

THE UNIVERSITY  
*of* NORTH CAROLINA  
*at* CHAPEL HILL  
  
DEPARTMENT *of* CITY *and* REGIONAL PLANNING

**Plan 651** Urban Form and Design of Cities

Prof. Andrew H. Whittemore

Spring 2022

**Overview**

This course examines urban form as the expression of economic, political, cultural, and environmental processes. The course will provide a historical global survey of pre-20th century urban form and a review of 20th and 21st century developments, largely in the United States, in order to build students’ understanding of the role of these processes in shaping cities. The course will examine how the built environment affects life in the city, and considers more self-conscious efforts to design cities in order to affect lives. Students will complete the course with knowledge of the way in which traditional and modern urban forms evolved, knowledge of historical and contemporary theories of urban design, and the ability to apply this knowledge in the design process.

**Logistics**

The class meets Tuesdays and Thursdays from 12:30 to 1:45 in Wilson Hall 217

**Readings**

All readings are available on the Plan 651 Sakai class website at https://sakai.unc.edu/portal/site/plan651sp22

**Assignments and Grading**

Over the course of the semester, you will work with a partner to produce:

1. **A HISTORICAL ANALYSIS:** Analyze the history of the built environment of a city, with attention to how economic, political, and social developments played out in the built form. To do this discuss five topics in your city’s history, trying to integrate them as best you can going from era to era. These are: (1) transportation (modes of transportation and how their design that made daily life possible), (2) land use (how uses were arranged in/between neighborhoods), (3) the environment (major changes to the natural environment in the city e.g. pollution, changing land forms/watercourses, disasters and their consequences for the built environment), (4) economy and work (what were the types of places people worked in, where were they, and what did they do there?), and (5) housing and community (in what types of arrangements did people live and otherwise associate with each other or avoid each other?). Organize your paper chronologically, and define eras according to major technological, political, or economic developments e.g. a walking era city, a city of rails, and an automotive city; a mercantile city, an industrial city, and a post-industrial city; an administrative capitol, a colonial city, and a global city. Include a brief introduction and a brief conclusion. The Historical Analysis is due on March 3: 2500 words for undergraduate students/3500 words for graduate students, include photographs and maps, original or from a cited source!
2. **AN URBAN FORM ANALYSIS:** Analyze in text, diagrams and photographs the current urban form, describing blocks (dimensions and shape), buildings (use, height, setbacks, and type of building frontage e.g. porch, stoop, yard, plaza, storefront), lots (width, depth, and coverage), streets (widths overall and widths provided for different transportation modes, landscaping), and public open spaces (size, hardscape/softscape, frequency) in two neighborhoods of your city. This assignment is to be completed separately, with each group member analyzing one neighborhood. Try to provide a minimum figure, a maximum figure, and a median or mode for characteristics that can be quantified (e.g. setbacks). Each team member should do one neighborhood – for this assignment you will be graded separately. A nine-block area should be sufficient for getting an idea of most of these features (analysis of the frequency of public open spaces may require looking at a larger area). Pick neighborhoods that, because they demonstrate good urbanism (accessible by multiple transit modes, comfortable, visually and experientially interesting, etc.), or contrarily poor urbanism (inaccessible, uncomfortable, visually and experientially unappealing, etc.) will help you with your final design solution. This assignment requires a table of your findings accompanied by a short narrative (~500 words) about the origins of the observed features (e.g. the features you observe reflect the area’s dating from the pre-automotive era), and brief thoughts about quality of the built environment of the neighborhoods (how does their form enable some kinds of experiences and/or prevent others?). Urban Form Analysis due March 29 – include photographs and diagrams, original or from a cited source!
3. **A FINAL PROJECT:** Propose a solution to a design problem you have identified through historical analysis or in further analysis. For the design solution you will need to use the modeling software Sketchup: present a 2D scheme showing streets, buildings, and major landscape features, and explain this in 1000 words (for undergraduate students) 1500 words (for graduate students) that presents the problem and explains how your solution addresses it. Don’t just explain what you’re conceiving of but why – reference readings from class to support your ideas. You can use cadmapper.com to capture a .5 km² (for undergraduate) or .75 km² (for graduate students) area of your city that you can import into Sketchup. Your design solution should not be confined by what is politically or economically feasible, but it should be contextual and fit with the surrounding area, in the coordination of street layouts or the continuation of some natural feature, for example. Your re-conceptualization can address any problem you assess: the past erasure of natural systems, a lack of public open space, ill-fated renewal or housing schemes, neighborhood decline and abandonment, decline and abandonment of industry or ports, lack of connectivity, lack of use diversity, disruptive infrastructure, etc. You can use photographs of design projects in your city or from around the world to supplement your sketchup illustration. Due April 28.
4. And for graduate students only: for every class session for which readings are assigned, email to me by the start of the session one question regarding one, two, or more of the readings. This will be reflected in your class participation grade. For everyone: Your class participation grade is based on attendance and how active you are in class discussion.

Your grade will be calculated as follows:

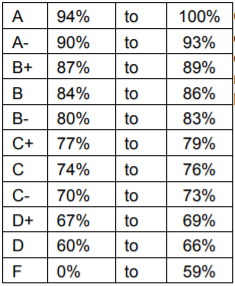
10% Class Participation

25% Historical Analysis

25% Urban Form Analysis

40% Final Project

Final grades will be assigned based upon the following scale. I round final averages to the nearest tenth of a percent.



LATE ASSIGNMENTS POLICY: Late assignments drop four points per day. For example, if a ‘95’ paper is late one day it will receive a ‘91‘, two days late and it will receive a ‘87’ … *a late paper is better than a 0*.

**Computer Software**

No prior experience with SketchUp is required for the course. The best resource for using SketchUp is available online at <http://help.sketchup.com/en>. Many other online tutorials exist as well. One text on using SketchUp is Daniel Tal’s *SketchUp for Site Design: A Guide to Modeling Site Plans, Terrain and Architecture* (Wiley Interscience, 2009). You will need to download a free version of the application on your laptop for use at home and in the lab session. The free version will be adequate for what is required in this class, but CAD (.dwg) files can only be imported on the version available on the PCs in the New East.

**Contact Information**

Office hours are Wednesday, 11:30am-12:30pm in New East 313. I can be reached via e-mail at awhittem@email.unc.edu.

**ZOOM SCENARIO**

*As long as it is possible to do so safely, we will be meeting in person this semester. I understand the ongoing COVID-19 pandemic may require changes to this plan and will be monitoring the situation closely. If I need to change the format of the course temporarily due to outbreaks of illness, I will announce this via email and the course Sakai site.*

If class or office hours need to be moved to zoom, you will find me at go.unc.edu/whittemorezoom PW: 02478

**OTHER ACADEMIC BUSINESS**

**“The Honor System forms a bond of trust among students, faculty, and administrators. The University of North Carolina at Chapel Hill operates under a system of self-governance, as students are responsible for governing themselves. As such, our University is transformed into a powerful community of inquiry and learning. The Honor Code embodies the ideals of academic honesty, integrity, and responsible citizenship, and governs the performance of all academic work a student conducts at the University. Acceptance of an offer of admission to Carolina presupposes a commitment to the principles embodied in our century-old tradition of honor and integrity.”**

http://catalog.unc.edu/policies-procedures/honor-code/

I am committed to treating Honor Code violations seriously and urge all students to become familiar with its terms set out at https://studentconduct.unc.edu/. If you have questions it is your responsibility to ask the professor about the Code’s application.

Missing Class: Students are permitted to miss class for EXCUSABLE absences only. Absences will be excused for medical or family purposes. Students are allowed **two** unexcused absences without any questions from the instructor. If a student has three unexcused absences, their grade will be affected.

Late Assignments: Late assignments drop four points per day. For example, if a ‘95’ paper is late one day it will receive a ‘91‘, two days late and it will receive a ‘87’ … *a late paper is better than a 0*.

Accessibility*:* The University of North Carolina – Chapel Hill facilitates the implementation of reasonable accommodations, including resources and services, for students with disabilities, chronic medical conditions, a temporary disability or pregnancy complications resulting in difficulties with accessing learning opportunities. All accommodations are coordinated through the Accessibility Resources and Service Office. In the first instance please visit their website [http://accessibility.unc.edu](https://outlook.unc.edu/owa/redir.aspx?C=TX9P-iEKuUOJ13QgJZni44yxaiBLvNEI7xytaJmv-to-UbSem5tbnY2HQL2SGLERRpN73Xe03_U.&URL=http%3a%2f%2faccessibility.unc.edu), call 919-962-8300 or email [accessibility@unc.edu](https://outlook.unc.edu/owa/redir.aspx?C=TX9P-iEKuUOJ13QgJZni44yxaiBLvNEI7xytaJmv-to-UbSem5tbnY2HQL2SGLERRpN73Xe03_U.&URL=mailto%3aaccessibility%40unc.edu). Please contact ARS as early in the semester as possible.

Resources: Our purpose as professors is to help you to excel in this learning environment. Should you need further assistance beyond the help of the professor, please consult the following on-campus resources:

•  The Writing Center: http://writingcenter.unc.edu/

•  Learning Center: http://learningcenter.unc.edu/

•  Counseling and Wellness Services: [http://campushealth.unc.edu](https://outlook.unc.edu/owa/redir.aspx?C=TX9P-iEKuUOJ13QgJZni44yxaiBLvNEI7xytaJmv-to-UbSem5tbnY2HQL2SGLERRpN73Xe03_U.&URL=http%3a%2f%2fcampushealth.unc.edu)

**SCHEDULE AND READINGS**

11 JANUARY **Course Introduction**

Carmona, Matthew et al. 2003. *Public Places – Urban Spaces* Amsterdam: Elsevier. “Urban Design Today,” 3-19

13 JANUARY **The Challenge of Urban Design**

Trancik, Roger. 1986. *Finding Lost Space: Theories of Urban Design*. New York: Van Nostrand Reinhold. “What is Lost Space,” 1-20; excerpt from “Case Studies,”128-149

Jacobs, Allan B. 1985. *Looking at Cities.* Cambridge: MIT Press. Excerpts from Chapter 3, “Use of Buildings and Land,” 49-53; “Street Pattern and Layouts,” 71-75 and “Building Arrangement,” 75-77

Peterson, Steven. 1979. "Urban Design Tactics. Roma Interrota." Architectural Design Profile 49, no. 3-4

18 JANUARY **Urban Traditions – Europe I**

Morris, A.E.J. 1994. *History of Urban Form before the Industrial Revolutions*. New York: Longman Scientific & Technical. Excerpts from “Greek City States,” 40-42 and 54; excerpt from “Rome and the Empire,” 69-70; excerpt from “Medieval Towns,” 97-103; excerpt from “The Renaissance: Italy Sets a Pattern,” 158-164

Braunfels, Wolfgang. 1988. *Urban Design in Western Europe*. Chicago: U Chicago Press. Excerpt from “Cathedral Cities,” 12-25; excerpts from “Seats of a Princely Court,” 186-193, 253-260.

Rasmussen, Steen Eiler. 1969. *Towns and Buildings*. Cambridge: MIT Press. Excerpt from “The Dutch Contribution,” 88-93; “A Tale of Two Cities,” 103-116.

20 JANUARY **Urban Traditions – Europe II**

Bacon, Edmund. 1976. *Design of Cities*. New York: Penguin. Pgs. 22-27; 42-45; 172-179; 182-189; 192-195

Schorske, Carl E. "Museum in contested space: the sword, the scepter and the Ring." In Thinking With History: Explorations in the Passage to Modernism. Princeton, NJ: Princeton University Press, 1998, pp. 105-125.

25 JANURARY **Urban Traditions – China, India & Japan**

Jin, Wu. 1993. “The historical development of Chinese urban morphology.” *Planning Perspectives* 8: 1, 20-34

Morris, A.E.J. 1994. *History of Urban Form before the Industrial Revolutions*. New York: Longman Scientific & Technical. “Japan” and “Indian Mandalas,” 404-410

Bacon, Edmund. 1976. *Design of Cities*. New York: Penguin. “Peking,” 244-251

Doshi, Balkrishna V. 1989. “City of Jaipur.” *Architecture Plus Design* 5: 2, 96-104

27 JANUARY **Urban Traditions – Africa & The Middle East**

Abu-Lughod, Janet. 1987. “The Islamic City: Historic Myths, Islamic Essence, and Contemporary Relevance,” in Richard T. Legates and Frederic Stout, eds. *The City Reader* London: Routledge, 172-180

Hakim, Benim S. 1986. “A design language: urban and architectural elements.” *Arabic-Islamic Cities: Building and Planning Principles*. London: Kegan-Paul, 55-96.

Onokerhoraye, Andrew Godwin. 1975. “Urbanism as an organ of traditional African civilization: The example of Benin, Nigeria.” *Civilisations* 25: 3/4, 294-306

1 FEBRUARY **Urban Traditions – Indigenous and Latin America**

Sanders, WT, and D Webster. 1988. “The Mesoamerican urban tradition” *American Anthropologist* 90: 3, 521-546

Lemoine, Rene Martinez. 2003. “The classical model of the Spanish-American colonial city” *The Journal of Architecture* 8: 3, 355-368

Kelly, John E. and James A. Brown. 2014. Excerpt from “Cahokia: the processes and principles of the creation of an early Mississippian City” *Making Ancient Cities: Space and Place in Early Modern Societies*, 297-325

3 FEBRUARY **Urban Traditions – USA I**

Reps, John W. 1965. *The Making of Urban America*. Princeton: Princeton University Press. Excerpts from “The Spanish Towns of Colonial America,” “Town Planning in the Tidewater Colonies,” and “New Towns in a New England,” 32-36, 46-55, 95-103, 119-130, 140-142.

Morris, A.E.J. 1994. *History of Urban Form before the Industrial Revolutions*. New York: Longman Scientific & Technical. Excerpt from “Urban USA,” 337-345

8 FEBRUARY **Urban Traditions – USA II**

Haney, Gina. 2017. “Understanding antebellum Charleston’s backlots through light, sound, and action.” *Slavery and the City*. Charlottesville: University of Virginia, 87-105

Morris, A.E.J. 1994. *History of Urban Form before the Industrial Revolutions*. New York: Longman Scientific & Technical. Excerpts from “Urban USA,” 335, 346-360

Bacon, Edmund. 1976. *Design of Cities*. New York: Penguin. Excerpt from “Vitruvius Comes to the New World,” 216-221

Westfall, Carroll William. 1990. "Classical American Urbanism." In New Classicism: Omnibus Volume. Edited by Andeas Papadakis and Harriet Watson. New York, NY: Rizzoli, 73-75.

10 FEBRUARY **The Modernist Revolution I**

Bacon, Edmund. 1976. *Design of Cities*. New York: Penguin. Excerpt from “Vitruvius Comes to the New World,” 226-227 and “Le Corbusier and the New Vision,” 228-241

Howard, Ebenezer. 2003. “Author’s Introduction” and “The Town-Country Magnet” in Richard T. Legates and Frederic Stout, eds. *The City Reader* London: Routledge, 309-316

Le Corbusier.1971. *The City of Tomorrow*. 3rd ed. London: the Architectural Press. “Foreward,” 1-7; “The Pack-Donkey’s Way and Man’s Way,” 10-18; “A Contemporary City,” 158-179

15 FEBRUARY **The Modernist Revolution II**

Trancik, Roger. 1986. *Finding Lost Space: Theories of Urban Design*. New York: Van Nostrand Reinhold. “Development of Twentieth-Century Space,” 21-59

Southworth, Michael Eran Ben-Joseph. 1997. *Streets and the Shaping of Cities* New York: McGraw-Hill, 1997: “Streets for the Motor Age,” 61-84.

17 FEBRUARY **The Modernist Revolution III**

Clay, Grady. 1980. *Close-Up: How to Read the American City*. Chicago: U Chicago Press. Excerpt from “Epitome Districts,” 61-65. “Strips,” 85-109.

Jackson, Kenneth T. 1985. *Crabgrass Frontier: the Suburbanization of the United States* Oxford: Oxford U Press. “The Drive-In Culture of Contemporary America,” 246-271

22 FEBRUARY **The Counter-Revolution**

Alexander, Christopher. 1965. “The City is not a Tree” *The Architectural Forum* 122: 58-62.

Trancik, Roger. 1986. *Finding Lost Space: Theories of Urban Design*. New York: Van Nostrand Reinhold. “Urban Space Precedents,” 60-96; “Three Theories of Urban Spatial Design,” 97-124

24 FEBRUARY **Historical Analysis Presentations**

1 MARCH  **Historical Analysis Presentations**

3 MARCH **Historical Analysis Due**

*In-Class: Sketchup Lab I, New East*

8 MARCH **Visual** **Theories of Urban Design**

Venturi, Robert. 1972. *Learning from Las Vegas.* Cambridge: MIT Press. Excerpt from “A Significance for A&P Parking Lots, or Learning from Las Vegas,” 3-18

Gordon Cullen. 1971. *Townscape*, Rheinhold, [2nd edition]: "Introduction," 7-12; "Serial Vision," 17-56

Collins, George R. and Christiane Crasemann Collins, eds. (2006) *Cammillo Sitte: the Birth of Modern City Planning*. New York: Dover. “The Relationship between Buildings, Monuments and their Plazas,” 151-157; “That Public Squares should be Enclosed Entities,” 170-176; “The Size and Shape of Plazas,” 177-184; “Streets,” 198-205

10 MARCH **Visual Theories of Urban Design**

Krier, Leon. July/August 1984. "Urban Components." Architectural Design 54: 43-49.

Duany, Andres and Elizabeth Plater-Zyberk. 1991. *Capital City Renaissance*. New York: Rizzoli. “Capital City Renaissance,” 70-73; “The Codes,” 96-97

15 & 17 MARCH **SPRING BREAK**

22 MARCH **Perceptual Theories of Urban Design**

Kevin Lynch, *The Image of the City* (MIT Press, 1960): "The Image of the Environment," 1-13; "The City Image and Its Elements," 46-90

24 MARCH **Urban Form Analysis Presentations**

29 MARCH **Urban Form Analysis Due**

*In Class: Sketchup Lab II, New East*

31 MARCH **Social Theories of Urban Design**

Jacobs, Jane. 1961. *The Death and Life of Great American Cities.* Vintage: "The Uses of Sidewalks," 29-73; "Mixed Primary Uses," 152-177; "Small Blocks," 178-186

5 APRIL **Social Theories of Urban Design**

Gehl, Jan. 2011. *Life Between Buildings.* Washington: Island Press. “To Assemble or Disperse,” 81-100 and “To Integrate or Segregate,” 101-112

Hayden, Dolores. 1996. “What Would a Non-Sexist City Be Like? Speculations on Housing, Urban Design, and Human Work,” in *The City Reader*, Richard T. LeGates and Frederic Stout, eds. London: Routledge. 448-463

7 APRIL **Sustainability**

e-book: Anne Whitson Spirn, “Ecological urbanism,” in Banerjee, T. & Loukaitou-Sideris, eds., *Companion to Urban Design* (Routledge, 2011): 600-610

e-book: Randolph T. Hester, Marcia J. McNally, “Intertwist and Intertwine: Sustainability, meet Urban Design” in Banerjee, T. & Loukaitou-Sideris, eds., *Companion to Urban Design* (Routledge, 2011): 600-610

12 APRIL **Biophilia**

Ian L. McHarg “A Step Forward” in *Design with Nature* (Wiley & Sons, 1997): 31-41.

Melanie Simmons, Kathy Baughmann McLeod, and Jason Hight, “Healthy Neighborhoods;” Carolee Kokola “Open Space;” Jim Patchett and Tom Price “Stormwater Systems,” Lynn Peemoeller and Jim Slama “Food Production;” in Douglas Farr, *Sustainable Urbanism: Urban Design with Nature* (Wiley & Sons, 2008): 148-150, 169-171, 175-181.

14 APRIL **WELLNESS DAY – NO CLASS**

19 APRIL **Retrofit**

Condon, Patrick M. 2010. *Seven Rules for Sustainable Communities*. Washington: Island Press. “Introduction,” 3-15; excerpts from “Restore the Streetcar City,” 20-31 and “Design an Interconnected Street System,” 39-56

Dunham-Jones, Ellen and June Williams. 2009. *Retrofitting Suburbia*. Hobokien: John Wiley & Sons. Excerpt from “Introduction,” viii-xiii; “Instant Architecture, Instant Cities, and Incremental Metropolitanism,” 2-14; “Mall Case Study: Belmar, Lakewood, Colorado,” 154-171.

21 APRIL **Workshop Day – Zoom Room Available from 12:30-2:45**

26 APRIL **Design Proposal Presentations**

28 APRIL **FINAL PROJECT DUE**