MISSISSIPPI STATE UNIVERSITY

Landscape Architecture Department
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Teaching Reflections

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Landscape Architecture Graduate Studio II, offered in Spring 2014 at Mississippi State University, is a graduate level studio course for the first year MLA students. Our department has recently gone through a curriculum change for the MLA program in order to add a non-thesis track into our program. We started the new MLA curriculum in the academic year of 2013 to 2014. The new curriculum provides each studio with a different topic and emphasis. For Graduate Studio II, the course is focused on incorporating current concerns of public health into studio design works.

Graduate Studio II constituted lectures, reading discussions, and two projects. The first project sought to provide students general knowledge and analytical skills regarding landscape performance for public health, and the second project aimed to integrate landscape performance into design practice. The lectures and readings have been designed to provide intellectual background for the two projects. They covered a wide range of topics related to urban planning, landscape design, and health assessment.

The first project has two components—case study and performance metrics. Through an on-site investigation of two types of neighborhood environments—a traditional neighborhood and conventional suburban neighborhood, students examined how landscape design quality would correlate with the landscape performance for public health. The case study helped the students to receive first-hand experiences of how features such as spatial scales, vegetation coverage, pedestrian infrastructure, and architecture can affect people's perception of the environment and their physical activity levels. The scholarly articles read in the course provide research tools for the students to analyze design qualities that would affect physical activity. The case study and readings set a foundation for the students to develop performance metrics evaluating and measuring the design qualities of a community open space that would affect human health. The students made efforts to quantify the design features based on research findings of the existing literature. They also looked at the measurement of landscape performance and the outcome for public health.

The second project was a design project that would convert the abandoned railroad that runs through the city downtown of Starkville in Mississippi into a greenway. The students were encouraged to provide a regional vision for the City of Starkville, exploring opportunities of urban infill and business development in the area as well as provide infrastructures for active living. The metrics the students developed for project one has served as design guideline and an evaluation tool for their projects.

The combination of research, reading, and design has proved to be successful in teaching students both methodologies and knowledge about design for health. They grasped the key issues that related to planning and design practices that would affect human health. The students' works have received high regards from our jury and peer students in terms of level of depth, creativity, and a vision of change for the local community. The following is short summary of the strength and possible improvements for the course:

1. Performance metrics could be more focused on a particular type of landscape. The definition of "community open space" is too broad to develop a metrics for design qualities and performance as a class exercise. A narrowed scope of investigation will be helpful.
2. Instead of simply looking at the measurement of performance/outcomes, the investigation of design qualities that would affect health performance proved to be very helpful in guiding students' design projects to be sensitive to health concerns.

3. Lectures and readings of research papers helped to connect research with design practice.
4. Case study analysis is very helpful, but it is limited by the physical context in which the university is located. Field trips and other forms of research (such as use of internet) might be a good complement to case study work.

Department of Landscape Architecture
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Spring 2014

LA 8522 Landscape Architecture Graduate Studio II—Public Health

Instructor: Chuo Li, PhD
Office Hours: M, W, F 11am-12pm and by appointment

Schedule: M, W, F 9am – 10:50am

Course Description
How does the built environment impact public health? How can planning and landscape design improve quality of life, assure better environmental and human health? The course will be focused on landscape design and human health, which responds to an increasing awareness of the failure of contemporary urban planning and community design to recognize human health. In this course, you will be introduced to some of the key considerations in developing design solutions to address public health issues such as obesity, environmental pollution, and social justice. Students will be challenged to think critically of the impact of the built environment on human well-being. The course offering is meant to be an introduction of the methods, theories, and concepts of healthy places as it applies to the practices of landscape architecture. The goals of the course include:

- To equip students with knowledge of precedents, standards, measures of landscape design that promotes public health
- To learn the environmental mechanism and landscape performance metrics in human health and utilize them to evaluate the health impacts of the built environment
- To advance design models that incorporate community health

The studio intends to encourage the students to challenge their own abilities and knowledge through exploration, experimentation, and refinement. The class projects provide the opportunity to integrate knowledge gained from lectures, readings, field trips, and class discussions with professional design practices in landscape architecture.

Course Work
Because this studio requires a wide scope of knowledge, skills, and scale of inquiry, course work incudes completion of reading assignments, participation of class discussion, site visit, and developing designs. Each course project will have a separate project description providing detailed instruction.

Project One: Landscape Performance Metrics in Public Health
In this project, you will work in community open spaces and assess the health consequences of the design forms. Through the process of understanding existing literatures on the health impacts of the built environment, measuring landscape design qualities, behavior observation, you will develop a report on landscape performance

metrics in identifying and evaluating the landscape design qualities that would encourage healthy living.

Project Two: Community Open Space—Greenway Design
Building on the work in Project One, Project Two will focus on the application of landscape performance metrics in public health on design practices, both as a design guideline and an audit tool for your design proposal. The purpose of this project is to incorporate the landscape performance metrics and active living network into the traditional design process for landscape architects. The project will utilize studies and methodologies developed in the field of built environment and human health to propose design solutions that support and enable healthy and active lifestyles.

Course Evaluation
Project will be evaluated based up achievement as displayed in your process, product, and presentation.

Project One: Landscape Performance Metrics – 35%
Project Two: Greenway Design – 45%
Project Presentation: 10%
Class Attendance and Discussion: 10%

Required Readings
- Frumkin H, Frank L, Jackson R. 2004. *Urban Sprawl and Public Health.* Island Press.
- Reading materials in Blackboard (added throughout semester)

Recommended Readings
- Kawachi, I, berkman, L. 2003. *Neighborhoods and Health*. Oxford University Press.
- Frank, L, Engelke, P, Schmid, T. 2003*. Health and Community Design: The Impacts of the Built Environment on Physical Activity*. Island Press.
- Morris, M, Duncan R, Hannaford K, Kochtitzky C, Rogers V, Roof K, Solomon J. 2006. *Integrating Planning and Public Health*. APA Planning Advisory Service.

Recommended Websites
Design for Health http://www.designforhealth.net/
Healthy Urban Planning http://www.euro.who.int/healthy-cities/UHT/20050201_2
Robert Woods Johnson Foundation http://www.rwjf.org/publications/otherlist.jsp
International Healthy Cities Foundation http://www.healthycities.org/

Class Schedule

Date		Class Topic	Texts
Week 1	Jan. 13	Introduction: Course overview and themes Hand out project one	
	Jan. 15	Topic: Urban Sprawl Landscape performance measurement	- Burchell, R. W. and Mukherji, S. 2003. Conventional development versus managed growth: the costs of sprawl. *American Journal of Public Health* 93 (9): 1534-1540. - Frumkin, H, Frank, L, Jackson, R. 2004. Chapter 1 and 5.
	Jan. 17	Site visit, behavior observation and behavior mapping	- Geller A. 2003. Smart growth: a prescription for livable cities. *American Journal of Public Health*. 93(9): 1410-1415. - Handy, S, Boarnet, M, Ewing, R, Killingsworth, R. 2002. How the built environment affects physical activity. *American Journal of Preventive Medicine* 23 (2s), 64-73. - Urban Sprawl and Public Health. Ch11.
Week 2	Jan. 20	Holiday (No Class)	
	Jan. 22-24	Design Week (No Class)	
Week 3	Jan. 27	Studio work/desk crits as requested	- Northridge, M. E, Sclar, E. 2003. A joint urban planning and public health framework: Contributions to health impact assessment. *American Journal of Public Health* 93 (1), 118-121.
	Jan. 29	Class discussion of readings	- Malizia E. 2005. City and regional planning: a primer for public health officials. *American Journal of Health Promotion* 19(5): S1-13. - Griffiths, J. 2006. Mini-symposium: Health and environmental sustainability: The convergence of public health and sustainable development. *Public Health* 120, 581-584.
	Jan. 31	Studio work/desk	- Kawachi, I. and Berkman, L. 2003. Ch 1.

		crits	
Week 4	Feb. 3	**Presentation: Project One Phase I Case Studies**	
	Feb. 5	Project One Phase II: community open space performance metrics in public health Lecture: Performance metrics	- Complete street metrics (example) - Leed ND - Morris: Appendix D
	Feb.7	Studio work	- Dannenbert et al. 2006. Growing the field of health impact assessment in the United States: an agenda for research and practice. *American Journal of Public Health* 96 (2): 262-270. - Kawachi, I. and Berkman, L. 2003. Ch 5.
Week 5	Feb. 10	Class discussion: Health Impact Assessment	- Forsyth A, Slotterback C, Krizek K. 2010. Health impact assessment in planning. *Environmental Impact Assessment Review* 30: 42-51. - Student research of performance metrics examples
	Feb. 12	Studio work/desk crits	
	Feb. 14	Work day	- Srinivasan S., Deary, A. O'Fallon, L. R. 2003. Creating healthy communities, healthy home, healthy people: initiating a research agenda on the built environment and public health. *American Journal of Public Health* 93 (9): 1446-1450.
Week 6	Feb. 17	**Pin-up:** **Performance metrics**	
	Feb. 19	Studio work/desk crits	

		as requested	
	Feb. 21	Studio work	
Week 7	Feb. 24	**Presentation: Project One Phase Two** **PDF file due by 12pm**	
	Feb. 26	Lecture: Greenway Hand out project 2	- Dannenberg et al. 2003. The impact of community design and land-use choices on public health: a scientific research agenda. *American Journal of Public Health* 93 (9): 1500-1508. - Lindsey, G, Wilson, J, Yang J. A, Alexa, C. 2008. Urban greenways, trail characteristics and trail use: Implication for design. *Journal of Urban Design* 13 (1), 53-79.
	Feb. 28	Site visit: Site inventory and analysis	- Northridge, M. E, Sclar, E. D, Biswas, P. 2003. Sorting out the connections between the built environment and health: a conceptual framework for navigating pathways and planning healthy cities. *Journal of Urban Health* 80 (4): 556-568.
Week 8	March 3	Topic: Making Healthy Places Lecture and class discussion	- Frank L, Anderson M, Schmid T. 2004. Obesity relationships with community design, physical activity, and time spent in cars. *American Journal of Preventive Medicine* 27 (7): 87-96.
	March 5	Studio work/desk crits	
	March 7	Field Trip	
Week 9	March 10-14	No Class (Spring Break)	
Week 10	March 17	Topic: New Urbanism Lecture and	- Cervero, R., et al. 2007. Models for change: Lessons for creating active living communities. *Planning Magazine*, A1-A12. - Rodriguez, D. A., Khattak, A. J., and Evanson, K. R. 2006.

		class discussion	Can New Urbanism encourage physical activity? *Journal of the American Planning Association* 7772 (1), 43-54.
	March 19	Studio work/desk crits	- Evans, G. 2003. The built environment and mental health. *Journal of Urban Health* 80 (4): 536-555.
	March 21	Studio work	
Week 11	March 24	**Project Two Phase I Presentation**	
	March 26	Work Day/ Phase II Master Plan: concept and program	- Pucher J and Dijkstra L. 2003. Promoting safe walking and cycling to improve public health: lessons from the Netherlands and Germany. *American Journal of Public Health* 93 (9): 1509-1516.
	March 28	Work Day/ concept and program	
Week 12	March 31	**Pin-up: Concept and program**	
	April 2	Studio work/schematic plan	- Leyden, K. M. 2003. Social capital and the built environment: the importance of walkable neighborhoods. *American Journal of Public Health* 93 (9): 1546-1551.
	April 4	Studio work/desk crits	- Burden, D. 2000. Street design for health neighborhoods. Website: http://gulliver.trb.org/publications/circulars/ec019/Ec019_b1.pdf - Hansen, G. 2014. Design for healthy communities: The potential of form-based codes to create walkable urban streets. *Journal of Urban Design* 19 (2): 151-170.
Week 13	April 7	**Pin-up: schematic plan**	

	April 9	Studio work	Cook, J. A. et al. 2013. How does design quality add to our understanding of walkable communities? *Landscape Journal* 32 (2): 151-162.
	April 11	**Project Two Phase II Presentation: Master Plan**	
Week 14	April 14	Studio work/site plan	
	April 16	Site plan/desk critics	
	April 18	Holiday (No Class)	
Week 15	April 21	Studio work	
	April 23	Studio work	
	April 25	Work Day/utilize performance metrics for project evaluation	
Week 16	April 28	Studio work	
	April 30	**Project Two Final Presentation** **PDF file due by 12pm**	

(Please note that situations may arise that necessitate schedule changes)

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Project 1: Landscape Performance Metrics in Public Health (35 % of Course Grade)

How does the built environment impact public health? What are the critical tools to evaluate specific design features? This assignment is intended to get you thinking about community open space, design, and public health. Each group of students will be assigned a neighborhood to conduct behavior observation. The group of students will visit the site together and gather site measurements such as land use, density, street network etc. Each group will then develop behavior maps and tables documenting residents' use of the neighborhood open spaces. Next, students will work together to develop performance metrics evaluating neighborhood features promoting physical activity. Due to the small size of our class, each individual will be responsible to develop metrics for one particular evaluation category such as accessibility, safety, or aesthetics etc. And students will work together to compile all the information into a final report.

Project Objectives:

1. Identify features of neighborhood built environment that influence health.
2. Evaluate the evidence for the link between built environment and health.
3. Propose landscape performance metrics to assess the health consequences of neighborhood design forms.

Phase One: Case Studies
For the first phase, work in groups of 2 - 3 students to gather information of the study neighborhoods, articulate analysis about the neighborhood's site context, streets, and park/open space.

The following are some suggested aspects of SITE CONTEXT you might want to measure and discuss in your team:

- Land use in nearby area (approximately 1/2 mile length/radius from the neighborhood's boundaries) and residential density
- Circulation and accessibility – vehicular, pedestrian, location of transit line(s), and other
- Linkages to other important open space/activities/public infrastructures
- Neighborhood design characteristics (tree coverage, street network, lot size, street setbacks, open spaces, architectural styles, street lights, etc.).

For USER BEHAVIORS, you need to develop the following elements:

1. Three behavior maps addressing user activities in three time slots of the day: morning, noon, and afternoon.
2. A table/tables showing daily use pattern of the neighborhood open spaces (streets, parks, etc.).
3. A written summary of the neighborhood design qualities (in bullet form) that encourage/discourage physical activity.

The team work will be presented in PowerPoint on **Monday, Feb. 3**. The pdf of work should be formatted to 11x17 booklet to be submitted for review.

Phase Two: Performance Metrics for Neighborhood Environment
In the second phase, the members of each team will work together to decide the major categories and indices for evaluating the design qualities of a community open space that would affect health. Each student will select one particular category to work on. And at the end all the information will need to be compiled into a final report.

The final presentation for this phase should be presented in PowerPoint format.

Develop a booklet for submission (i.e. 8.5x11 or 11x17), **Due on Monday, Feb.24.**

The final report should include at least the following elements:
1. Introduction
2. Metrics: evaluation categories and indices
3. Conclusions

Other elements that you feel are needed can also be included.

Schedule (see class syllabus)

Evaluation/Grading

Phase One (group)	15%
Phase Two (group work)	10%
(Individual work)	10%
	35%

Criteria for Grading:
1. Efficient and productive use of time (new work to present each day of class; steady progress)
2. Demonstrate awareness and understanding of built environmental factors contributing to human health
3. Thoroughness and in-depth considerations of multiple environmental factors
4. Writing clarity

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Project 2: Greenway Design in Starkville, MS (45 % of Course Grade)

Greenways as defined by Little (1990) as protected linear corridor that improve environmental quality and provide for outdoor recreation. Although greenways have been a component of landscape planning for over a century, only recently they have been considered central to the open space planning process. For this project, we are going to develop a greenway design for the city of Starkville that would promote public health by providing spaces for recreation, socialization, and mediating environmental pollutions. The greenway is also able to protect biodiversity, protect regional cultural characteristics, and allow for economic growth and development. You will need to use landscape performance metrics created in project one to evaluate/assess how well your site plan perform for public health.

Project Objectives:

1. To understand and grapple with the critical issues with regard to site design and public health
2. To propose a design response appropriate to site context and program
3. To evaluate site design for the built environment-health link.

Phase One: Analysis of Site Context

For the first phase, the class will work as a group. Each student will be responsible to gather information, articulate the analysis about the site context regarding one of the following categories:

The following are some suggested aspects of SITE CONTEXT you might want to measure and discuss in your team:

- Land use in nearby area (approximately 1/2 mile length/radius from the neighborhood's boundaries), character of the neighborhoods and surrounding areas
- Circulation and accessibility – vehicular, pedestrian, location of transit line(s), access considerations, and parking opportunities
- Topography, hydrology, soils, wildlife, habitat assessment and suitability analysis
- Demographics, needs assessment, and socio-cultural considerations
- Economic and future opportunities (what might the project mean to the economic opportunities of the community and downtown Starkville in terms of real estate and commercial development?)

Analysis should condense/explain the information and the implication of the information. It is important to not simply present the information, but interpret information in a way that is helpful to create design ideas and concepts.

Phase One will be presented in PowerPoint on **Monday, March 24**. Group will develop a booklet for submission (11x17), Due by the class.

Phase Two: Greenway Master Plan

Using the analysis materials you developed in phase one, it is time to begin *design* work. Break apart what is inventory versus what is truly analysis that conveys design and programming decisions. Where is your design inspiration coming from? How do you take the context analysis to the next level so that it clearly conveys your emerging concepts? Develop presentation boards (you decide the size and number) that include the following elements…

E 1: Concept statement

- Based on the previous context and neighborhood analysis materials, prepare a *concept statement/plan* and show the key considerations that most influence your emerging concept.

E 2: Master Plan

- An illustrative master plan -- you decide ideal scale for sheet size depending on your layout decisions; include enough detail of adjacent land uses to support/enhance your plan. Add images, precedents, or sketches to explain the design features.

E 3: Performance Assessment

- Using the landscape performance metrics you developed in project one to evaluate the design qualities of your master plan that would help promote public health. You need to create a chart showing the scores your project receive in each design category and a written summary addressing key issues in your site plan to achieve performance benefits in terms of promoting public health.

Phase Two will be presented on **Friday, April 11**.

Phase Three: Site Design

The students will select one area on your plan and develop it in greater details. It is acceptable to slightly revise the master plan in response to new information gained during this more detailed study.

Please include the following elements as minimum:

E1: An illustrative site plan with a scale appropriate to sheet size.
E2: Two sections, showing locations on plan.
E3: Two eye-level perspectives. Make sure to include the necessary contexts. Indicate on plan where perspective is taken from.

The final presentation (phase two and phase three) will be on Wednesday, April 30.
PDF of final works due on April 30 at 5pm.

Schedule (see class syllabus)
Evaluation/Grading

Phase One	10%
Phase Two	20%
Phase Three	15%
	45%