

# UNIVERSITY OF MICHIGAN MEDICAL SCHOOL DEPARTMENT OF LEARNING HEALTH SCIENCES

Implementation Science in Health 1  
LHS 621, Section 100  
Fall 2023

**CREDIT HOURS:** 3

**PRE-REQUISITES:** Graduate level statistics course within the last 5 years

## FACULTY

**Gretchen A. Piatt, MPH, PhD**

Professor and Vice Chair, Department of Learning Health Sciences

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Office Hours: Wednesdays 7-8pm or by appointment, see course calendar on Canvas

## COURSE DESCRIPTION

Many evidence-based health care interventions fail to produce successful outcomes when implemented into practice. Implementation and dissemination sciences comprise a multidisciplinary set of theories and methods to improve and expedite translating research evidence to everyday health-related practices. Both disciplines are systematic approaches to understanding how healthcare interventions can be better integrated into diverse practice settings and emphasize direct engagement with institutions and communities where health interventions take place. To optimize public health, it is essential to not only understand how to create the best interventions, but how to best ensure that they are effectively delivered within clinical and community practice.

## COURSE OBJECTIVES

By completion of the course students will be able to:

- Examine dissemination and implementation, differentiating from quality improvement
- Recommend implementation and quality improvement methods to address problems by applying solutions in health using a standardized problem
- Appraise mixed methods to support implementation and evaluation
- Evaluate the expected effect of their implementation plan using criteria
- Devise approaches for scaling up to larger numbers of organizations and settings
- Critique the role of their implementation plans on health disparities based on at least one vulnerable population
- Debate the role of dissemination and implementation in learning health cycles

- Recommend implementation and quality improvement methods to address problems by applying solutions in health through the learner's own problem and plan

## CONTENT TOPICS

- Foundational topics in implementation science
- Defining the evidence gap
- Developing research questions
- Assessing context and engaging stakeholders
- Determinants frameworks and logic models
- Implementation strategies
- Health Equity
- Learning health systems
- Evaluation

## 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 instructor. Within the course Canvas site, you will access the learning materials and syllabus, discuss issues, submit assignments, take exams, participate in online activities, and present your projects.

This course will be taught using multiple methods, including, but not limited to: *discussions, case study analyses, videos, and web-based technologies.*

## REQUIRED TEXTS AND OTHER MATERIALS

1. Wensing, M., Grol, R., & Grimshaw, J. (2020). *Improving patient care: The implementation of change in health care.* John Wiley & Sons.

**Additional readings:** This course will use assigned readings including journal articles and book chapters, as well as government publications. All resources are available through the University of Michigan Library or through direct link to the resource.

## EXPECTATIONS

This course is designed to be asynchronous to meet the needs of diverse learners from different parts of the United States and beyond. The modules are self-contained, with assignments that we will grade and provide feedback on. One module will be released at a time so that you complete all module requirements before moving ahead. Synchronous office hours will be held each week to ensure that there is an opportunity to clarify questions or issues, and to get clarification if the material is not clear. As much as possible, office hours sessions will be recorded and posted online so that others are able to access the information. We will use Zoom for office hours.

It is a core expectation that you will plan to complete one module per week. If you are finding it difficult to keep up, please make sure you talk with the instructors as soon as you realize that there may be problems.

## COURSE ACTIVITIES

**Weekly Class Discussions:** These class discussions will allow you and your peers to engage in discussion on topics being presented in the weekly resources.

**Assignments:** There will be 7 assignments that you will work through during the course and provide you with a structure for planning improvement or implementation interventions.

**Quizzes:** These short quizzes will ensure you understand the foundational concepts needed for the course.

**Readings:** You should plan to complete all the assigned readings as you work through the modules. The supplemental readings are not required but are one place to look for further information on specific topics.

## ASSIGNMENTS, DUE DATES, AND DIRECTIONS

Each week you will participate in assigned whole class discussions and/or quizzes, and complete any assigned written assignments or exercises. Please refer to the guidelines and grading rubrics provided on Canvas.

Assignment	DUE DATE	Possible Points
Implementation Science and QI Discussion	9/10	10
What is Implementation & What is QI Quiz	9/10	5
Scale-up Scenarios Quiz	9/10	5
Prioritizing the Gap Quiz	9/17	5
Finding Evidence-Based Solutions Quiz	9/17	5
Identifying the Gap Discussion	9/17	10
PICO Assignment	9/24	20
Engaging Stakeholders Discussion	10/1	10
Stakeholder and Team Worksheet Assignment	10/1	20
Making Sense of Frameworks Discussion	10/8	10
Determinant Domain and Constructs Quiz	10/8	5

Determinants Assignment	10/8	20
Adaptation and Fidelity Discussion	10/15	10
Adaptation and Fidelity Quiz	10/15	5
Logic Model Draft Assignment	10/15	20
Strategies and How They Work Quiz	10/22	5
Matching Strategies to Determinants Quiz	10/22	5
Which Strategies Make Sense and Why Discussion	10/22	10
Implementation Strategies Assignment	10/22	20
Health Equity Discussion	10/29	10
Scale-Up and Sustainability Discussion	11/5	10
Process Evaluation Assignment	11/5	20
Approaches to Evaluation Quiz	11/5	5
Evaluation Study Designs Quiz	11/5	5
Scale Up Quiz	11/5	5
Ethical Considerations Discussion	11/12	10
LHS Discussion	12/3	10
Final Logic Model Assignment	12/10	40

## 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.

## GRADING AND EVALUATION

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

1. **Class Discussions -110 possible points**
2. **Course Quizzes - 55 possible points**
3. **Course assignments - 140 possible points**

**All points will be converted into percentages to assign grades.**

## 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 two points 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 8/10. Two days late will result in the maximum number of points being 6/10, 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
A	93-96	B	83-86	C	73-76	D	63-66		
A-	90-92	B-	80-82	C-	70-72	D-	60-62		

## **DLHS Grade 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).

## **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 [Canvas](#) and should appear on your calendar within Canvas. Please take the time to familiarize yourself with Zoom by visiting [U-M's Getting Started with Zoom](#) 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/TDCClient/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 [Information and Technology Services](#) if you have any technical issues accessing Zoom. You can also contact [Health Information Technology & Services](#) for help.

### Digital Etiquette

Please give your name when you begin to speak. Please use the chat function and/or raise hand feature if you would like to speak. Please also use an external microphone or headphones when you can, and please always mute yourself when not speaking to ensure that there isn't extraneous noise. Extraneous noise affects both audio quality and captioning.

## 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](http://www.uhs.umich.edu/aodresources).

For a listing of other mental health resources available on and off campus, visit: <http://umich.edu/~mhealth/>.

### **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](http://sapac.umich.edu). Alleged violations can be reported non-confidentially to the Office for Institutional Equity (OIE) at [institutional.equity@umich.edu](mailto: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.



### **COVID-19 Statement**

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.