

Sustainable Urbanism and Architecture (UP533/Arch506)

Fall Term, 2013; Monday and Wed, 10:30 am - noon; Rm. 2108 (A&A Building)
Douglas Kelbaugh, Professor of Architecture and Urban Planning
kelbaugh@umich.edu; M: 358-9587; office 3138 A&A Bldg., office hours by appointment
Graders: Elise Ross (roselise@umich.edu), Christian Roadman (roadman@umich.edu)

CREDITS – 3

PREREQUISITES – none

COURSE FORMAT/ ENROLLMENT – class time approximately 85% lecture; 15% class q&a and discussion; 25 - 40 students.

ELIGIBILITY – Any UM graduate student, with priority given to MUP, MArch and MUD programs, with a limited number of students from SNRE, Eng'g. (and undergrad program, space permitting)

CONTENT

A sometimes broad, sometimes in-depth exposure to American and international urban planning, architecture, urban design, and landscape architecture that strives to be environmentally sustainable and resilient, as well as culturally enriched, aesthetically accomplished, socially equitable, and economically viable.

The built environment accounts for approximately half our planet's energy consumption and carbon footprint, and strongly impacts global climate change, resource depletion and loss of ecological diversity, all of which can be dramatically reduced by good design and planning that also improve the quality of life, health and community for humans and other species.

The lectures, class discussions and readings include a wide range of scales and topics, such as the role of climate and natural resources in history, ecological footprints, passive solar design, social and economic justice, suburban sprawl, waste and water management, agriculture and food, cultural norms, New Urbanism, Everyday Urbanism, Post Urbanism, Tactical Urbanism and Landscape Urbanism. Energy-efficient and environmentally-conscious buildings, cities and landscapes, as well as related regulations, policy and best practices in the industrialized and developing world are also featured. Livability, walkability, bikeability and transit will be considered, as well as the role of a free, diverse public realm in healthy, vibrant communities

A reading- and lecture-based course, there is a short written assignment each week throughout the term. Attendance is important to learning the material.

REQUIREMENTS/GRADING - Attendance and class participation (20%); weekly written submissions on readings (40%); exercises; and final exam (40%); no midterm exam. There will be no research papers or projects.

INSTRUCTOR BIO

Professor Kelbaugh received a B.A. and an M.Arch degree from Princeton University. He headed Kelbaugh + Lee from 1977 to 1985, an architecture firm that won 15 design awards and competitions. While Architecture Chair at the University of Washington, he was principal in Kelbaugh, Calthorpe and Associates. Editor of the *The Pedestrian Pocket Book*, which helped jumpstart New Urbanism and TOD (Transit Oriented Development), he is author of *Common Place: Toward Neighborhood and Regional Design* (1998) and *Repairing the American Metropolis* (2002), as well as co-editor of *The Michigan Debates on Urbanism* (2005) and *Writing Urbanism* (2008). He has written over a dozen book chapters on topics. Doug served as dean of Taubman College between 1998-2008. Following his deanship he took a two year leave of absence, during which he worked in Dubai as Exec. Director of design and planning for an international development company with a large portfolio of walkable, mixed-use, transit-oriented projects throughout Asia, Europe and Africa.

<p>5</p>	<p>9/30 – “Cities?!” Their origins and roles; the polis, walkable public realm; urban vs. rural; as economic engines, organisms and ecosystems; urban anonymity; Kleiber’s law and the math of urban metabolism and creativity; urban footprint and the ecological paradox; inherent problems of cities; Urban Heat Island Effect 1. http://www.ted.com/talks/geoffrey_west_the_surprising_math_of_cities_and_corporations.html</p> <p>10/2 - “Community, Cosmopolis” Tribal/sectarian vs. democratic/cosmopolitan, village vs. city; Western vs. Arab urban space; community vs. privacy, public urban space/plazas; unsustainability of sustainability agenda w/o beauty/interest/care; Look at the Photo Gallery: http://ngm.nationalgeographic.com/2011/12/city-solutions/kunzig-text/1</p>	<p><u>5 Questions</u> Rdr, Krieger, 1-6, Bond, 1-2 Glaeser, 1-15, Brand, 67-73, Video</p> <p>Solomon,1-36</p>
<p>6</p>	<p>10/7 - “The Life of the Street and the City - Jane Jacobs” Her epic battle with modernist urban planning; uses of the sidewalk, contact; 4 generators of diversity; visual order; the kind of problem a city is; can a city be designed?</p> <p>10/9 - “ An Urban Heroine and a Rural Heroine” Guest lecture by Rbt. Fishman, urban historian, Taubman College, on Jane Jacobs and Rachel Carson; epic champions of the city and the countryside Optional video interview of Jacobs: http://grist.org/urbanism/2011-07-21-jane-jacobs-on-neighborhoods-placemaking-and-active-living-video/</p>	<p>Rdr, Jacobs, 3-54</p> <p>Rdr, Jacobs, 428-448</p>
<p>7</p>	<p>10/14/12 – no class, Fall Break</p> <p>10/16 - “Upstream, Downstream: Water Cycles in Constructed Landscapes” guest lecture, Jen Maigret, Asst. Prof. of Arch. Managing and designing for water in the city; peak water 1. http://www.scientificamerican.com/article.cfm?id=sewage-overflow-adds-to-detroits-woes 2. http://www.guardian.co.uk/global-development/2013/jul/06/water-supplies-shrinking-threat-to-food Optional: Calculate your water footprint http://environment.nationalgeographic.com/environment/freshwater/water-footprint-calculator/</p> <p>8</p> <p>10/21 - “Paved with Good Intentions: Suburbia and the Costs of Sprawl” Analyzing, rethinking, redesigning and retrofitting the suburbs; visible and hidden costs of sprawl; The American Dream; mobility vs. accessibility</p> <p>10/23- “New Urbanism/Smart Growth” The movement, charter and projects; urban principles vs. architectural style; the Transect; acceptance and criticism/controversy; Vancouver model; Lean Urbanism; gentrification http://bettercities.net/news-opinion/blogs/robert-steuteville/20842/populist-urbanism-beyond-creative-class</p>	<p><u>3 Questions:</u> Rdr, Water Facts and Actions; 2 web articles</p> <p>Kelbaugh, 21-51 (3-19 optional)</p> <p>Rdr, Owen, 45-56 Kelbaugh, 157-170 <u>Question</u> Web article</p>

9	<p>10/28 - “Three+ Urbanisms” Everyday, New and Post Urbanism; Landscape Urbanism; NeoTraditional, Modernist, PostStructurlist theory and polemics 1. http://landscapeandurbanism.blogspot.com/2011/07/source-whatever-happened-to-urbanism.html 2. http://landscapeandurbanism.blogspot.com/2011/07/reading-landscape-terra-fluxus.html</p> <p>10/30 – “Other Urbanisms, Houston” Agrarian Urbanism; auto-centric and developer-centric Houston; “American distance,” speed zones and slow zones, “Hyperdensity,” Asian high rise, high density model vs. traditional European, low-rise, high density model</p>	<p>Kelbaugh, 170-180 (or newer version in Rdr.) 2 Questions 2 web articles Optional Rdr, Kelbaugh, LU & NU</p> <p>Rdr., Lerup vs. Calthorpe, 7-66 or Chakrabarti, 126-149</p>
10	<p>11/4 –“Detroit! – sink or swim, shrink or grow?” Dinosaur in Wright’s decline scenarios? industrialism, lack of diversification; racism, white flight; ruin porn, UM design charrettes; strategies for shrinking city; urban agriculture; entrepreneurs; topdown vs. bottomup initiatives; transit 1. http://www.nytimes.com/2013/04/14/business/dan-gilberts-quest-to-remake-downtown-detroit.html?pagewanted=1&_r=0 (see 10 photos at top) 2. http://www.pps.org/blog/detroiters-work-the-lighter-quicker-cheaper-regeneration-of-a-great-american-city/ Optional - Flip through <i>Detroit Environmental Agenda</i> in Rdr. on CTools</p> <p>11/6 –“Dubai! – over the top or just over?” An expanding, successful city, or collapsing bubble? House of Cards in R. Wright’s decline scenarios?; architectural expression and excess; water and energy in the desert; the environmental paradox of cities; mobility vs. accessibility; indentured laborers; tourism and trade; TOD with green mosque (1.) http://www.newleftreview.org/?view=2635 (same as Davis essay in Rdr.)</p>	<p>Rdr, Glaeser, 41-67</p> <p><u>2 Questions:</u> 2 web articles,</p> <p>Rdr, Davis, 48-68 (or website 2) <u>Question</u> Rdr, Glaeser blog</p>
11	<p>11/11 - “Euro-green” Sustainable architecture and urbanism in northern Europe; Kronsberg and Freiberg, Germany; Bo01 and Hammerby in Sweden</p> <p>1. http://urbanland.uli.org/Articles/2011/Mar/CerveroGreenTOD</p> <p>11/13 – “Urban Biking and Tactical Urbanism” Bikes in the city: bikesharing systems, accommodating cyclists, bike safety, bike parking, bikes as art; Tactical Urbanism, pop-ups; Lean Urbanism 1. http://www.nytimes.com/2012/05/27/opinion/sunday/this-is-how-we-ride.html?_r=1&pagewanted=all 2. http://economix.blogs.nytimes.com/2011/07/04/the-bicycle-dividend/ Flip through these two remarkable photo galleries: http://www.boston.com/bigpicture/2012/06/pedal_power.html http://www.usatoday.com/story/travel/destinations/2013/10/01/best-cities-bike-sharing/2896227/.)</p>	<p>Rdr, Fraker, 121-153 <u>Question</u> web article</p> <p>Rdr, Tactical Urbanism 2 <u>2 Questions</u> 2 Web articles</p>

<p>12</p>	<p>11/18 – “Sustainable Architecture: Passive Solar” Physics of solar energy and greenhouse principle; passive vs. active solar; Trombe wall case study; small skin-load-dominated passive solar buildings; other sustainable technologies and systems</p> <p>11/20 –“Sustainable Architecture: larger buildings” Large, internal-load-dominated buildings; German Passive House; daylighting 1st & 2nd laws of thermodynamics; energy vs. exergy; district co-generation, heating and cooling with solar, wind and biogas systems; 6 benefits of urban trees and their impact on UHIE http://thearchdruidreport.blogspot.com/2010/02/energy-follows-its-bliss.html <i>(If necessary, go to home blog and find under Feb, 2010.)</i></p>	<p>Rdr, McLennan, 97-113, Kelbaugh, 1-5 <u>Optional</u> McLennan, 114-121</p> <p>Rdr, Haag, 1-10</p> <p><u>Question</u> archdruid blog</p>
<p>13</p>	<p>11/25 - “Green Policies, Codes and Practices” Vision California, LEED NC & ND, AIA2030 Challenge; Low Impact Design (LID), Light Imprint; energy taxes and pricing; urgent urban policy; Chicago: http://www.nytimes.com/2011/05/23/science/earth/23adaptation.html?</p> <p>Optional 5 minute video on true and full cost of gas: http://brokensidewalk.com/2011/06/21/video-how-much-does-a-gallon-of-gas-cost/</p> <p>11/27 –“Critical Regionalism and Typology - the local and the universal” Sense of place, nature, history, craft, and limits; functionalism vs. type vs. style; hierarchy, foreground & background buildings; typology in urban design</p>	<p>Kelbaugh, 181-195 <u>Question</u> Web article</p> <p>Kelbaugh, 77-117</p>
<p>14</p>	<p>12/2 - “Examples of Greening the Developing World” Architecture and urbanism in Africa, South America, and Asia; slums and informal settlements 1. http://www.ted.com/talks/stewart_brand_on_squatter_cities.html Optional: (2.) http://www.foreignpolicy.com/articles/2012/08/13/weapons_of_mass_urban_destruction?page=0,2 (if you’re interested in urban design in China) (3). http://ngm.nationalgeographic.com/2011/06/green-china/mckibben-text (view photo gallery on upper left) (4.) http://www.nytimes.com/slideshow/2012/05/06/sunday-review/06METROPOLIS.html?ref=sunday#2. (remarkable images of India)</p> <p>12/4 - “The Third Industrial Revolution?” World population; the dilemma of growth and redefining prosperity; flourishing within limits; biophilia, biosphere consciousness; capitalist short-termism http://ngm.nationalgeographic.com/7-billion (3 min. video on global population)</p>	<p>Rdr, Glaeser, 69-76, 217- 220, Brand, 36-50 and 3 minute TED video</p> <p>Rdr, Rifkin, 233-241, Jacobs, 161-176 <u>Optional</u> Brand, 51-64 <u>Question</u> Video</p>

<p>15</p>	<p>12/9 - “Coming Home - UM Campus, AA and Walking” Campus history, design, architectural typology; N. Campus; other campuses; UM and AA sustainability plan and initiatives; walking and health, walkability, street trees; Walkscore; love of place, love of home (oikophilia) http://dirt.asla.org/2011/04/13/interview-with-jan-gehl/</p> <p>Retrieve your Walkscore in AA and in your hometown (if possible) and bring to class: http://www.walkscore.com/ (Simply type in your address.) Check out AA and your home town at http://www.walkscore.com/traverse Read short article “Walkscore – a 100 to 1 Kelbaugh Family Tale” in the Rdr and submit a mindful question for a bonus point on your summary grade for the week.</p> <p>12/11 –Review of lectures and some thoughts on the future</p> <p>Now that you’re through the course, watch, enjoy these two optimistic videos/slide shows whenever you get a chance:</p> <ol style="list-style-type: none"> 1. http://www.youtube.com/watch?v=nj2ofrX7jAk&feature=email 2. http://www.bbc.co.uk/news/world-12618167 <p>TBA - FINAL EXAM, TUESDAY, DEC 17, 1:30-3:30 PM, RM 2108</p>	<p>Rdr, AA Climate Action Plan; Speck, 223-233 <u>Question</u> Web article</p> <p><u>2 Questions</u> Rdr, Brand, 298- 302, reread Hawken, 1-8 from Week 4</p>
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Weekly readings and written assignment –

The author and pages of all required readings are listed in the right-hand column and can be found in the books that you’re required to acquire, on Ctools, or on the web. (Some web articles and videos are posted on Ctools, but most must be accessed directly from the web address given.)

- Each week a written *summary/description or list of bullet points* is required of the week’s readings. The purpose of the assignments is to demonstrate to the graders that you have mindfully read the assignment - by **summarizing** while extracting **specific key concepts**. The length should be approximately 250-325 words per reading, but short readings may be somewhat shorter and long readings may be somewhat longer. (Use your judgment.) Therefore, depending on the number and length of readings, total submission lengths will vary from week to week. Succinct, economical prose is desirable. Double-space the text. Bullet points that convey complete thoughts may be used instead of prose if you prefer (and can be single spaced). When required readings are listed in the right column under “Question” or Questions, rather than a summary, write a single question that unpacks, reveals or probes each article or video.
- Use the template provided on Ctools and upload submissions directly to “Assignments.” before the Wednesday lecture.
- Label the submission with the date and your Student ID # rather than with your name (so it will be anonymous to the graders, who may be colleagues).
- Readings listed under “Optional” are recommended and relevant (depending on your personal background and interests) but you are not required to read them or write a summary or question.
- The normal grade is a check. A check minus is given for a less than satisfactory submittal, typically one that fails to convince the grader that you’ve mindfully read the material. (A check plus may be given for an extraordinarily lucid and/or compelling submission.)
- **If you miss the deadline**, your grade will be reduced by one level (e.g., check to check minus). After two weeks from the due date, submissions will automatically no longer be accepted on Ctools.

- If the instructor is notified in a timely manner, there will be some relief for required travel, illness, disability or mandatory events that directly conflict with due dates.
- Religious holidays will be honored.

REQUIRED READING

Books

Please acquire, available at North Campus Bookstore (Pierpont Commons):

R. Wright, *A Short History of Progress* (Text Publishing, Australia, 2005)

D. Kelbaugh, *Repairing the American Metropolis* (UW Press, 2002)

D. Solomon, *Cosmopolis* (TCAUP, 2007) – only available at Taubman College Media Center, Art and Architecture Building, N. Campus

2 copies of all these books are on reserve at the Duderstadt Library

Reader, on **CTools** (under resources). Books with * are also on reserve.

*S. Brand, *Whole Earth Discipline* (Penguin Books, 2010)

*J. M. Bond, "Working Cities: Density, risk spontaneity," *Writing Urbanism* (Routledge, 2008)

*P. Calthorpe, L.Lerup, *New Urbanism, The Michigan Debates on Urbanism*, (Taubman College, 2006)

*V. Chakrabarti, *A Country of Cities* (Metropolis Books, 2013)

J. Corner, "Terra Fluxus," *Landscape Urbanism Reader* (PAP, 2006)

M. Davis, "Fear and Money in Dubai," *Evil Paradises: The Dreamworlds of Neo-Liberalism* (New Press, 2007)

H. Fraker, *The Hidden Potential of Sustainable Neighborhoods* (Island Press, 2013)

*E. Glaeser, *Triumph of the City* (Penguin Press, 2011)

*P. Hawken, *Blessed Unrest* (Penguin, 2007)

*T. Jackson, *Prosperity without Growth*, (*Earthscan*, 2009)

*J. Jacobs, *The Death and Life of Great American Cities* (Vintage, 1992)
Dark Age Ahead (Random House, 2004)

D. Kelbaugh, "The 7 Principles of Energy-Efficient Architecture" (*Proceedings*,
5th Nat'l. Passive Solar Conference, NESEA, UMass, 1980)

*A. Kreiger, "The virtues of cities," *Writing Urbanism* (Routledge, 2008)

R. Koolhaas, "Whatever Happened to Urbanism," *S,M,L,XL* (OMA/Koolhaas/Mau, 1995)

*J. McLennan, *The Philosophy of Sustainable Design* (ECOTone, 2004)

*D. Owen, "Green Manhattan," *Writing Urbanism* (Routledge, 2008)

*J. Rifkin, *The Third Industrial Revolution*, (Palgrave MacMillan, 2011)

J. Speck, *Walkable City*, (Farrar, Straus and Giroux, 2102)

Final thoughts:

"Nothing in the world can take the place of persistence. Talent will not; nothing is more common than unsuccessful men with talent. Genius will not; un-rewarded genius is almost a proverb. Education will not; the world is full of educated failures. Persistence and determination are omnipotent."
Calvin Coolidge (30th President of the U.S., 1923–1929)

"Life's outcomes, while not entirely random, have a huge amount of luck baked into them. Above all, recognize that if you have had success, you've also had luck – and with luck comes obligation... You owe a debt to the unlucky."

Michael Lewis, author of *Liar's Poker* and *The Big Short*