NUTC 212: Developing Equitable, Inclusive Community Environments for Physical Activity
Summer 2021

Class Meetings:  Online, primarily via Canvas

Instructor(s):  Mark Fenton, MS (email: mark.fenton@tufts.edu)
Rebecca Boulos, MPH, PhD (rebecca.boulos@tufts.edu)

Instructor Office Hours:  As needed. Please email us and we will respond within 48 hours.

Semester Hour Units:  3

Prerequisites:  None

Course Description: In this course, we will discuss how policy, environmental and systems change interventions in support of physical activity have the potential to improve health equity for large segments of the population. Physical activity measurement, epidemiology, and recommended guidelines will be outlined, and the socio-ecological model will frame the evidence for systems-based approaches to population physical activity. Students will learn about key elements of the built environment that support routine activity, such as land use plans and zoning, and transportation networks and funding. Throughout, we will explore how inequitable distribution of these policies and infrastructures have adversely impacted disadvantaged segments of the population often based on race, age, disability, income, and other demographic factors, and how these may be remedied. When appropriate, policy approaches to improved nutrition will be included (e.g., land use practices to preserve farmland, local ordinances supporting urban agriculture or limiting fast food establishments). The result will be a broad understanding of the evidence- and best practice-based approaches to healthy and equitable community development.

Course Goals: The primary purpose of this course is to teach students how social, policy, and environmental systems work together to influence access to and availability and use of spaces that support physical activity. Students will learn about: the epidemiology and measurement of physical activity, how to read, interpret and use different types of evidence related to physical activity, including peer-reviewed journals, policy briefs and national guidelines; theoretical frameworks used to guide behavioral interventions, and how policies and practices at the local, state, and federal levels have historically and currently impact health disparities as they relate to chronic disease prevention and prevalence. By the end of this course, students will be able to explain how various factors in their community are influencing their and others’ physical activity behaviors and will have written a proposal to address a problem of either personal or professional interest related to physical activity. More specifically, students will:

1. Apply tenets from the socio-ecological model to inform public health interventions related to physical activity.
2. Describe four broad characteristics of environments that are supportive of
inclusive routine physical activity, and the strength of the evidence base for each.

3. Differentiate between the various specific and credible resources that provide guidelines, recommendations, or specific technical support for creating physical activity-supporting environments.

4. Classify specific policy approaches to developing equitable environments that support routine walking, cycling, and transit use, and the level of evidence in support of these approaches.

5. Develop specific, actionable, evidence- and best practice-based suggestions for an area or issue of personal or professional interest related to physical activity.

**Texts or Materials:** All assigned readings listed on the schedule will be available for the duration of the semester on Canvas (as PDFs or via links), or via the Hirsch Health Sciences Library access system, in cases where finding the literature is not part of the assignment.

**Required Materials:**

- **Digital Pedometer:** A reliable, repeatable step counter is required, but it does not need to provide distance and calorie burn estimates. A telephone step counter, Fitbit or similar device, or a simple step counting pedometer is sufficient. Recommended: Inexpensive pedometers such as the Yamax SW200 “digi-walker” or Accusplit AE120XL digital pedometer are quite adequate.


**Recommended Resources:** Statistics manual (accessible for free). If you are unfamiliar with statistics, this small manual is a great place to begin.

**Academic Conduct:** Each student is responsible for upholding the highest standards of academic integrity, as specified in the Friedman School’s Policies and Procedures Handbook and Tufts University policies. It is the responsibility of each student to understand and comply with these standards, as violations will be sanctioned by penalties ranging from failure on an assignment and the course to dismissal from the school. Instructors and other university personnel may request that students submit written assignments to plagiarism prevention resources, websites, or other authoritative databanks, such as (but not limited to) “turnitin.com,” or a similar site. These services compare student-produced documents with web content, newspapers, journals, magazines, books, student essays, and other data to determine the originality of student work.

**Classroom Conduct:** The course does not assume a technical background in public health or planning and is well-suited for interested professionals in public health promotion and policy development, and health agencies; planning, public works, parks and recreation, housing, transit, and transportation; school administration; economic and community development; elected and appointed officials; and advocates and citizens concerned with the public health of their community.
The course is designed to be accomplished fully asynchronously, such that students can view any of the provided lectures, videos, and other materials at their convenience. Four lectures will be provided live on the Monday of their respective weeks (#s 1, 4, 7 & 9), and recorded to be immediately available for viewing. This is based on feedback from previous years’ students, many of whom indicated they appreciated an opportunity to participate in live presentations. Further, it allows the faculty to provide extremely contemporaneous information on current issues, particularly around rapidly evolving challenges and practices focused on equitable transportation and land use policies and implementation. There are also two scheduled “office hours” on Wednesdays of weeks 5 and 10. To be clear, attendance at any live session is not required nor does it have any bearing whatsoever on grading or standing in the class. These sessions are provided to allow students who feel they benefit from live interaction with faculty to have that opportunity, and to allow faculty (and students) to inject very current examples into course material.

**Assessment and Grading:** The assignments and discussion for this course are designed to allow you to practice and demonstrate that you understand the course and class objectives. They are both reflective and evaluative. Contributing to your final grade are:

1. Assignments & activities; responses to comments on submitted work (6 total, 10 points each) 35%
2. Participation in discussions – thoughtful comments on classmates’ contributions and follow-up on content discussed (e.g., sharing a discovered article or resource) 30%
3. Final paper 35%

**Assignments & Activities**

2. Assignment 2: Complete the “Getting to Know You” Zee Map (ungraded).
3. Assignment 3: Complete the physical activity one-week recall diary.
4. Assignment 4: Wear a pedometer for one week and write a reflection about similarities/differences compared with the one-week recall (see assignment 3).
5. Assignment 5: Write a one-page evaluation of a real-world development policy or infrastructure project that might inequitably influence physical activity for the surrounding population. (A current example will be provided by the instructors.)
6. Assignment 6: Complete assigned definitions & acronyms.
7. Assignment 7: Complete Walkscore comparison of three different locations.
8. Assignment 8: Complete PhotoVoice.

**Discussions:** We learn through independent study, and we learn through interaction with others. Discussions are one of the best ways to get to know your colleagues and create connections that are otherwise challenging to create in the context of an online classroom. Discussion guidelines and questions relevant to a particular week’s topic will be distributed ahead of time, as necessary. Please remember to contribute in a professional and constructive way, particularly in the face of disagreement; as you know, nutrition and social environments can become very personal, very quickly. Students are expected to contribute to the discussion by responding to the comments of other students with thoughtful but concise questions, observations, relevant research, evidence, and resources. Brevity and focus in discussion postings is highly valued; no additional credit is given for lengthy contributions. Students are also expected to engage with each other in ongoing discussions of their own work. We expect
courtesy and thoughtful consideration of others’ views, with conciseness, clarity, and evidence. You don’t have to write a lot, but you should write clearly and with focus, ideally making a point. We urge you to go beyond opinion and supposition; build a brief case for your point—cite evidence, observation, something you’ve read, relevant professional experience, etc.

**Final Project and Presentation:** Students will write a final two-page (~1,000 words) “application plan” and record an accompanying, short (~5 minutes, no longer than 6 minutes) presentation. The plan should be formally written and structured and include citations and references to class readings or equivalent resources discovered during the course. For this plan, students will:

1. Identify a physical activity-related problem in their community that they would like to address.
2. Identify key stakeholders who will be affected by changes related to this public health problem.
3. Apply concepts and lessons learned in the class to identify specific policy or procedural steps, or specific actions that will be taken, and the anticipated outcomes, keeping stakeholders’ interests in mind.

**Final Project Grading Criteria:**

1. Content: The plausibility of the plan, and quality of evidence and practical guidance supporting the student’s approach will be evaluated, as will the student’s ability to synthesize concepts learned throughout the semester, and to utilize them in a systematic way, demonstrating an equitable impact on physical activity levels to include those populations at greatest risk for physical inactivity. The written document will also be evaluated for organization, clarity, and succinctness, including appropriate use of references.
2. Presentation: The presentation will be considered for focus, clarity, and persuasiveness. The student is expected to frame his/her plan for the target audience (e.g., city council, school board, transit authority).
3. Feedback to a fellow student. Each student will respond to another student’s plan, offering a constructive critique focused on: quality of the technical content (will it positively and equitably impact physical activity in the population?); effectiveness of the presentation in engaging others; and the likelihood of implementation.
4. Final submission: Based on classmates’ feedback to their presentation, students will provide a final edited version of their paper for instructors’ consideration. A second version of the presentation is not required.

**Grading Range:** Final letter grades (A+ through F) for the course will be assigned based on the following criteria (we round up at 0.05 or 0.5):

- 90–100 A range (90–<93 = A-, 93+ = A, A+ given for superlative work)
- 80–89 B range (80–<83 = B-, 83–<87 = B, 87–<90 = B+)
- 70–79 C range (70–<73 = C-, 73–<77 = C, 77–<80 = C+)
- 60–69 D range (60–<63 = D-, 63–<67 = D, 67–<70 = D+)
- <60 F

**Instructions for Submission of Assignments and Exams:** Written assignments should be submitted in Word or PDF, 1-inch margins, 11-point font, double-spaced. If you would like our
comments directly in your assignment, Word may be your preferred format. **All assignments, discussion postings, etc., must be submitted by Sunday the week they are assigned to be due, no later than 12:00AM EST/EDT or your local time, whichever is later,** unless otherwise specified (e.g., term assignment has an end-of-semester due date). Please let us know if you are taking the course in a time zone other than the eastern coast of the U.S. Late assignments will be accepted; however, 10% will be deducted for every day late. If you would like to request an extension on an assignment, you MUST email or call BEFORE the posted due date/time to request the extension. We will be reasonably flexible in identifying an alternate due date.

**Accommodation of Disabilities:** Tufts University is committed to providing equal access and support to all students through the provision of reasonable accommodations so that each student may access their curricula and achieve their personal and academic potential. If you have a disability that requires reasonable accommodations, please contact the Friedman School Assistant Dean of Student Affairs at 617-636-6719 to make arrangements for determination of appropriate accommodations. Please be aware that accommodations cannot be enacted retroactively, making timeliness a critical aspect for their provision.

**Diversity Statement:** We believe that the diversity of student experiences and perspectives is essential to the deepening of knowledge in this course. We consider it part of our responsibility as instructors to address the learning needs of all students in this course. We will present materials that are respectful of diversity: race, color, ethnicity, gender, age, disability, religious beliefs, political preference, sexual orientation, gender identity, socioeconomic status, citizenship, language, or national origin among other personal characteristics.
# Course Topics and Assignment Schedule at a Glance

This schedule is subject to modification at the instructors’ discretion.

<table>
<thead>
<tr>
<th>DATE OF CLASS</th>
<th>COURSE TOPIC</th>
<th>LECTURERS</th>
<th>ASSIGNMENTS DUE</th>
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<tr>
<td><strong>Week 1 (May 26)</strong></td>
<td>Introduction to the course &amp; “netiquette”</td>
<td>Boulos &amp; Fenton</td>
<td><strong>Assignment 1:</strong> Watch introduction videos. Finish by 5/30. <strong>Assignment 2:</strong> Complete the “Getting to Know You” Zee Map. Finish by 5/30. <strong>Assignment 3:</strong> Complete the PA one-week recall diary. Finish by 6/6, Submit to Canvas 6/13. <strong>DISCUSSION:</strong> What are the facilitators to you being physically active in your personal life? What could be barriers for others that don’t have those same facilitators?</td>
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<td><strong>Week 2 (May 31)</strong></td>
<td>Framing Determinants of Health: Socio-Ecological Model</td>
<td>Boulos &amp; Fenton</td>
<td><strong>Assignment 4:</strong> Wear a pedometer for one week and write a reflection about similarities/differences compared with the one-week recall from week 1. Finish by 6/13, Submit to Canvas 6/13. <strong>DISCUSSION:</strong> Use Robert Wood Johnson Foundation’s life expectancy “calculator” ([link](<a href="https://www.rwjf.org/en/library/interactives/wher">https://www.rwjf.org/en/library/interactives/wher</a> eyouliveaffectshowlongyoulive.html)) on your home location, and one to two other locations that you know to be demographically different (e.g. by race, age, income, ethnicity). Are the life expectancies the same or different? If different, briefly offer one or two reasons why that might be the case.</td>
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<td><strong>Week 3 (June 7)</strong></td>
<td>Physical Activity 101</td>
<td>Boulos &amp; Fenton</td>
<td><strong>Assignment 5:</strong> Write a one-page evaluation of a real-world development policy or infrastructure project that might inequitably influence physical activity in the surrounding population. (A current example will be provided by the instructors.) Submit to Canvas 6/27. <strong>DISCUSSION:</strong> Briefly list two health risk factors (other than physical inactivity) that have been successfully reduced through socio-ecological changes, providing an historic benefit to public health? What were the socio-ecological changes? (Do NOT include changes for increased physical activity—consider other risk factors such as infectious disease, accidental injury, nutrition, tobacco, etc.)</td>
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<td>Week 4 (June 14)</td>
<td>Evidence, Systems &amp; Disparities in Physical Activity</td>
<td>Boulos &amp; Fenton</td>
<td>NO NEW ASSIGNMENT. ASSIGNMENT DUE: Reflection of PA recall questionnaire vs. pedometer measure. DISCUSSION: What evidence can you find explaining why racial and ethnic minorities tend to have lower rates of attainment of physical activity recommendations? How would levels of physical activity impact racial differences in chronic disease risk and life expectancy?</td>
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<td>Week 5 (June 21)</td>
<td>Physical Activity Behavioral Interventions – the Stickiness Problem</td>
<td>Boulos &amp; Fenton</td>
<td>ASSIGNMENT DUE: Definitions &amp; Acronyms – Post acronym definitions &amp; applicability to PA to Canvas using the Glossary, found under Discussions. Submit in Glossary 6/27. ASSIGNMENT DUE: One-page evaluation of a real-world development policy or infrastructure project DISCUSSION: Do you have experience in a behavioral, educational, and/or encouragement program to promote physical activity, and if so; do you believe it was effective? Are you aware of any research or evidence on behavioral, educational, and/or promotional programs that have created successful sustained increases in physical activity? For example, do you know of anything like this that has worked on a scale greater than just volunteers in a research study?</td>
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<td>Week 6 (June 28)</td>
<td>Built Environment Influences on Physical Activity</td>
<td>Fenton</td>
<td>Assignment 7: Obtain Walkscores for three demographically different locations; compare scores and comment on their similarities or differences. Finish by 7/4, Submit to Canvas 7/11. ASSIGNMENT DUE: Definitions &amp; Acronyms DISCUSSION: Why do you believe real estate websites often link to the WalkScore website? What evidence supports making this link?</td>
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<td>Week 7 (July 5)</td>
<td>Land Use Mix, Density, and Institutional Racism in Land Use Planning</td>
<td>Boulos &amp; Fenton</td>
<td>Assignment 8: Skim completed definitions/acronyms list on Canvas. Finish by 7/4. ASSIGNMENT DUE: Post Walkscores and comments on Canvas. Finish by 7/11. DISCUSSION: Please share at least one piece of research or information you have found (not on the reading lists, etc.) that is an evidence-based or practice-based resource that you think can inform and guide community designs and policies for increased physical activity. Important: What leads you to believe this is a credible or reliable source of information or design or practice guidance?</td>
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<td>Week 8 (July 12)</td>
<td>Networks of Facilities for Active Transportation: Success and Unintended Consequences</td>
<td>Fenton</td>
<td>Assignment 9: Create a photo-voice (photos with captions) of a walk audit of an actual walking route that is or could be part of your life. Submit to Canvas 7/25. DISCUSSION: This week, we’re going to ask you to respond to an article in the Emory Wheel and a student project at Furman University using GIS mapping to study gentrification along Atlanta’s beltline trail. <a href="https://emorywheel.com/atlantas-beltline-a-gentrified-path/">https://emorywheel.com/atlantas-beltline-a-gentrified-path/</a> <a href="https://storymaps.arcgis.com/stories/e14cb44aad5d4757b9bbdf937dbcc57a">https://storymaps.arcgis.com/stories/e14cb44aad5d4757b9bbdf937dbcc57a</a> Discussion Question: Do you believe that projects such as the Beltline Trail in Atlanta should be stopped if they are causing gentrification and displacement? Or can you find evidence that there are viable alternatives that allow for development of walk-, bike-, and transit-friendly designs &amp; policies while minimizing the inequitable consequences of displacement and gentrification?</td>
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<td>Week 9 (July 19)</td>
<td>Site Design, Safety, Traffic Calming, &amp; Inclusive Community Engagement</td>
<td>Boulos &amp; Fenton</td>
<td>NO NEW ASSIGNMENTS/NO ASSIGNMENT DUE. DISCUSSION: If you were going to do what Ray Sharp did in the book chapter reading, how would you make your case to the officials in your community? Who would you talk to, and what would the conversation look like/how would you compel them to action? Would you threaten to run for public office? Or commend them for doing great work? Which resources would you use?</td>
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| Week 10 (July 26) | Safe Routes to School | Fenton | **Assignment 10:** Develop a memo (~1,000 words) outlining how you will utilize what you have learned from this class in your work and/or advocacy. Record a 4-5-minute (6 min max) video presentation summarizing your plan. *Submit DRAFT in Discussions 8/1.*  
**ASSIGNMENT DUE:** Post photo-voice of your walk audit. Comment on at least one other and/or comment on overall themes you see from the postings.  
**DISCUSSION:** Offer substantive ideas on how to change social norms regarding walking and bicycling to school, like they were in the 1950s and 1960s, so these become a normal behavior again. Keep in mind, we know the shortcomings of behavior change alone - think about the stickiness problem. Use the concepts of the socio-ecological model and systems science to inform your answer. |
|---|---|---|---|
| Week 11 (August 2) | National Initiatives, Movements, and Economic Impacts of Healthy Design | Fenton | **Assignment 11:** Review your partner’s draft memo and provide written comments (you will post this so that others can learn from your drafts and responses).  
**ASSIGNMENT DUE:** Exchange your first drafts, including references, of your “implementation memos” with your partner.  
**DISCUSSION:** Should some type of Health Impact Analysis be included during the new and redevelopment permitting processes? Should it be recommended or required? How can equity concerns be incorporated in such an analysis? |
| Week 12 (August 9) | Intervention Approaches | Boulos & Fenton | **Assignment 12:** Utilizing classmate input, finalize your “implementation memo” and video presentation.  
**ASSIGNMENT DUE:** Have provided your comments (and received your partner’s comments) on your memo.  
**OPTIONAL DISCUSSION:** Do you have questions for your peers as you’re developing your final proposal? Use the discussion forum to exchange challenges, questions, ideas, etc. |
### Detailed Descriptions of Course Topics, Assignment Schedule, and Learning Objectives for Each Session

**Class Session:** Session 1  
**Date of Class:** Week of 5/26  
**Course Topic(s):** Course Orientation  
**Learning Objectives:**  
1. Identify, explain, and use a weekly PA recall diary.  
**Required Reading/Assignments:**  
*Readings.*  
1. Readings.  
2. Assignments.  
   1. Watch instructor/TA introduction videos.  
   2. Complete one-week PA recall; estimate typical daily energy expenditure.  
   3. Complete the “Getting to Know You” Zee Map by submitting a brief (one phrase each) summary of your name, position, why you’re taking the course, your earliest fond recollection of being physically active as a young child, your location, and posting to the Zee Map.  

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**Class Session:** Session 2  
**Date of Class:** Week of 5/31  
**Course Topic(s):** Framing Determinants of Health: Socio-Ecological Model  
**Learning Objectives**  
1. Draw and describe the Socio-Ecological Model and summarize different examples of its use in public health promotion.  
2. Explain how the Socio-Ecological Model can be used to inform approaches to changing physical activity behavior.  
**Required Reading/Assignments:**  
*Readings.*  
Assignments.

Wear a pedometer for one week, recording daily step totals. Estimate daily energy expenditure. Compare data from this to weekly recall from first week and analyze/discuss similarities/differences. Were they different, if so why, and which do you think was more accurate for you? Also comment on physical activity in your life.

Class Session: Session 3
Date of Class: Week of 6/7
Course Topic(s): Physical Activity 101

Learning Objectives:
1. Define various forms of physical activity - recreation, exercise, functional, transportation.
2. Differentiate between different methods for estimating/measuring PA - questionnaires, accelerometers, observation.
3. Explain national epidemiologic surveillance programs and changes in routine energy expenditure over human history.
4. Describe national PA recommendations for health, weight loss and fitness.
5. Use a pedometer and compare results with those from weekly PA recall diary.

Required Reading/Assignments:
Readings.
Required
6. Review: 2018 Physical Activity Guidelines for Americans

Recommended
2. Dietary Guidelines for Americans, 2020-2025

**Assignments.**  
Write a one-page evaluation of a real-world development policy or infrastructure project that might inequitably influence physical activity in the surrounding population. For example: Read this article about a possible age 55+ housing development in Augusta ME that would change availability of recreational space for other neighborhood residents.

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**Class Session:** Session 4  
**Date of Class:** Week of 6/14  
**Course Topic(s):** Evidence, Systems & Disparities in Physical Activity  

**Learning Objectives:**  
1. Describe “systems science” and how it can be used to understand and intervene to improve health disparities.  
2. Describe how social, legal, and political systems can influence disparities in physical activity – both positively and negatively.

**Required Reading/Assignments:**  

**Readings.**  
**Required**

2. Fulton JE (2020). “Physical inactivity is more common in racial and ethnic minorities in most states.” [https://blogs.cdc.gov/healthequity/2020/04/01/physical-inactivity/](https://blogs.cdc.gov/healthequity/2020/04/01/physical-inactivity/)
7. Book Ch. 27: Isaac F. Bringing physical activity, fitness & movement to the workplace.

**Recommended**


**Assignments.**  
**ASSIGNMENT DUE:** Reflection of PA recall questionnaire vs. pedometer measure.
Class Session: Session 5
Date of Class: Week of 6/21
Course Topic(s): Physical Activity Behavioral Interventions – the Stickiness Problem

Learning Objectives:
1. Describe typical behavior-focused physical activity interventions, and their relative strengths and weaknesses.
2. Explain how a socio-ecological approach moves beyond pure behavior change.
3. Identify the multiple disciplines that must be engaged for a broader socio-ecological approach to physical activity promotion.
4. Begin identifying specific socio-ecological issues that underlie inequitable outcomes

Required Reading/Assignments:

Readings.
Required

Recommended

Assignments.
Definitions and acronyms: Each student will be assigned 3-4 acronyms to define (what the letters mean, what it actually is); and its importance to our work. Post to Canvas by next class for an active class glossary.

**ASSIGNMENT DUE**: One-page evaluation of a real-world development policy or infrastructure project that might inequitably influence physical activity in the surrounding population.
Class Session: Session 6
Date of Class: Week of 6/28
Course Topic(s): Built Environment Influences on Physical Activity

Learning Objectives:
1. Summarize the current evidence connecting physical activity and the environment.
2. Describe four key environmental elements that support routine walking, cycling, and transit use.
3. Explain, interpret, and apply a Walkscore rating, including strengths and shortcomings.
4. Discuss health equity issues related to transit availability, segregation, housing, and gentrification.

Required Reading/Assignments:

Readings.

Required
7. Familiarize yourself with the Physical Activity Research Center (PARC)

Recommended
Assignments.
Obtain Walkscores (www.walkscore.com) of three real locations you know (ideally one is your home, second is another place you frequent such as work, third is an area you find noteworthy because of high or low walkability). Compare scores and why you think they are different. Also identify shortcomings of Walkscore. Write a one-page discussion answering these questions: what felt more “walkable” to you, and why? Did Walkscore capture all the factors of walkability? What did it do well, what poorly?
Assignment DUE: Post your two acronym glossary entries.

Class Session: Session 7  
Date of Class: Week of 7/5  
Course Topic(s): Land Use Mix, Density, and Institutional Racism in Land Use Planning  

Learning Objectives:
1. Identify and distinguish between the various types of planning documents and policies and their importance (e.g., master/comprehensive plans, Long-Range Transportation Plans, Transportation Improvement Plans, Pedestrian/Bicycle Plans, Open space/trail plans).
2. Develop ordinance recommendations that will address segregated vs. mixed uses; Euclidian vs. Form-based code; open space & farmland preservation.
3. Identify ordinance influences on population dietary behavior, such as community gardens and related activities (urban composting, bees, chickens, goats, pigs), drive-thru/fast-food zoning.
4. Explain relevant movements in the land use field, such as Traditional Neighborhood Design (TND); Transit Oriented Development (TOD); New Urbanism, Smart Growth.

Required Reading/Assignments: 

Readings.
Required
9. **Skim:** Your classmates’ Glossary submissions

**Assignments.**

No new assignments.

**ASSIGNMENT DUE:** Post your Walkscores and comments on three locations.

**Class Session:**  
Session 8

**Date of Class:**  
Week of 7/12

**Course Topic(s):**  
*Networks of Facilities for Active Transportation: Success and Unintended Consequences*

**Learning Objectives:**

1. Classify key transportation network elements for routine active transportation (walking, cycling, and transit use).
2. Categorize key guidelines and manuals used in network construction, such as the AASHTO guide to design; Manual on Uniform Traffic Control Devices (MUTCD), NACTO Urban Street Design Guide.
3. Define Complete Streets, both the movement, and actual design approaches such as traffic calming and road diets.
4. Distinguish attributes of trails and multi-use pathways for transportation vs. recreation.
5. Design and implement an I2Audit (Inclusive Interdisciplinary Walk/Movement Audit) for community engagement, education, and practical planning.

**Required Reading/Assignments:**

**Readings.**

**Required**

1. America Walks: [How the MUTCD creates unsafe conditions for people just trying to access food](https://www.americawalks.org/). (2021).
2. Book Ch. 37 – Selby J. A road diet for increased physical activity: Safer walking, bicycling, and transit use
3. Book Ch. 39 – Peterson K. Leveraging public and private relationships to make Omaha bicycle friendly
5. **Review:** Complete Streets - Summary document (what is it), model policy statement
6. **Review:** NACTO urban street design guidelines - Executive summary
7. **Review:** National Physical Activity Plan - Rails-to-Trails Conservancy website
8. **Review:** American Trails website

**Recommended**

Assignments.
Create a photo-voice of a walk audit of an actual walking route that is or could be part of your life. Post photos with one-sentence captions: two photos of appealing/supportive elements; two photos of discouraging/unsupportive, and one photo of an interesting, intriguing, surprising or curious element. (Outline: opening two sentence description of the route and why it’s important, five photos with captions, and two concluding sentences on possible low-cost remediation or improvements).

Class Session: Session 9
Date of Class: Week of 7/19
Course Topic(s): Site Design, Safety, Traffic Calming & Inclusive Community Engagement

Learning Objectives:
1. Characterize “carrots and sticks” in transportation demand management, such as congestion charges (London, others), HOV lanes; pricing of parking; and bike share systems using performance and impact data.
2. Distinguish differing roles of key stakeholders, such as architects, landscape architects, planners, engineers, and elected and appointed boards.
3. Understand how pop-up and demonstration projects can improve inclusive community engagement while allowing communities try new or innovative design approaches.
4. Describe key protections and requirements of the Americans with Disabilities Act and its benefits.

Required Reading/Assignments:
Readings.
Required
5. Book Ch. 36 – Sharp R. Local public health leadership for active community design: An approach for year-round PA in Houghton, MI.
6. Book Ch. 38 – Meehan L. Incorporating physical activity and health outcomes in regional transportation planning
7. Review: Walk and Bike Suitability Assessment (WABSA)
8. Review: PBIC Walkability Checklist; Bike-ability checklist

Assignments.
Continue to work on photo-voice.
Class Session:  
Session 10

Date of Class:  
Week of 7/26

Course Topic(s):  
Safe Routes to School

Learning Objectives:
1. Summarize major research and policy efforts targeting school-related physical activity and nutrition.
2. Explain how these research and policy efforts fit within the SEM, specifically utilizing the 5E framework (evaluation, education, encouragement, engineering, enforcement).
3. Discuss how efforts can/cannot effectively increase physical activity, improve nutritional quality and/or result in target benefit.
4. Explain possible challenges and solutions associated with shared-use agreements.

Required Reading/Assignments:

Readings.

Required
1. Book Ch. 35 – Thomas I. Institutionalizing Safe Routes to School in Columbia, MO.
3. Rodriguez NM, et al. (2019). Enhancing safe routes to school programs through community-engaged citizen science: two pilot investigations in lower density areas of Santa Clara County, California, USA; BMC Public Health;19:256
6. Review: National Center for Safe Routes to School website
7. Review: National Safe Routes Partnership website
8. Review: EPA - School Siting Recommendations
9. How Oakland Got Real about Equitable Urban Planning

Recommended
1. Book Ch. 3 - Yancey T. Role of recess and physical activity breaks during the school day.

Assignments.

Write a two-page (~1,000 words) “implementation memo” and
1. Identify a physical activity-related problem in your community that you would like to address.
2. Identify key stakeholders who will be affected by changes related to this public health problem.
3. Apply concepts and lessons learned in class to identify specific policy or procedural steps, or specific actions that will be taken, and the anticipated outcomes, keeping stakeholders’ interests in mind.

The memo should be formally written and structured and include citations and references to class readings or equivalent resources discovered during the course. Also develop a brief video presentation summarizing your plan for the class (4-5 minutes; no longer than 6 minutes).
ASSIGNMENT DUE: Post your “photo-voice” of your walk audit. Comment on at least one other and/or comment on overall themes you see from the postings.

Class Session: Session 11
Date of Class: Week of 8/2
Course Topic(s): National Initiatives, Movements, and Economic Impacts of Healthy Design

Learning Objectives:
1. Identify the focus and strengths of key campaigns supporting healthy community design, such as Complete Streets; Transportation Trails (Rails-to-Trails conservancy); Crime Prevention through Environmental Design (CPTED), New Urbanism, and Transportation Demand Management.
2. Utilize the assessment tools of the Walk Friendly Community & Bike Friendly Community Awards to assess community success.
3. Identify and present the economic benefits of healthy community design principles.
4. Utilize the Health Economic Analysis Tool (HEAT) for walking & cycling to ascertain the dollar value of bicycle and pedestrian improvements and understand the adjustable defaults on the tool.

Required Reading/Assignments:

Readings.
Required
1. Schuetz J (2020). To improve housing affordability, we need better alignment of zoning, taxes, and subsidies. Brookings Institution.
3. Review: EPA Smartgrowth summary documents on:
   a. Economic benefits to Developers
   b. Economic benefits to Businesses
4. Review: NYC Dept. of Transportation: The Economic Benefits of Sustainable Streets
5. Review: League of American Bicyclists website
6. Review: Pedestrian and Bicycle Information Center website

Recommended
1. National Physical Activity Plan. The 2014 United States report card on physical activity for children and youth

Assignments.
Review your partner’s draft and provide written comments (you will post this so that others can learn from your drafts and responses).

ASSIGNMENT DUE: Exchange first drafts of “implementation memos,” including references.

Class Session: Session 12
Date of Class: Week of 8/9
Course Topic(s): Intervention Approaches

Learning Objectives:
1. Describe community-based participatory research.
2. Design a community engagement process from initial contact through a site visit with field audits and facilitated planning sessions.

3. Utilize a simple assessment of community readiness, examining:
   - Public health understanding of true PSE
   - Allied disciplines engagement (planning, public works, housing transit)
   - Policymaker embrace & implementation

4. Explain and give real examples of the 3-P framework for community planning and public design charrettes (programs, projects, and policies).

Required Reading/Assignments:

Readings.

Required

2. Fenton - Three P summary memo (program, project, & policy)
3. Fenton - How to Pay for Sidewalks
4. Review: Michigan Active Community Environment checklist and design toolkit

Assignments.

Utilizing classmate input, finalize your concluding “implementation memo” and video presentation.

ASSIGNMENT DUE: Have provided your comments (and received your partners’ comments) on your implementation memo by this time.

Class Session: Session 13
Date of Class: Week of 8/16
Course Topic(s): Your Plans and Relevant Case Studies

Learning Objectives:

1. Critique their own and others’ implementation ideas to utilize healthy design approaches.
2. Synthesize key implementation lessons from varied case studies, and succinctly summarize these key takeaways (e.g., Shape Up Somerville, Nashville MPO).
3. Utilize a Health Impact Assessment (HIA) to make the case for healthy design, such as Boston’s Metropolitan Area Planning Council HIA of proposed MBTA service and fare changes.

Required Reading/Assignments:

Assignments.

ASSIGNMENT DUE: Final two-page “implementation memo,” and brief video presentation explaining your plan. This must be based on evidence and best practices presented or discovered by you in this class, with the goal of increasing population level physical activity (possibly in a specific target location or group).

This schedule is subject to modification at the instructors’ discretion.