnson JK, Sollecito WA. "McLaughlin & Kaluzny's Continuous Quality Improvement in Health Care, 5th edition." Burlington, MA: Jones & Bartlett Learning, 2020. ISBN: 9781284174410

University of Michigan libraries provide free electronic access to the textbook for up to 3 simultaneous users, but you cannot record notes on the free access version. Personal copies of the textbook (in print – both new and used – and in electronic formats) can be purchased through bookstores and online sites, e.g., Barnes & Noble, Amazon. (Check that it is the 5th edition, the most current version.)

Expectations

This is a small class; therefore, discussions will be the key to learning during the course. There will be readings from a textbook and from supplemental sources that will prepare the student for discussions, which will involve initial and follow-up posts online. Students will develop a proposal A3 throughout the course on a real and relevant problem of their own choosing. Students will be expected to keep pace with required checkpoints for their A3 throughout the course. Additional assignments and course activities will provide opportunities to explore multiple elements of quality improvement in healthcare.

The course emphasizes considering how information is important to your professional activities and those of others. Classmates often have experiences that illustrate and enrich the assigned material. Most activities involve online discussion threads in which views are shared. Timely completion of assignments and submission of views/comments is extremely important. The activities and discussion move forward each week. Late replies no longer advance the current shared discussions. To accommodate periods when students anticipate that demands from other activities will be heavy, students can plan ahead by completing assignments and submitting initial posts in advance. (The grading policy includes penalties for late submissions.)

DROP-ADD DEADLINES

Monday, September 16 – full tuition refund – HILS doctoral students wishing to drop after this date must have permission from the HILS Program Director.

Friday, October 7 – half tuition refund

GRADING AND EVALUATION

Grading will be based on four evaluation methods. They are detailed below:





- 1. Fourteen (14) Topic/Discussions (30 pts each). Respond to questions about the content of assigned topic resources and comment on responses of peers.
- Four (4) Assignments Topical (20 pts each). Complete and submit activities related to specific topics.
- **3. Seven (7) Assignments/Discussions (35 pts each).** Submit assignments (usually drafts of your evolving proposal A3) and comment on submissions of peers.
- 4. One Final A3 submission (297 pts). Submit the final version of your proposal A3.

Grading Policies

No late assignments will be accepted without penalty. Unless an agreement has been reached in advance with the instructor, the student will lose 10% for every day that the assignment is late. For example, if the assignment is worth 10 points and is turned in one day late, the maximum number of points for that assignment will be 9/10. Two days late will result in the maximum number of points being 8/10, and so on. **Graded assignments will be returned through Canvas.**

Final grades will be accessible through Wolverine Access; grades for each assignment will be posted through the Canvas course site. Overall course grades are posted within 72 hours of when the final course assignment component (typically the final course project report) is due. The course grade will be a letter grade (A – D, F) following the weighting described below. Grades will be assigned using this conversion scale:

A+	97-100	B+	87-89	C+	77-79	D+	67-69	F	<60
Α	93-96	В	83-86	С	73-76	D	63-66		
A-	90-92	B-	80-82	C-	70-72	D-	60-62		

DLHS Grade and Grievance Policy

Regular feedback on graded assignments and timely resolution of any grading concerns is helpful for student learning and contributes to an overall positive experience. Students are encouraged to discuss any assignment grade concerns with the instructor(s) within two weeks of the grades being posted on Canvas. Similarly, any concerns and grievances related to the overall course grades should be raised by contacting the faculty of record within two weeks of the course grades being posted on Wolverine Access.

For this course, the grade dispute arbitration will happen within the Department of Learning Health Sciences (DLHS). After initial discussion with the faculty of record for the course, there is an opportunity for a second look by another DLHS faculty member with appropriate expertise for resolving grade disputes. If the student and faculty are not able to come to an agreement about the grade dispute, the Associate Chair for Educational Programs or assigned designee will adjudicate the dispute. Per Rackham's Academic Dispute Resolution Process, if the concern is not resolved, the student may seek a formal resolution conference with the Medical School's Rackham Resolution Officer (see http://www.rackham.umich.edu/policies/academic-dispute-resolution for full policy and the contact information for the current resolution officer.

COURSE ACTIVITIES





Assignments, Due Dates, and Directions

Assessment	DUE DATE	Possible Points (Initial post/Reply)		
Welcome: Introduce Yourself Discussion [short week]	Initial post: Thu Aug 29 View posts: Sun Sep 1	NA		
Module 1 Topic Discussion	Initial post: Thu Aug 29 Peer reply: Sun Sep 1	30 (15/15)		
Module 2 Topic Discussion	Initial post: Thu Sep 5 Peer reply: Sun Sep 8	30 (15/15)		
Module 3: Problem Area Selection and Scoping Assignment/Discussion	Initial post: Thu Sep 12 Peer reply: Sun Sep 15	35 (17.5/17.5)		
Module 3 Topic Discussion	Initial post: Thu Sep 12 Peer reply: Sun Sep 15	30 (15/15)		
Module 4 A3 Assessment Tool Assignment	Thu Sep 19	20		
Module 4 Topic Discussion	Initial post: Thu Sep 19 Peer reply: Sun Sep 22	30 (15/15)		
Module 5 Topic Discussion	Initial post: Thu Sep 26 Peer reply: Sun Sep 29	30 (15/15)		
Module 6 Draft of A3 Sections: Title, Background/ Importance, Current State, and Problem Statement Assignment/Discussion	Initial post: Thu Oct 3 Peer reply: Sun Oct 6	35 (17.5/17.5)		
Module 6 Topic Discussion	Initial post: Thu Oct 3 Peer reply: Sun Oct 6	30 (15/15)		
Module 7 Practice Asking Helpful Questions (Humble Inquiry and Building Trust) Assignment/Discussion	Initial post: Thu Oct10 Peer reply: Sun Oct13	35 (17.5/17.5)		
Module 7 Topic Discussion	Initial post: Thu Oct 10 Peer reply: Sun Oct 13	30 (15/15)		
[Fall Break Week: Mon Oct 14 – Sun Oct 20]				
Module 8 Draft of A3 Sections: Goal(s), Analysis Assignment/Discussion	Initial post: Thu Oct 24 Peer reply: Sun Oct 27	35 (17.5/17.5)		
Module 8 Topic Discussion	Initial post: Thu Oct 24 Peer reply: Sun Oct 27	30 (15/15)		
Module 9 Universal Skills/ High Reliability Training Assignment	Thu Oct 31	20		
Module 9 Topic Discussion	Initial post: Thu Oct 31 Peer reply: Sun Nov 3	30 (15/15)		
Module 10 Draft of A3 Sections: Countermeasures, Action Plan, Follow-up Plan Assignment/Discussion	Initial post: Thu Nov 7 Peer reply: Sun Nov 10	35 (17.5/17.5)		
Module 10 Topic Discussion	Initial post: Thu Nov 7 Peer reply: Sun Nov 10	30 (15/15)		
Module 11 A3 Assessment Assignment	Thu Nov 14	20		





Module 11 Topic Discussion	Initial post: Thu Nov 14 Peer reply: Sun Nov 17	30 (15/15)		
Module 12 Assess your own A3 Assignment	Thu Nov 21	20		
Module 12 Topic Discussion	Initial post: Thu Nov 21 Peer reply: Sun Nov 24	30 (15/15)		
[Thanksgiving Break Week: Mon Nov 25 – Sun Dec 1]				
Module 13 Current Draft of Proposal A3 and Its Recorded Presentation Assignment/Discussion Part 1 (Initial Post)	Thu Dec 5	35		
Module 13 Topic Discussion	Initial post: Thu Dec 5 Peer reply: Sun Dec 8	30 (15/15)		
Module 13 Current Draft of Proposal A3 and Its Recorded Presentation Assignment/Discussion Part 2 (Replies)	Sun Dec 8	30		
Module 14 Topic Discussion	Initial post: Thu Dec 12 Peer reply: Sun Dec 15	30 (15/15)		
Module 14 Final A3 Assignment	Sun Dec 15	297		
TOTAL POINTS		1037		

- **A.** Fourteen Topic Discussions, worth 30 points each (420 points total, 40% of final grade) You will learn about a wide variety of topics relevant to QI in Health Care. To demonstrate your understanding of these topics and their application, respond to questions about the topics and comment on responses of peers.
- **B.** Four Assignments (topical), worth 20 points each (80 points total, 8% of final grade) You will participate in activities that provide experience in applying skills related to specific topics. You will provide documentation of having performed the activities.
- C. Seven A3 Assignments/Discussions, worth ~35 points each (240 points total, 23% of final grade) You submit assignments that are shared with peers and comment on peer's assignments. In six of the assignments, you will learn the iterative process for developing proposal A3s. You will identify a problem to address. Then you will develop a proposal A3 to address it through cycles of seeking information, developing/updating drafts of expanding content, and seeking feedback from relevant individuals. You will submit successive drafts of your proposal A3 and comment on proposal A3s of peers. For one assignment you will learn to ask helpful questions (humble inquiry), submit a summary of changes you made, and comment of changes made by others.
- D. One Final A3 Assignment, worth 297 possible points (29% of final grade)
 You will demonstrate that you have learned to develop a proposal A3 that includes important content. You will submit a final version of your proposal A3 addressing the problem that you identified. The instructor will evaluate proposal A3s using the A3 assessment tool that is explained in the course.

Readings

Module	Date	Readings
Welcome	Mon Aug 26	View "Introduce Yourself" posts





		1,4 = 40000
1	Mon Aug 26	Krumm, A. E. (2023)
		Harrison, R. V. (2023) Harrison, R. V. (2023)
2	Mon Sep 2	Johnson, J. K., & Sollecito, W. A. (2020)
	(Tue Sep 3)	Speyer, L. K., & Harrison, R. V. (2024)
	(Tue Sep 3)	Burke Paliani, D. & Harrison, R. V. (2023)
3	Mon Sep 9	Johnson, J. K., & Sollecito, W. A. (2020)
4	14 0 40	Harrison, R. V. (2024)
4	Mon Sep 16	Johnson, J. K., & Sollecito, W. A. (2020) Burke Paliani, D. (2021)
		Michigan Medicine. (2024)
		Michigan Medicine. (2024)
		Myers, J. S., Kin, J. M., Billi, J. E., Burke, K. G., & Harrison, R. V. (2021)
_	Mars Cars 00	Burke Paliani, D, & Harrison, R. V. (2024)
5	Mon Sep 23	Johnson, J. K., & Sollecito, W. A. (2020) Scoville, R., Little, K. (2014)
		Harrison, R. V. (2021)
		Shook, J. (2009, July 1)
		Harrison, R. V. & Burke Paliani, D. (2024)
		Burke Paliani, D, & Harrison, R. V. (2024) Harrison, R. V. & Burke Paliani D. (2024)
		Burke Paliani, D, & Harrison, R. V. (2024)
		Burke Paliani, D, & Harrison, R. V. (2024)
		Burke Paliani, D, & Harrison, R. V. (2024)
		Harrison, R. V. & Burke Paliani, D. (2022)
6	Mon Son 20	Burke Paliani, D. & Harrison, R. V. (2022) Johnson, J. K., & Sollecito, W. A. (2020)
0	Mon Sep 30	Swensen S, Pugh M, McMullan C, Kabcenell A. (2013)
		Schmidt, N. J., & Craig, P. A. (2021)
		UofM Health Quality Deartment (undated)
7	Mon Oct 7	Johnson, J. K., & Sollecito, W. A. (2020)
		Harrison, R. V., Krumm, A. E., & Burke Paliani, D. (2023) Burke Paliani, D, & Harrison, R. V. (2024)
		Burke Paliani, D, & Harrison, R. V. (2024)
	1	[Fall Break Week: Mon Oct 14 – Sun Oct 20]
8	Mon Oct 21	Johnson, J. K., & Sollecito, W. A. (2020)
		Brach, C., Lenfestey, N., Roussel, A., Amoozegar, J., & Sorenson, A. (2008)
		Health Equity Terms. (2019, October) Quality Improvement Data Resources: Addressing Health Disparities and
		Inequality. (n.d.)
		Urban Institute. (2018, April 18)
9	Mon Oct 28	Johnson, J. K., & Sollecito, W. A. (2020)
		Harrison, R.V. (2023)
		Harrison, R.V. (2022) Burke Paliani, D, & Harrison, R. V. (2024)
		Burke Paliani, D, & Harrison, R. V. (2024)
		Burke Paliani, D, & Harrison, R. V. (20234
10	Mon Nov 4	Johnson, J. K., & Sollecito, W. A. (2020)
44	Man No. 44	Harrison, R.V. (2021)
11	Mon Nov 11	Johnson, J. K., & Sollecito, W. A. (2020) Harrison, R.V. (2024)
		SQUIRE 2.0 guidelines. (n.d.)
12	Mon Nov 18	Johnson, J. K., & Sollecito, W. A. (2020)
		Luckenbaugh, A., Miller, D. & Ghani, K. (2017)
		Harrison, R.V., Krumm, A.E. (2023)
		Friedman, C. P., Rubin, J. C., & Sullivan, K. J. (2017) hanksgiving Break Week: Mon Nov 25 – Sun Dec 1]
13	Mon Dec 2	Burke Paliani, D, & Harrison, R. V. (2023)
13	WIOTI Dec 2	Research guides: Microsoft PowerPoint: Design tips. (2021, February 11)
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COURSE POLICIES

Accessibility and Accommodations

Students should speak with their instructors before or during the first week of classes regarding any special needs. Students seeking academic accommodations should register with Services for Students with Disabilities (SSD). SSD arranges reasonable and appropriate academic accommodations for students with disabilities. Please visit https://ssd.umich.edu for more information.

Student Academic Dispute Procedures

Rackham's Academic Dispute Resolution Policy and Procedures are available to Rackham students who have a dispute or disagreement with faculty or staff about the equity and fairness of decisions or procedures that affect their academic standing, the conduct of their research, and progress toward the degree. Such issues may arise regarding fair and equal treatment in the conduct of a class, in the pursuit of the student's research, and in the grading or evaluation of academic work and research. Other issues may concern the equity and fairness of program, department, or Rackham policies. https://rackham.umich.edu/academic-policies/section9/

Remote Learning

While synchronous course instruction will be rare, there may be times when real-time discussion or small group meetings for assignments or group work may be needed. Instructors may also have office hours in real time as well.

The course will use Zoom for these synchronous ("real time") meetings. Meeting dates and times will be scheduled through <u>Canvas</u> and should appear on your calendar within Canvas.

Please take the time to familiarize yourself with Zoom by visiting <u>U-M's Getting Started with Zoom</u> page. You may choose to use Zoom on your mobile device (phone or tablet).

This article describes how to update your name in Zoom: https://teamdynamix.umich.edu/TDClient/30/Portal/KB/ArticleDet?ID=746
Some students and faculty may also wish to add their personal pronouns beside their names.

Things to Know About Zoom:

- You must sign in to my Zoom session using your uniquename and password (for med.umich.edu users: enter your Level 1 credentials).
- The Zoom sessions are recorded.
- You can contact <u>Information and Technology Services</u> if you have any technical issues accessing Zoom. You can also contact <u>Health Information Technology & Services</u> for help.

Digital Etiquette

Let's give our name when beginning to speak; Let's use the chat and/or raise hand feature if we're waiting to speak; Let's use microphones and mute when not actively speaking to improve overall audio and caption guality.





INSTITUTIONAL POLICIES

Academic Integrity of Students

The academic community, like all communities, functions best when its members treat one another with honesty, fairness, respect, and trust. Your instructors expect students to work and study together to foster learning and understanding of the material. However, direct copying of homework, copying of homework from existing solutions, cheating on an exam, and other conduct that violates the academic integrity and ethical standards of the Rackham Graduate School community cannot be tolerated and will result in serious consequences and disciplinary action.

All written submissions must be your own, original work. We expect that your submitted work will represent your own thoughts, opinions, and knowledge. If you share it with anyone else prior to submission, you may contribute to a breach of academic integrity, and we encourage you not to share your written work with others until it has been assessed.

You may incorporate selected excerpts, statements or phrases from publications by other authors, but they must be clearly marked as quotations and must be attributed. If you build on the ideas of prior authors, you must cite their work. You may obtain copy editing assistance, and you may discuss your ideas with others, but all substantive writing and ideas must be your own or be explicitly attributed to another.

A resource explaining academic integrity and plagiarism can be found here: https://guides.lib.umich.edu/c.php?g=1039501&p=7538393

If we suspect you have cheated (including plagiarism), at the very least you will receive a zero on the assignment. Rackham policy dictates that we must report every instance of academic dishonesty, no matter how small. Suspected academic misconduct will be handled initially by your course instructor. https://rackham.umich.edu/academic-policies/section8/

Diversity, Equity, and Inclusion

The Department of Learning Health Sciences (DLHS) is committed to developing the institutional mechanisms and norms necessary to promote the values of diversity, equity, and inclusion, both inside and outside our classrooms. To this end, DLHS upholds the expectations that all courses will: (1) be inclusive, (2) promote honest & respectful discussions, (3) follow multicultural ground rules and (4) abide by UM policies and procedures. Inclusive courses are those in which teachers and learners co-create and co-sustain environments that support and encourage all members to participate equitably. https://rackham.umich.edu/rackham-life/diversity-equity-and-inclusion/

Student Mental Health and Well-Being

The University of Michigan is committed to advancing the mental health and wellbeing of its students. If you or someone you know is feeling overwhelmed, depressed, and/or in need of support, services are available. For help, contact Counseling and Psychological Services (CAPS) at (734) 764-8312 and https://caps.umich.edu/ during and after hours, on weekends and holidays, or through its counselors physically located in schools on both North and Central Campus. You may also consult University Health Service (UHS) at (734) 764-8320 and https://www.uhs.umich.edu/mentalhealthsvcs, or for alcohol or drug concerns, see www.uhs.umich.edu/aodresources.

For a listing of other mental health resources available on and off campus, visit: https://caps.umich.edu/article/finding-your-community-provider-database-included.





Sexual Misconduct/Sexual Harassment Reporting

Title IX prohibits sex discrimination to include sexual misconduct: harassment, domestic and dating violence, sexual assault, and stalking. If you or someone you know has been harassed or assaulted, you can receive confidential support and academic advocacy at the Sexual Assault Prevention and Awareness Center (SAPAC). SAPAC can be contacted on their 24-hour crisis line, 734-936-3333 and online at sapac.umich.edu. Alleged violations can be reported non-confidentially to the Office for Institutional Equity (OIE) at institutional.equity@umich.edu. Reports to law enforcement can be made to the University of Michigan Police Department at 734-763-3434.

Support for Food Insecurity

Students across the country experience food insecurity at alarming rates. The Maize and Blue Cupboard at the University of Michigan provides food, kitchen and cooking supplies, personal and household items, and support services. For information about accessing their services, please visit https://mbc.studentlife.umich.edu/

Confidentiality and Mandatory Reporting

As instructors, one of our responsibilities is to help create a safe learning environment. Dr. Gretchen Piatt also has a mandatory reporting responsibility related to her role as the Director of the Health Infrastructures and Learning Systems degree program. Instructors are required to share information regarding sexual misconduct or information about a crime that may have occurred on U-M's campus with the University. Students may speak to someone confidentially by contacting SAPAC's Crisis Line at (734) 936-3333

U-M Health Response

We each have a responsibility for protecting the collective health of our community. Applicable safety measures are described on the U-M Health Response website: https://healthresponse.umich.edu/ Please bookmark this site for policies, guidance, and FAQs.



