

**UNIVERSITY OF MICHIGAN SCHOOL OF MEDICINE
DEPARTMENT OF LEARNING HEALTH SCIENCES**

**LHS 650 - Health Infrastructures Pro-Seminar I
Syllabus Version: August 4, 2023**

CREDIT HOURS	3 credits
PRE-REQUISITES	Graduate standing or permission of the instructor
CLASS SCHEDULE	Tuesday 1-3:50 pm (Aug 29 – Dec 5)
LOCATION	Room 5380 THSL
FACULTY	Rachel Richesson, PhD (richessr@med.umich.edu)

SHORT COURSE DESCRIPTION

Health infrastructures connect networks of people, organizations, and technologies at multiple levels of scale in physical and virtual spaces to improve the health of individuals and populations. This seminar examines theory and applied case studies to explore infrastructural thinking in the context of learning health systems.

COURSE DESCRIPTION

Large-scale infrastructures support the delivery of a social good. They employ an array of networked human and digital services and resources, and both shape and are shaped by social and technical forces or dynamics (i.e., they are sociotechnical). *Sociotechnical infrastructures integrate and connect people, technologies, policies, and processes that together support a broad range of valued activities in a given domain.* They provide stable and accessible services to communities of interest that can be small or large, highly localized, or dispersed. Created in pursuit of a common, public good, infrastructures are designed for sustainability. In the case of health infrastructures, the common, public good is the improvement of individual and population health. Interconnected networks of people and technologies operate at local, state, national, and global levels in physical and virtual spaces such as public health departments, research institutions, hospitals, primary care offices, long-term care facilities, pharmacies, and payer organizations. These networks of networks grow, shrink, and evolve in patterns that demonstrate adaptability to changes in demands for services, environmental or policy change, and advances in the technologies that support the infrastructure.

Examining the health system as a problem of infrastructure (i.e., adopting “Infrastructural Thinking”) reveals current actors (people, technologies, institutions), relational dynamics and power, conventions, and adaptabilities that create inertia as well as opportunities for change and improved sustainability. An overarching goal of this course is to explore what it means to adopt infrastructural thinking in the context of health and health care and in the work required to address the chronic and well-known maladies of the current health system – soaring costs, poor quality, and excess and preventable morbidity and mortality.

COURSE OBJECTIVES By completion of the course students will be able to:

1. Define a learning health system as an infrastructural construct.
2. Describe key conceptual and theoretical frameworks in infrastructural thinking.
3. Apply theoretical approaches in sociotechnical systems to problems of health and health information infrastructures.
4. Describe the relationships between knowledge, technology, people, processes, and policy.
5. Articulate and critique approaches to designing and implementing infrastructure in health and health information.

OUTLINE AND SCHEDULE OF COURSE TOPICS – CHECK CANVAS SITE FOR UPDATES

TEACHING METHODS

This course will be taught as a pro-seminar and will include synchronous in-class discussions and case studies. Throughout the course guest lecturers and small group activities in class will stimulate dialogue and add additional texture to key course concepts.

ASSIGNMENTS & GRADES

Grading for the course will be based on five evaluation methods: evidence of preparation through pre-class assignments, class attendance & participation, three brief essays, one group “infrastructural inversion” exercise, and a final paper. Details about assignments and grading rubrics will be posted on Canvas. The assignments and due dates are listed below.

Assignment	Due Date	Points
Short Essay #1 - The Learning Health System value proposition as infrastructure	September 12 th	10
Short Essay #2 - Infrastructure Concepts and Research/Learning at Network Scale	October 24 th	10
Short Essay #3 – TDA	November 14 th	10
Infrastructural Inversion (group project – in class)	October 3 rd	20
Final Paper: Healthcare problem or challenge and the role of infrastructure in LHS context	December 13 th	25
Class Preparation		15
Attendance and Participation		10
	Total	100

GRADING POLICIES

Please note that other than the Group Infrastructure Inversion activity, all assignments are individual, and students are expected to work independently of each other. Please review University and School statements regarding violations of honor codes, plagiarism and other academic improprieties.

Class preparation (pre-work) assignments are due before class each week and no points will be given for late submissions. For other assignments, late submissions will be accepted but with penalties. If the assignment is not turned in by the due date and time, the student will lose 20% of total possible 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 to students 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 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).

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.

ATTENDANCE

Students who are feeling ill should not come to class in-person. Grades will not be negatively impacted by not attending class due to illness. **A Zoom link to attend class remotely will be arranged upon request.** Other than illness, students are expected to attend all classes and will only be excused for extenuating circumstances and cultural and religious holidays. These circumstances shall be discussed with the instructor prior to missing class. Students are expected to make up any work that is missed.

REQUIRED TEXTS AND OTHER MATERIALS

There is no required text. Readings are listed and available on the course Canvas site. They may be updated and modified over the course of the semester.

NOTE ABOUT READINGS AND CLASS PARTICIPATION

There is a considerable amount of reading to do each week in this class, especially at the beginning. It is critically important that you do the readings and come prepared to ask questions and actively participate in discussions. You should expect to take notes on the assigned reading and come prepared to lead-off discussions. Suggested readings are optional.

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. Original work for narrative questions is not mere paraphrasing of someone else's completed answer: you must not share written answers with each other at all. At most, you should be working from notes you took while participating in a study session. Largely duplicate copies of the same assignment will receive an equal division of the total point score from the one piece of work.

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.

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 by Drs. Piatt and Donnelly. <https://rackham.umich.edu/academic-policies/section8/>

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/>

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 instructors 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/>

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/topic/our-services> for more information on student accommodations and SSD's [Frequently Asked Questions](#) page for COVID-19 accommodations updates.

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: <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. 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 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 on our campus. The HILS Director has a mandatory reporting responsibility and is 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.