Socio-Technical Mapping and the Built Environment

Course Information

This course introduces students to the social and technical histories of built environments and the impacts (past and present) of socio-cultural biases on technical decision frameworks. Using readings, group discussions, research and spatial mapping tools, students will develop skills in exploring, identifying and documenting ways that built environments can either facilitate or constrain access to resources, including health. Previous experience with GIS is not required.

Gen. Ed.: Quant. Literacy and Social Contexts and Institutions (pending). | 3 cr.

Faculty Information

Karen Merritt, PhD, MPH | Adjunct Instructor | Phone: 207-266-0413 (cell)
Email: karen.merritt@maine.edu | Office Hours by appointment

Instructional Materials and Methods

Course is structured asynchronously; Discussion content will be made available weekly in Brightspace. No textbook is required.

GIS course resources available for download (free):
  • ArcGIS Online and The ArcGIS book and Instructional Guide

Course Goals

The goal of this course is to introduce students to the following concepts:

• the social and the technical histories of built environments are linked;
• cultural biases in society create – and are mappable in – urban landscapes; and
• cultural biases create differences in access to resources – including health – as the result of decisions made in the building and shaping of urban environments.

We will approach these concepts from multiple vantages, including use of spatial mapping tools, to build our understanding of social environments in the U.S.

Instructional Objectives

Students will gain:

- hands-on familiarity with geo-spatial mapping tools (GIS) and types of downloadable, publicly-available data that can be combined to tell stories of place;
- skills in creating presentation-style GIS products (StoryMaps);
- broad understanding of:
  - major socio-cultural movements that have shaped the U.S. urban landscape;
  - the impact of these movements on access disparities within communities; and
  - the link between disparities in access and disparities in health.

Student Learning Outcomes

Students will gain skills in:

- interpreting, presenting and combining multiple types of information in ways that use maps, graphs and visualizations to tell nuanced story of place;

- presenting and explaining mapped content in ways that guide viewers/audiences to see underlying patterns and relationships in mapped content;

- identifying, describing and critically analyzing the social and cultural impacts of technological decision-making in society; and

- developing understanding of how social forces create measurable and mappable differences in health across geographic/geospatial scales.

Course Expectations and Grading

Discussion Content

- Weekly Perspective Readings and Class Discussion - Students will rotate responsibility to facilitate class (Brightspace) discussion applying materials found through development of content for individual Final StoryMap projects.

GIS

- Quizzes and Exercises – two (2) short quizzes and three (3) GIS practice exercises over the course of the semester from information in the GIS text or exercises.

- Group StoryMaps - two (2) map-making assignments over the course of the semester to practice and apply course concepts. To be completed and submitted as group exercises.

- <u>Final StoryMap</u> - Students will individually create a StoryMap focused on neighborhood-scale infrastructural frameworks and access disparities in a selected city. Final project includes class presentation of StoryMaps during Finals week.

<u>Additional Out of Class Assignment</u>

Students will keep a personal reflections journal. Journals are not graded, but will be submitted for discussion 2× over the course of the semester. This is a course about integrating different types of information into knowledge; spending time reflecting on your (our) perceptions about what we discuss in class and how we understand why the built environment is structured as it is improves our ability to engage constructively and thoughtfully in the shaping of our society.

<u>Course Grading</u>

- Individual Final StoryMap Project - 10% (draft); 20% (final)
- Team StoryMaps - 15%
- GIS Quizzes and Exercises - 15%
- Class Discussion – Facilitation and Participation - 15%
- Final Project Presentation - 15%
- Personal Reflection Journal - 10%

Course Schedule:

Week(s)	Topics for Perspective Readings | Discussion
1	Introduction | Course Structure
2-3	Underpinnings and Natural Environments
4-5	Infrastructure and Historical Framing
6-7	Patterns and Overlays
8	Exploring Demographics
9	Break Week
10	Social Determinants of Health
11	Human Ecology
12-13	Vulnerability Indices and Health Mapping
14	Resistance Spaces and Solution Spaces
15	(Finals Week) - Project Presentations

Course Policies

Valuing, Recognizing, and Encouraging Diversity, Equity, and Inclusion

Promoting and valuing diversity in the classroom enriches learning and broadens everyone's perspectives. Inclusion and tolerance can lead to respect for others and their opinions and is critical to maximizing the learning that we expect in this course. Our own closely held ideas and personal comfort zones may be challenged. The results, however, create a sense of community and promote excellence in the learning environment. Diversity includes consideration of: 1) the variety of life experiences others have had, and 2) factors related to "diversity of presence," including, age, economic circumstances, ethnic identification, disability, gender, geographic origin, race, religion, sexual orientation, social position. This class will follow principles of inclusion, respect, tolerance, and acceptance that support the values of diversity.

Classroom Community Expectations

In this course, we will address a range of topics that can be difficult to discuss. For this reason, please approach both our course materials and our class discussions with an open mind. Always express agreement, disagreement, and debates with classmates in a civil manner. Similarly, be willing to listen to peers and faculty when they disagree with you or present a different viewpoint and refrain from interrupting your classmates. There is a zero tolerance policy for harmful behavior or speech in this class.

Campus Policies

Academic Honesty Statement

Academic honesty is very important. It is dishonest to cheat on exams, to copy term papers, to submit papers written by another person, to fake experimental results, or to copy or reword parts of books or articles into your own papers without appropriately citing the source. Students committing or aiding in any of these violations may be given failing grades for an assignment or for an entire course, at the discretion of the instructor. In addition to any academic action taken by an instructor, these violations are also subject to action under the University of Maine Student Conduct Code. The maximum possible sanction under the student conduct code is dismissal from the University. Please see the University of Maine System's Academic Integrity Policy listed in the Board Policy Manual as Policy 314: https://www.maine.edu/board-of-trustees/policy-manual/section-314/

Students Accessibility Services Statement

If you have a disability for which you may be requesting an accommodation, please contact Student Accessibility Services, 121 East Annex, 581.2319, as early as possible in the term. Students who have already been approved for accommodations by SAS

and have a current accommodation letter should meet with me privately as soon as possible.

Course Schedule Disclaimer (Disruption Clause):

In the event of an extended disruption of normal classroom activities (due to COVID-19 or other long-term disruptions), the format for this course may be modified to enable its completion within its programmed time frame. In that event, you will be provided an addendum to the syllabus that will supersede this version.

Observance of Religious Holidays/Events:

The University of Maine recognizes that when students are observing significant religious holidays, some may be unable to attend classes or labs, study, take tests, or work on other assignments. If they provide adequate notice (at least one week and longer if at all possible), these students are allowed to make up course requirements as long as this effort does not create an unreasonable burden upon the instructor, department or University. At the discretion of the instructor, such coursework could be due before or after the examination or assignment. No adverse or prejudicial effects shall result to a student's grade for the examination, study, or course requirement on the day of religious observance. The student shall not be marked absent from the class due to observing a significant religious holiday. In the case of an internship or clinical, students should refer to the applicable policy in place by the employer or site.

Sexual Violence Policy | Sexual Discrimination Reporting

The University of Maine is committed to making campus a safe place for students. Because of this commitment, if you tell a faculty or staff member who is deemed a "responsible employee" about sexual discrimination, they are required to report this information to Title IX Student Services or the Office of Equal Opportunity. Behaviors that can be "sexual discrimination" include sexual assault, sexual harassment, stalking, relationship abuse (dating violence and domestic violence), sexual misconduct, and gender discrimination. Therefore, all of these behaviors must be reported.

 Why do teachers have to report sexual discrimination?

The University can better support students in trouble if we know about what is happening. Reporting also helps us to identify patterns that might arise – for example, if more than one person reports having been assaulted or harassed by the individual.

What will happen to a student if a teacher reports?

An employee from Title IX Student Services or the Office of Equal Opportunity will reach out to you and offer support, resources, and information. You will be invited to meet with the employee to discuss the situation and the various options available to you.

If you have requested confidentiality, the University will weigh your request that no action be taken against the institution's obligation to provide a safe, nondiscriminatory environment for all students. If the University determines that it can maintain confidentiality, you must understand that the institution's ability to meaningfully investigate the incident and pursue disciplinary action, if warranted, may be limited. There are times when the University may not be able to honor a request for confidentiality because doing so would pose a risk to its ability to provide a safe, nondiscriminatory environment for everyone. If the University determines that it cannot maintain confidentiality, the University will advise you, prior to starting an investigation and, to the extent possible, will share information only with those responsible for handling the institution's response.

The University is committed to the well-being of all students and will take steps to protect all involved from retaliation or harm.

If you want to talk in confidence to someone about an experience of sexual discrimination, please contact these resources:

For *confidential resources on campus*: **Counseling Center: 207-581-1392** or **Cutler Health Center: at 207-581-4000**.

For *confidential resources off campus*: **Rape Response Services:** 1-800-871-7741 or **Partners for Peace**: 1-800-863-9909.

Other resources: The resources listed below can offer support but may have to report the incident to others who can help:

For *support services on campus*: Title IX Student Services: 207-581-1406, Office of Community Standards: 207-581-1406, University of Maine Police: 207-581-4040 or 911.

Visit the Title IX Student Services website at umaine.edu/titleix/ for more information.