4 January 2021

Winter Quarter 2021
University of Washington

EnvH 538: Public Health and Built Environment
Dept. of Environmental and Occupational Health Sciences, UW School of Public Health
UrbDP 538: Public Health and Built Environment
Dept. of Urban Design and Planning, UW College of Built Environments
EnvH 538 and UrbDP 538 are taught concurrently

Instructor
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Office hours by appointment

Class sessions: Thursdays, 5:00pm – 6:50pm, January 7 to March 11, 2021

Location: Taught synchronously on Zoom:
https://washington.zoom.us/j/99106095800, passcode 2810 **OR**
https://washington.zoom.us/j/99106095800?pwd=NzNFYjcycnlSeVEzdlhQcGhqM3ZhUT09
Meeting ID: 991 0609 5800, passcode: 2810
One tap mobile +12063379723,,99106095800# US (Seattle), passcode: 2810

Course Description

This interdisciplinary course focuses on the increasing recognition that the design of communities and of buildings can impact human health, especially among disadvantaged populations. Community designs that feature parks, sidewalks, trails, public transit, access to healthy food, and connectivity among destinations can promote equity, encourage physical activity, help prevent obesity and its associated health consequences, and reduce dependence on automobiles whose use contributes to air pollution, motor vehicle crashes, and pedestrian injuries. Increased attention to the health implications of the built environment has led to various innovative solutions, such as mixed-use Smart Growth developments, investments in bicycling and pedestrian infrastructure, incentives to reduce gentrification, and the use of health impact assessments to convey health information to community decision-makers. The current and future impacts on the built environment of the COVID-19 pandemic will also be explored.

Course Learning Objectives

At the conclusion of the course, students should be able to:

- Explain how the design of the built environment impacts public health both positively and negatively
- Critique the literature regarding health and built environment including its strengths and weaknesses
- Describe the methods used to assess the built environment and its impact on health and equity
- Describe the options available to promote healthy community design decisions
- Describe the current and potential future implications of the COVID-19 pandemic on the built environment
- Summarize the benefits of and barriers to working in an interdisciplinary environment

Student Evaluation

- Class participation 15%
- Written reflections on readings 30%
- Street and park audit 20%
- 3-5 page paper on research topic 20%
- Two-minute oral testimony 15%

Access and Accommodations: Your experience in this class is important to us. If you have already established accommodations with Disability Resources for Students (DRS), please communicate your approved accommodations to us at your earliest convenience so we can discuss your needs in this course. If you have not yet established services through DRS, but have a temporary health condition or permanent disability that requires accommodations (conditions include but not limited to: mental health, attention-related, learning, vision, hearing, physical or health impacts), you are welcome to contact DRS at 206-543-8924 or uwdrs@uw.edu or disability.uw.edu. DRS offers resources and coordinates reasonable accommodations for students with disabilities and/or temporary health conditions. Reasonable accommodations are established through an interactive process between you, your instructors and DRS. It is the policy and practice of the University of Washington to create inclusive and accessible learning environments consistent with federal and state law.

Academic Integrity: Students at UW are expected to maintain the highest standards of academic conduct, professional honesty, and personal integrity. UW is committed to upholding standards of academic integrity consistent with the academic and professional communities of which it is a part. Plagiarism, cheating, and other misconduct are serious violations of the UW Student Conduct Code (WAC 478-120). We expect you to know and follow the university's policies on cheating and plagiarism, and the SPH Academic Integrity Policy. Any suspected cases of academic misconduct will be handled according to UW regulations. For more information, see the UW Community Standards and Student Conduct website.

Religious Accommodations: Washington state law requires that UW develop a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The UW's policy, including more information about how to request an accommodation, is available at Religious Accommodations Policy. Accommodations must be requested within the first two weeks of this course using the form at https://registrar.washington.edu/students/religious-accommodations-request/.

Class Schedule and Required Readings

All readings are provided on **Canvas Share Space** (https://canvas.uw.edu/) under "Files".

Textbook (purchase not necessary):

- *Making Healthy Places: Designing and Building for Health, Well-Being, and Sustainability*. Andrew Dannenberg, Howard Frumkin, Richard Jackson. Island Press, 2011. (First Edition)
- *Making Healthy Places: Designing and Building for Health, Well-Being, and Sustainability*. Nisha Botchwey, Andrew Dannenberg, Howard Frumkin. Island Press, 2022. (*Second Edition, now in preparation*)

We are now writing the Second Edition of this book (abbreviated as *MHP*). For updated chapters that are ready by the time of class on a topic, we will provide a PDF of the draft chapter on Canvas and welcome your suggestions for improvement. For chapters whose updates are not ready by the time of class, we will provide a PDF of the chapter from the First Edition on Canvas. Details about the book are available at www.makinghealthyplaces.com.

January 7: Introduction to course; overview of public health and the built environment; Andrew Dannenberg, MD, MPH

- MHP Preface (1st edition)
- MHP Chapter 1. Introduction to healthy places (1st edition)
- Corburn J. Equitable and healthy city planning: towards healthy urban governance in the century of the city. Chapter 2 in: E. de Leeuw, J. Simos (eds), *Healthy cities: the theory, policy, and practice of value-based urban planning*. pp. 31-41. Springer, 2017.
- Malizia EE. City and regional planning: a primer for public health officials. *American Journal of Health Promotion.* 2005; 19(5S):1–13.

January 14:

A. Physical activity; injury. Guest speaker: Steve Mooney, PhD, Assistant Professor, UW Dept. of Epidemiology, Harborview Injury Prevention and Research Center, sjm2186@uw.edu

B. Contact with nature

- MHP Chapter 2. Community design for physical activity (1st edition)
- *MHP Chapter 5. Injuries and the built environment (2nd edition)*
- MHP Chapter 15. Contact with nature (1st edition)
- Mooney SJ, DiMaggio CJ, Lovasi GS, et al. Use of Google Street View to assess environmental contributions to pedestrian injury. *American Journal of Public Health*. 2016;106(3):462-469.
- South EC, Hohl BC, Kondo MC, et al. Effect of greening vacant land on mental health of community-dwelling adults: a cluster randomized trial. *JAMA Network Open*. 2018; 1(3):e180298. https://jamanetwork.com/journals/jamanetworkopen/issue/1/3

January 21:

A. Transportation and land use. Guest speaker: Mark Hallenbeck, MS, Director, Washington State Transportation Center; tracmark@uw.edu

B. Behavioral choices

- *MHP Chapter 11. Transportation and land use (2nd edition)*
- *MHP Chapter 19. Behavioral choices and the built environment (2nd edition)*
- Yu W, Chen C, Jiao B, Zafari Z. The cost-effectiveness of bike share expansion to low-income communities in New York City. *Journal of Urban Health*. 2018; 95:888-898.
- Boehmer TK, Wendel AM, Bowers F, et al. U.S. Transportation and Health Tool: data for action. *Journal of Transport and Health*. 2017; 6:530-537.
- Anderson ML, Lu F, Yang J. Physical activity and weight following car ownership in Beijing, China: quasi-experimental cross-sectional study. *BMJ*. 2019; 367: l6491.

- *OPTIONAL*: National Academies of Sciences, Engineering, and Medicine, 2019. *A Research Roadmap for Transportation and Public Health*. Washington, DC: National Academies Press. 2019. https://doi.org/10.17226/25644. 60 pages.

January 28:

READING REFLECTIONS FOR WEEKS 1 TO 4 DUE by 5:00pm
NAME OF PARK AUDIT PARTNER DUE by 5:00pm

A. Impacts of the COVID-19 pandemic on the built environment. In-class exercise. **Andrew Dannenberg MD, MPH**, and **Arthur Wendel, MD, MPH**, Medical Officer, Agency for Toxic Substances and Disease Registry, HHS Region 10, Division of Community Health Investigations, Seattle, wendel.arthur@epa.gov

B. Healthy workplaces, health care settings, and schools

- *MHP Chapter 13. Healthy workplaces (2nd edition)*
- *MHP Chapter 14. Healthy health care settings (2nd edition)*
- MHP Chapter 14. Healthy schools (1st edition)
- Aboelata M. Evergreen Cemetery Jogging Path, Boyle Heights CA. From *Built Environment and Health: 11 Profiles of Neighborhood Transformation*. Prevention Institute, Oakland CA, 2004. [**Note**: Read the 1 profile on Evergreen Cemetery Path, not all 11 profiles]. http://www.preventioninstitute.org/component/jlibrary/article/id-114/127.html?tmpl=component&print=1

Select, read, and write reflections on one of the following two papers:

- Frumkin H. COVID and the built environment. December 2020. Unpublished. **OR**
- Megaheda NA, Ghoneimb EM. Antivirus-built environment: Lessons learned from Covid-19 pandemic. *Sustainable Cities and Society.* 2020; 61,102350. https://doi.org/10.1016/j.scs.2020.102350

February 4:

PARK AND STREET AUDIT DUE by 5:00pm

A. Climate change, resiliency, disasters. Guest speaker: Jeremy Hess, MD, MPH, Professor, Dept. of Emergency Medicine, UW School of Medicine, and Dept. of Environmental and Occupational Health Sciences, UW School of Public Health, jjhess@uw.edu

B. Discussion of park and street audit

- MHP Chapter 16. Resiliency to disasters (1st edition)
- Younger M, Morrow-Almeida HR, Vindigni SM, Dannenberg AL. The built environment, climate change, and health: opportunities for co-benefits. *American Journal of Preventive Medicine*. 2008; 35:517–526.
- Fanzo J, Davis C, McLaren R, Choufani J. The effect of climate change across food systems: Implications for nutrition outcomes. *Global Food Security*. 2018; 18:12-19.
- Dannenberg AL, Frumkin H, Hess JJ, Ebi KL. Managed retreat as a strategy for climate change adaptation in small communities: public health implications. *Climatic Change*. 2019; 153(1), 1-14. https://doi.org/10.1007/s10584-019-02382-0
- Satterthwaite D, Archer D, Colenbrander S, Dodman D, Hardoy J, Mitlin D, Patel S. Building resilience to climate change in informal settlements. *One Earth*. 2020; 2(2):143-156. https://doi.org/10.1016/j.oneear.2020.02.002

February 11:

A. Access to healthy food. Guest speaker: Jesse Jones-Smith, PhD, MPH, RD, Associate Professor, Dept. of Health Services & Nutrition Sciences Program, UW School of Public Health, jjoness@uw.edu

B. Community design for air and water quality

C. Jason Roberts TED talk video to be shown in class: https://youtu.be/ntwqVDzdqAU

- MHP Chapter 3. Food environments (1st edition)
- MHP Chapter 4. Community design and air quality (1st edition)
- MHP Chapter 6. Community design for water quantity and quality (1st edition)
- Cooksey-Stowers K, Schwartz MB, Brownell KD. Food swamps predict obesity rates better than food deserts in the United States. *International Journal of Environmental Research and Public Health.* 2017, 14, 1366. https://www.mdpi.com/1660-4601/14/11/1366.

- Sokolow S, Godwin H, Cole BL. Impacts of urban water conservation strategies on energy, greenhouse gas emissions, and health: Southern California as a case study. *American Journal of Public Health*. 2016; 106(5):941-948. https://ajph.aphapublications.org/doi/pdf/10.2105/AJPH.2016.303053

- *OPTIONAL*: The Built Environment Assessment Training Institute offers two free online training courses on assessing the built environment for (a) Physical Activity, and (b) Nutrition. Time: ~ 4 hours. http://www.med.upenn.edu/beat/online-courses.html

February 18:

RESEARCH PROJECT PAPERS DUE by 5:00pm

A. **Community redevelopment and affordable housing; Yesler Terrace. Terry Galiney,** Seattle Housing Authority, Terry.Galiney@seattlehousing.org

B. Mental health, social capital

- *MHP Chapter 7. Mental health and the built environment (2nd edition)*
- *MHP Chapter 8. Social capital and community design (2nd edition)*
- *MHP Chapter 12. Healthy homes (2nd edition)*
- ChangeLab Solutions. Preserving, protecting, and expanding affordable housing. Executive Summary. 2015. http://www.changelabsolutions.org/sites/default/files/Preserving_Affordable_Housing-EXECUTIVE_SUMMARY_FINAL_20150401_0.pdf
- Smith GS, Breakstone H, Dean LT, Thorpe RJ. Impacts of gentrification on health in the US: A systematic review of the literature. *Journal of Urban Health*. 2020; 97:845-856. https://doi.org/10.1007/s11524-020-00448-4

- *OPTIONAL*: Seattle Housing Authority. Renewing Yesler's promise: the redevelopment of Yesler Terrace. Brochure. 2019. https://www.seattlehousing.org/sites/default/files/Brochure_Redevelopment_of_Yesler_Terrace.pdf

February 25:

A. **Balancing health, equity, and development decisions in planning. Guest speaker: Gene Duvernoy, JD, MBA**, President and CEO Emeritus, Forterra, euge@forterra.org

B. **Green architecture, healthy buildings. Guest speaker: Heather Burpee, M Arch**, Research Associate Professor, UW Department of Architecture; Integrated Design Lab; burpeeh@uw.edu

C. Discussion of research paper assignment

- *MHP Chapter 9. Social equity and healthy urban places (2nd edition)*
- *MHP Chapter 22. Measuring, assessing, and certifying healthy places (2nd edition)*
- Aboelata MJ, Bennett R, Yañez E, Bonilla A, Akhavan N. Healthy development without displacement: realizing the vision of healthy communities for all. Prevention Institute. 2017. 27 pages. https://www.preventioninstitute.org/publications/healthy-development-without-displacement-realizing-vision-healthy-communities-all
- Corburn J, Curl S, Arredondo G, Malagon J. Making health equity planning work: a relational approach in Richmond, California. *Journal of Planning Education and Research. 2015;* 1–17.
- International City/County Management Association (ICMA). Active living for older adults: management strategies for healthy and livable communities. 2003. http://www.ca-ilg.org/sites/main/files/file-attachments/resources__Active_Living.pdf

March 4

A. **Jobs in healthy community design. Guest speakers: Richard Gelb,** Environmental Planner, Public Health - Seattle & King County, Richard.Gelb@kingcounty.gov; **Cailin Henley, MPH,** Alta Planning and Design, cailinhenley@altaplanning.com;
B. **Policy and legislation**
C. **Community engagement**

- MHP Chapter 18. Policy and legislation for healthy places (1st edition)
- *MHP Chapter 21. Community engagement in design and planning (2nd edition)*
- Jernigan DH, Sparks M, Schwartz R. Using public health and community partnerships to reduce density of alcohol outlets. *Preventing Chronic Disease*. 2013; 11(10):E53.
- Chauvin J, Pauls J, Strobl L. Building codes: an often overlooked determinant of health. *Journal of Public Health Policy*. 2016; 37(2):136-148.
- Seattle Office of Planning and Community Development. *Equitable Development Implementation Plan*. 2016. Read pages 1-14; skim through rest of 55-page document. https://www.seattle.gov/Documents/Departments/OPCD/OngoingInitiatives/EquitableDevelopmentInitiative/EDIImpPlan042916final.pdf

March 11:

READING REFLECTIONS FOR WEEKS 5 TO 10 DUE by 5:00pm

A. **Student presentations in class: Two-minute testimony**
B. **Built environment in the developing world; future built environments**

- MHP Chapter 23. Urban health in low- and middle- income countries (1st edition)
- MHP Chapter 24. Built environments of the future (1st edition)
- Jackson RJ, Dannenberg AL, Frumkin H. Health and the built environment: 10 years after. (Commentary). *American Journal of Public Health*. 2013; 103:1542-1544.
- Giles-Corti B, Moudon AV, Reis R, Turrell G, Dannenberg AL, Badland H, Foster S, Lowe M, Sallis JF, Stevenson M, Owen N. City planning and population health: a global challenge. *Lancet*. 2016. http://dx.doi.org/10.1016/S0140-6736(16)30066-6

Optional course readings

- MHP Chapter 21. Training the next generation to promote healthy places. (includes discussion of job opportunities in field) (1st edition)
- *MHP Chapter 25. Healthy places research: emerging opportunities (2nd edition)*
- MHP Glossary (1st edition)
- Urban Land Institute. *Building Healthy Places Toolkit: Strategies for Enhancing Health in the Built Environment*. Washington, DC: Urban Land Institute, 2015. 95 pages. http://uli.org/wp-content/uploads/ULI-Documents/Building-Healthy-Places-Toolkit.pdf
- American Planning Association. *Planning for Equity Policy Guide*. 2019. 29 pages. https://planning.org/publications/document/9178541/

Class discussions of readings

All assigned readings should be completed prior to class. We plan to allow time for discussion of the readings in the second hour of our class sessions. For the *MHP* book chapters, there are Discussion Questions available online at http://makinghealthyplaces.com/wp-content/uploads/2011/08/Discussion-Questions.pdf that we may discuss as time permits.

Class activities/requirements

Reading Reflections: **DUE DATES: January 28 and March 11**

For **each** of the assigned readings each week (chapters and articles), write one paragraph (typically ¼ to ½ page long, single spaced) responding to the following questions:

"Considering the focus of the class on health and built environment issues,

- Should the reading be used in this course next year, using scale of 1 (definitely delete) to 5 (definitely keep)?
- What information in the reading was new to you?
- How does the information in the reading relate to your background and interests?
- How might the information in the reading be useful to you in your future work?"

Deliverables: Set of reading reflections accumulated into a file (Part 1 and Part 2) uploaded to Canvas. Within each set of reading reflections, use chapter number, title, and MHP edition or article author and title as subheadings to clearly identify the reading to which the reflection belongs.

DUE January 28: Reflections Part 1 covering weeks 1 to 4 of readings

DUE March 11: Reflections Part 2 covering weeks 5 to 10 of readings

Field exercise: Park and Street Audit DUE DATE: February 4

1. Review combined park and street audit tool posted on Canvas.
2. Provide instructor with student names in working pairs no later than **January 28**.
3. Students not now living in Seattle or uncomfortable with doing this exercise as a socially distanced pair may do the exercise alone.
4. Work in pairs with a classmate from another college or school (such as CBE and SPH) to conduct an audit of one local park and an adjacent street that leads to the park. **WEAR MASKS AND KEEP APPROPRIATE SOCIAL DISTANCING WITH YOUR PARTNER.**
5. Deliverables to be uploaded in a single file to Canvas, clearly labeled to indicate who worked in your group:
   a) Map of park and adjacent street with key features noted. The map can be from the web, or hand-drawn, or a photo of a map found in the park.
   b) Completed audit tool for that park and street, including recommendations for how that park and street could be improved.
   c) Up to 10 digital photographs highlighting important features – please use low resolution photos. Include brief captions with each photograph.

Research project paper: DUE DATE: February 18

1. Review research methods and topics listed in *Making Healthy Places Chapter 25. Healthy places research: emerging opportunities (2nd edition)*
2. Select a topic of interest from this chapter. Write a 3-5 page single-spaced paper first describing briefly why the topic is important, and then describing in more detail how you would design a research project to add to our knowledge about this topic. Paper should include:
   - Proposed study design
   - Types of skills research team would need
   - Characteristics of a study population (and of comparison group if needed)
   - Data sources
   - Methods such as surveys, informant interviews, use of existing datasets
   - Types of analyses
   - Ethics concerns (if any); need for human subjects approval
   - Types of results that might be found in such a study
   - Possible implications of such results.

   Deliverable: 3-5 page single spaced paper uploaded to Canvas.

Two-minute testimony: DUE DATE: March 11

1. Pick a current topic related to a proposed change in the built environment (locally or elsewhere) that has health implications.
2. Prepare a two-minute oral testimony that might be delivered to a city council, legislature, zoning board, or other decision-making group conveying the health concerns about the project and how it might be improved to promote health or mitigate adverse health impacts.

   Deliverable: Upload the topic of your testimony to Canvas (one sentence or less) and give a timed 2-minute oral presentation **during March 11 class**. Do not submit a written version of what you present to the class.

The topic you pick may be a real or fictional and may be from Seattle or your hometown or elsewhere. You may find a topic in the local newspaper. The proposed project may be favorable to health that you want to support or could be harmful for health that you want to discourage. Your task is to convey to the decision-makers in 2 minutes the impact of the proposal on health and urge them to consider health as part of their decision. Feel free to be creative on your topic. Some examples of possible topics –

- A Stay Healthy Streets bill to permanently designate 100 miles of local streets for use by pedestrians and bicyclists while banning through traffic
- A bill to close three nearby community schools and build one large new school on inexpensive land farther from the students it serves
- A bond issue to provide more funding for new parks and for maintaining existing parks
- A bill to build a new sports stadium and demolish homes of 1000 low-income persons
- A bill requiring 10% of city transportation funds be used to improve bicycle and pedestrian infrastructure
- A proposal to allow e-scooters on all roads, trails, and sidewalks in the city
- A bill to set aside land for more community gardens (P patches) in the city
- A proposal to allow apodments (tiny apartments) to be built in Capitol Hill

The format of your 2 minute testimony should be as follows:

- First introduce yourself: “I am [your real name] representing XYZ organization (real or fictional) or speaking as a public health professional or as a concerned citizen”
- State that the location today is Seattle City Council or wherever
- State that the topic today is the proposed bill to do …… (one sentence maximum)
- State succinctly how the proposed bill affects health and the built environment
- Mention and respond to arguments made by those who disagree with your position
- Conclude with how you are urging the decision-maker to vote or to improve the proposal

Optional opportunity: Editing the Second Edition of *Making Healthy Places*

As noted above, Dr. Dannenberg and co-editors are now writing the Second Edition of *Making Healthy Places* (www.makinghealthyplaces.com) to be published in early 2022. There are unfunded opportunities for students to assist in editing this book from January to June 2021. Tasks may involve identifying case studies, writing photo captions, locating specific references, proofreading, assisting in indexing, etc. Students who assist will be listed in the Acknowledgements section of the book. Please let Dr. Dannenberg know if you are interested in becoming involved in this work.