

DRAFT

USC School of Architecture
ARCH 599 Health and the Built Environment
Fall 2014
4 Units

Class Sessions Fall Semester: This class is offered as 100% online (distance learning) course with synchronous and asynchronous components (see below for specifics).
1-hour lecture; 2-hour presentation and discussion session

Faculty Rachel Berney, PhD, Assistant Professor
Email: berney@usc.edu, Office: Watt 337

Office Hours Office hours will be hosted via a combination of Webex and in-person hours based on instructor location and outreach needs for class (The Webex link and call in number will be posted to Blackboard Announcements).

Introduction and Purpose

This case study-oriented course presents critical relationships between human health and well-being and the built environment at three scales: the building, the landscape, and the city. The overall urban experience is composed of people, their environment, and all of the combined social, cultural, political, and ecological interactions that occur within. There is an interdependence of life experience supporting health and well-being across these scales. The most local scale of experience begins within interior building space, followed by immediate settings and larger landscapes, and finally the overall construction and functioning of the built environment of the city.

Interwoven with this nested three-scale exploration is an examination of the range of critical policy steps undertaken in implementing public health programs. These include: program creation, deployment, outreach and monitoring, evaluation, and evaluation synthesis. The quality of the built environment can have profound effects on human health and well-being and, likewise, on the scope, scale, and effectiveness of public health programs. This course explores those relationships and seeks to understand how to design and how to create policy to optimize health and well-being in urban settings.

Part I Building Scale: introduction; interactions between the built environment and human health and well-being; understanding indoor environmental quality and its affects on people.

Part II Landscape Scale: understanding the role of nature in the built environment to improve physical, mental, and emotional health.

Part III City Scale: understanding how “livable cities” create better opportunities for health and well-being, especially in terms of mobility in the context of origins and destinations and life along the way.

Learning Outcomes

1. To understand the three key scales within the built environment and how each interact with one another as well as how each interact with aspects of human health and well-being and what steps designers can take to improve well-being through their design work.
2. To understand the range of actions taken in public health programming (including: creation, implementation, outreach, monitoring/evaluation, and feeding outcomes back into the process) and how the different stages of public health program creation can work with the built environment in mutually beneficial ways.
3. To develop the ability to critically review and analyze design and public health case studies and write one of your own.

Course Format

This is an online (distance learning course) which is offered both synchronously (real time) (66.6%) and asynchronously (33.3%). The course consists of weekly asynchronous faculty lectures and weekly synchronous faculty-facilitated discussions. This is a 4-unit course with a significant reading and case study component, which means that we require 45 hours of class time (lectures, presentations, and discussions) and 120 hours of homework (reading, reading responses, assignments, case study project) over the course of the 15 sessions. Students should expect a total of 15 hours of faculty lectures and 30 hours of faculty-facilitated presentations and discussions.

Online files (including new materials, assignments, completed assignments) will be updated weekly. Student will be notified of new content in two ways: via email to his/her USC account and via a Blackboard announcement. All class work (journals, assignments, etc) is due weekly.

Regular participation is required for a successful learning experience. Login to the course and participate on a regular basis (at least 2 times per week). Check your course email EVERYDAY for messages. If you are experiencing technical difficulties that prevent electronic communication, contact the instructor immediately by phone. We reserve the right to drop any student who does not participate in online activities for more than one week without contacting faculty.

Course Schedule

Lectures will be presented live weekly. You may log in and listen live and participate via chat or watch the recording later if you want (all lectures MUST be watched by the end of the week they are presented). Presentations and/or discussion will follow the lecture each week.

All lectures will be recorded and available on Webex. Just log in to your account there.

Assignments will be discussed at the end of class. If you attend the class session live, you will be able to ask questions via chat.

Please post all assignments to your Journal on Blackboard. Assignments are due before class on the date assigned.

Logging in to Webex

Go to <http://webex.com>. Click the "Attend a Meeting" button. If you have never used Webex before you will need to download a small application. Webex is accessible on your computer or iPad/tablet. Please log in to Webex and get set up at least 15 minutes before the first lecture presentation, if not sooner. Create a free Webex account and you'll be notified by email of scheduled sessions. Class news will be posted on Announcements in Blackboard.

Participating in Audio and Video Discussions

Be sure you have a good Internet connection - at least three bars on your WiFi. During the lecture presentations your audio will be muted. When participating in discussions, a headset is recommended for best quality.

To connect with online sessions (synchronous or asynchronous) you will log in using the session link sent to you via email. It is also posted in Announcements on Blackboard. You can listen in using your computer audio, or by calling in via phone. The meeting number will be provided in the email you receive before each presentation or discussion. It will also be posted in Announcements. All lecture presentations will be uploaded to Webex for playback. They will also be uploaded to Blackboard as Powerpoint and PDF files.

Assignments

Please post your assignments to a Journal you create on Blackboard. In addition to weekly reading responses, there are two case study analysis assignments. These two assignments will help prepare you for the final project, which is to develop a case study of a design project or public health program.

Announcements and News

Announcements and News about the course will be posted by the instructors in Blackboard. Public news about the course will be posted on Twitter here: <https://twitter.com/arch599visual>

Course Requirements and Grades

30% Class Assignments – (2) case study analysis assignments each worth 15% of the course grade
40% Online Participation –viewing of weekly lectures, submittal of reading responses, participation in discussions, presentations of work
40% Final Project – development of a case study analyzing a project or a program (requirements, details, etc. will be outlined in the Final Project handout; the project will be due at the end of the class)

Course Policies

Required level of analytical and writing competence

Successful students will have basic familiarity with how to break down and analyze written documents and how to craft a well-written essay in English. The case study format used for the main assignment will be taught in class. Familiarity with case study formats and purposes is recommended.

Required level of technology and technical competence

Successful students will have basic familiarity with the required course software, hardware, infrastructure, and connectivity requirements below.

Required course software, hardware, infrastructure, and connectivity requirements:

- Blackboard Learning Management System
- Windows or Mac OS, latest version preferred.
- Internet Explorer, Firefox, or Chrome Browser with latest Adobe Flash plug-in installed.
- Computer audio headset with microphone preferred for online discussion but not required
- Reliable high-speed internet connection
- Streaming media access such as USC on iTunes U or YouTube
- Webex for synchronous meeting; a small free download may be required on your computer or tablet
- Access to collaboration and search tools such as Google, Creative Commons, and Flickr

Standards of Appropriate Online Behavior

Please access and review “Policies Regarding Student Use of Computing Resources at USC.” This document can be accessed at <http://www.usc.edu/its/policies/student/>.

The protocols defined by the USC Student Conduct Code will be upheld in this course. For more information, use this link: (<http://www.usc.edu/student-affairs/SJACS/>)

Technical Support

Help with network connectivity and software is available by contacting the consultants at the ITS Customer Support Center by emailing consult@usc.edu or calling 213-740-5555. Walk-in support is available in Leavey Library’s Information Commons, on the lower level. Visit the Customer Support Center page at: <http://www.usc.edu/its/csc/>

Statement for Students with Disabilities

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m.–5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776.

Statement on Academic Integrity

USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one's own academic work from misuse by others as well as to avoid using another's work as one's own. All students are expected to understand and abide by these principles. *Scampus*, the Student Guidebook, contains the Student Conduct Code in Section 11.00, while the recommended sanctions are located in Appendix A: <http://www.usc.edu/dept/publications/SCAMPUS/gov/>. Students will be referred to the Office of Student Judicial Affairs and Community Standards for further review, should there be any Appendix N: Sample Syllabus Template N-3 suspicion of academic dishonesty. The Review process can be found at: <http://www.usc.edu/student-affairs/SJACS/>.

Accreditation

The Master of Landscape Architecture degree program includes three curricula. Curriculum +3 for students with no prior design education and Curriculum +2 for students admitted with advanced standing have full accreditation by the Landscape Architecture Accreditation Board. Curriculum +1.5 for students with advanced placement is a post-professional study and is not subject to accreditation. Information about landscape architecture education and accreditation in the United States may be found on-line at <http://www.asla.org/Education.aspx>.

The USC School of Architecture's five year BARCH degree and the two year M.ARCH degree are accredited professional architectural degree programs. All students can access and review the NAAB Conditions of Accreditation (including the Student Performance Criteria) on the NAAB Website, http://www.naab.org/accreditation/2009_Conditions.aspx.

Bibliography

There are three required course books, as well as select additional readings and website content that you are responsible for.

REQUIRED TEXTS:

- Hynes, H. Patricia & Russell Lopez (2009). *Urban Health: Readings in the Social, Built, and Physical Environments of US Cities*. Burlington, MA: Jones & Bartlett
Lopez, Russell P. (2012). *The Built Environment and Public Health*. New York: Wiley.
Yin, Robert K. (2013). *Case Study Research: Design and Methods*. New York: Sage.

ADDITIONAL BIBLIOGRAPHIC REFERENCES LISTED IN THE CLASS SCHEDULE:

- Cervero, Robert. 1998. *The Transit Metropolis: A Global Inquiry*. Washington, D.C.: Island Press.
Engelke, Peter & Thomas Schmid. 2003. *Health and Community Design: The Impact of the Built Environment on Physical Activity*. Washington D.C.: Island.
Hou, Jeffrey, Julie M. Johnson, and Laura J. Lawson. 2009. *Greening Cities, Growing Communities*. Seattle: University of Washington Press.
Hynes, H. Patricia and Genevieve Howe. 2009. "Urban Horticulture in the Contemporary United States: Personal and Community Benefits." In *Urban Health: Reading in the Social, Built, and Physical Environments of U.S. Cities*, edited by H. Patricia Hynes and Russell Lopez, 261-276. Burlington, MA: Jones and Bartlett Publishers.
Kaplan, Rachel, Stephen Kaplan, & Robert Ryan. (1998). *With People in Mind: Design and Management of Everyday Nature*. WDC: Island Press.
Kellert, Stephen R. 2004. "Beyond LEED: From Low Environmental Impact to Restorative Environmental Design." Keynote Address presented at the Greening Rooftops for Sustainable Communities Conference, Sponsored by Green Roofs for Healthy Cities, Toronto, CA, and City of Portland, Portland, OR, June 4.
Marcus, Clare Cooper and Naomi A. Sachs (2014). *Therapeutic Landscapes: An Evidence-Based Approach to Designing Healing Gardens and Restorative Outdoor Spaces*. New York: Wiley.

- Massey, Douglas S. 2009. "The Age of Extremes: Concentrated Affluence and Poverty in the 21st Century." In *Urban Health: Reading in the Social, Built, and Physical Environments of U.S. Cities*, edited by H. Patricia Hynes and Russell Lopez, 5-36. Burlington, MA: Jones and Bartlett Publishers.
- Raphael, Dennis. 2009. "Health Inequities in the United States: Prospects and Solutions." In *Urban Health: Reading in the Social, Built, and Physical Environments of U.S. Cities*, edited by H. Patricia Hynes and Russell Lopez, 37-64. Burlington, MA: Jones and Bartlett Publishers.
- Samet, Jonathan M. and John D. Spengler. 2009. "Indoor Environments and Health: Moving into the 21st Century." In *Urban Health: Reading in the Social, Built, and Physical Environments of U.S. Cities*, edited by H. Patricia Hynes and Russell Lopez, 129-140. Burlington, MA: Jones and Bartlett Publishers.
- Sloane, David. 2006. From Congestion to Sprawl: Planning and Health in Historical Context. *Journal of the American Planning Association* 72:1, 10-18.
- Wargo, John. 2010. *Green Intelligence: Creating Environments That Protect Human Health*. New Haven, CT.: Yale University Press.

REFERENCE BOOKS:

- Chicago Manual of Style*, 16th Edition.
- Hunting, Katherine and Brenda L Gleason. 2012. *Essential Case Studies in Public Health: Putting Public Health into Practice*. Burlington, MA: Jones and Bartlett Publishers.
- Yin, Robert K. (2011). *Applications of Case Study Research*. New York: Sage.

WEBSITES AND ONLINE DOCUMENTS:

- CTOD, *TOD and Public Health: Bringing DOT to Scale in Los Angeles*
http://latod.reconnectingamerica.org/sites/default/files/factsheet_publichealth.pdf
- Healthy People
<http://healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=12>
- National Renewable Energy Library, Edwards and Torcellini, *Lit Review of the Effects of Natural Light on Building Occupants*
<http://www.nrel.gov/docs/fy02osti/30769.pdf>
- U.S. Department of Housing and Urban Development, Transit-Oriented Development
<http://www.hud.gov/offices/cpd/about/conplan/tod.cfm>
- U.S. Green Building Council, Leadership in Energy and Environmental Design (LEED) rating system
<http://www.usgbc.org/DisplayPage.aspx?CategoryID=19>
- UNEP, *Livable Cities: The Benefits of Urban Environmental Planning*
http://www.citiesalliance.org/sites/citiesalliance.org/files/CA_Docs/resources/cds/liveable/liveablecities_web_7dec07.pdf
- Yale Environment 360, Opinion column by John Wargo
http://e360.yale.edu/feature/leed_building_standards_fail_to_protect_human_health/2306/

Cases studies to be adapted from multiple locations, including:

- American Institute of Architects
- American Public Health Association
- American Society of Landscape Architects
- Harvard University Global Health series

Landscape Architecture Foundation

Cases to write for the class:

Teaching Case Study #1 – Evaluating San Francisco’s Federal Building OR Evaluating Seattle’s Bullitt Center (Konis)

Teaching Case Study #2 – Visible Ecology in Urban Neighborhoods (Berney)

Teaching Case Study #3 – Mobility Plan for an LA Neighborhood (Berney)

Class Schedule

| Week | Topic | Readings (to be completed before lecture on the week they are assigned) | Assignments |
|------|--|---|--|
| | BUILDINGS | Note: Average reading load of 65 pages/week + some website review. | Note: Reading responses are due weekly |
| 1 | <u>Course intro</u> ; concepts in public health in the built environment and public health programs; overlaps and current and future synergies | READ BEFORE FIRST LECTURE: Lopez, Chap. 1 “Introduction to the Built Environment and Health” (10 pp); Massey “The Age of Extremes: Concentrated Affluence and Poverty in the 21st Century” (32 pp); Raphael, Health Inequities in the United States: Prospects and Solutions” (28 pp); Sloane “From Congestion to Sprawl” (9 pp) (79 pages total) | |
| 2 | <u>Cradle to Cradle</u> : building scale intro; indoor environmental quality (IEQ); intro teaching case study #1 ; physical building elements related to health, such as materials, toxicity, “products plus” | Read Case Study #1 – Konis, “Evaluating the SF Federal Building OR Evaluating Seattle’s Bullitt Center” (25 pp); Lopez, Chap. 7 “Indoor and Outdoor Air Quality” (17 pp); Samet and Spengler, “Indoor Environments and Health: Moving into the 21st Century” (10 pp) (52 pages total) | |
| 3 | <u>Living Building Challenge/LEED</u> : Psychological aspects of health in relationship to buildings, user needs and preferences | Yin, Chap. 2 “Designing Case Studies” (44 pp); Kellert, “Beyond LEED: From Low Environmental Impact to Restorative Environmental Design” (18 pp); Wargo, “LEED Building Standards Fail to Protect Human ” (62 pages total + website) | |
| 4 | <u>The Building Blocks of Case Studies</u> : Introduction; elements of case studies; how to design and report them | Lopez, Chap. 14 “Assessment Tools and Data Sources (15 p); Lopez, Chap. 15 “Health Policy and Programs” (13 pp); Yin, Chap. 6 “Reporting Case Studies” (32 pp) (60 pages total) | |

| | | | |
|----|--|--|---|
| 5 | <u>Right to Light</u> : physiological aspects of health in relationship to buildings; activity patterns; circadian entrainment, role of thermal and lighting regimes and lack of stress on body | Edwards and Torcellini, "Lit Review of the Effects of Natural Light on Building Occupants" (57 pp); Healthy People website (57 pages total + website) | |
| | LANDSCAPES | | |
| 6 | <u>Nearby Nature</u> : introduction to the role of urban nature of mental, emotional and physical health | Kaplan, Kaplan and Ryan, Section 1 "By Way of Explanation: People and Nature" (27 pp); Yin, Chap. 3 "Preparing to Collect Case Study Evidence" (31 pp); Yin, Chap. 4 "Collecting Case Study Evidence" (29 pp) (87 pages total) | Case Study Exercise #1: Collecting Evidence due |
| 7 | <u>Right to Recreation</u> : intro teaching case study #2 ; access to open space; programming; rec and park versus park and rec | Read Case Study #2 – Berney, "Visible Ecology in Urban Neighborhoods" (25 pp); Engelke and Schmid, Chap. 3 "Physical Activity and Public Health" (16 pp), Chap. 4 "Physical Activity I" (20 pp), and Chap. 5 "Physical Activity II" (22 pp) (83 pages total) | |
| 8 | <u>Food Deserts, Food Security, and Urban Ag</u> : access to food; opportunities for urban ag; forms of urban ag | Hou, Johnson and Lawon, Chap. 12 "Visions of Urban Community Gardens" (25 pp); Hynes and Howe, "Urban Horticulture in the Contemporary U.S." (15 pp); Lopez, Chap. 9 "Food, Nutrition, and Food Security" (21 pp). (61 pages total) | |
| 9 | <u>Restorative Natural Environments</u> : how different types of landscape interventions fit different settings in the built environment; how restorative natural environments aid all aspects of well-being | Kaplan, Kaplan and Ryan, Section II and IV "Meeting the Challenges" (49 pp) and "With People in Mind" (26 pp) (75 pages total) | |
| 10 | <u>Healing Gardens</u> : landscaped spaces designed specifically for dealing with different types of trauma | Lopez, Chap. 11 "Mental Health, Stressors and Health Care Environments" (15 pp); Marcus and Sachs, "Intro" (4 pp), Chap. 4 "Types and Locations of Therapeutic Landscapes in Healthcare" (10 pp), Chap. 6 "General Design Guidelines" (34 pp), Chap. 16 "Horticultural Therapy and Healthcare Garden Design" (10 pp), and Chap. 20 "Evaluation of Therapeutic Gardens" (8 pp) (81 pages total) | |
| | CITIES | | |
| 11 | <u>Livable Cities</u> : introduction to the role of city spatial logics in creating livable cities; walkability; resilient cities | Lopez, Chap. 3 "Planning and Urban Design" (23 pp); UNEP, "Livable Cities" (Read Section 1, pp. 1-12); | Case Study Exercise #2: Analyzing Evidence due |

| | | | |
|----|--|---|------------------------|
| | | Yin, Chap. 5 "Analyzing Case Study Evidence" (43 pp) (77 pages total) | |
| 12 | <u>Spatial Logics</u> : how mobility; demographics; access to recreation, to work, to medical care, etc. Intro teaching case study #3 . | Read Case Study #3 – Berney "Mobility Plan for an LA Neighborhood" (25 pp); Lopez, Chap. 10 "Vulnerable Populations" (15 pp), Chap. 12 "Social Capital (19 pp), and Chap. 13 "Environmental Justice" (21 pp) (80 total pages) | |
| 13 | <u>Mobile Neighborhoods</u> : neighborhood mobility plans; connecting non-motorized transport and health opportunities | LEED for Neighborhood Development (review guidelines on website); Lopez, Chap. 4 "Transportation Policies" (15 pp) (15 pages total + website) | |
| 14 | <u>21st century TOD</u> : transit oriented development in the 21st century | Cervero, Chap. 1 "Transit and the Metropolis" (23 pp); Engelke and Schmid, Chap. 7 "Transportation Systems" (19 pp), Chap. 9 "Urban Design Characteristics (25 pp), and Chap. 10 "Principles from Seattle and Atlanta" (10 pp) (77 pages total) | |
| 15 | <u>Reframing the City</u> : What's the city for? Who's the city for? Returning to concepts in public health in the built environment and public health programs; overlaps and current and future synergies | Rogers "Cities: The Vital Core" (7 pp), Wargo, Part 5 "Lessons Learned and Emerging Threats" (60 pp) (67 pages total) | Case Study Project due |