ENviron 590.37 – Sustainable Cities and Urban Design
Instructor: Anthony M. Sease, PE, RA, LEED-AP
tony.sease@duke.edu
Phone: 919.405.2000
Fall 2015 - v1.0 - 24AUG15

Overview
This course addresses urban form and the design of cities in the context of increasing clarity in the linkages between patterns of human settlement and indicators of sustainability. Historical considerations inform our exploration, but those considerations are secondary to developing: 1) knowledge of influencing factors in urban design, 2) an understanding of the experiential aspects of urban form, and 3) familiarity with and an ability to critique contemporary planning and urban design practices. The intended benefits of the course are to develop a broad sense of forces that have influenced the making of cities, particularly forces that remain influential to today’s practitioner, and to couple that understanding with a sense of design as an intentional act in advancing the sustainability of human settlements. Students should complete the course with 1) a high-level familiarity of generative forces in the shaping of human settlements especially in recent generations, 2) a fluency with precedents in urban design and analysis, and 3) an understanding of contemporary planning and design practices in sustainable urbanism. In its breadth, the course is a survey rather than an exhaustive study of any single component or characteristic of the built environment.

Objectives of the course include:
1) Establishing an understanding of historical and contemporary forces and actors influencing built form;
2) Establishing an understanding of the relationship between built form and energy demand, including reference to contemporary measures of sustainability such as LEED-ND;
ENVIRON 590.37 – Sustainable Cities and Urban Design
Fall 2015

3) Introducing selected contemporary practices, policies and precedents in sustainable urbanism;
4) Introducing design as an intentional act in the shaping of urban form, with consideration of disciplinary boundaries and agency;
5) Establishing an understanding of scale and dimension, particularly relative to the act of inhabiting, building, or regulating place;
6) Equipping each student with the reflective and analytical capacity to consider one’s own decisions with respect to the built environment.

The course is generally organized into three concurrent parts: 1) establishing a general frame of reference for historical context and influencing factors, including discursive framing of sustainable urbanism; 2) consideration of specific urban components, design standards, and evolving best practices; and 3) case studies in contemporary urban design practice.

Class Format
Class sessions will be a combination of lecture, discussion, case studies, critique, and student presentations. Assigned reading materials form a basis for each session, but may or may not be directly referenced in the particular lecture. However, students are responsible for knowing the content of BOTH the required readings and the lectures and class discussion materials. Please note that regular attendance and participation in class is expected, and will contribute to your semester grade. Students’ participation will be assessed based on the quality, regularity, and appropriateness of questions and contributions to discussions.

Logistics
Class meets on Tuesdays and Thursdays, 3:05-4:20 PM in LSRC Room A156. Announcements, assignments and many readings will be posted on the course Sakai site. Some sessions may be conducted in situ, through walks around campus and possibly in downtown Durham, with scheduling announcements made well in advance.

Each student’s class participation is essential in enriching discussions, both with direct course content as well as relevant personal experiences or observations. Texting, e-mail, web surfing, or performing other work during class are prohibited, in part as distractions to others; conducting such activities will impact one’s course grade. Laptops are not allowed for use in class, unless specifically instructed otherwise for specific research or course purposes. Laptops for note taking inhibit one of the primary objectives of the course, that is, the enabling of students to establish a level of familiarity and comfort in documenting and reflecting graphically on experiential aspects of urban form. SKETCH NOTEBOOKS will be required in order to accommodate note taking, field observations, and reflections in sketches and in text. More about this requirement follows.

Assignments
Design is a participatory act, one facilitated through drawing. Design in this sense is also empirical, with the ability to document one’s observations being a critical step in ascertaining the essential design qualities of a given condition. The Australian architect Glenn Murcutt describes drawing as an “act of discovery”. Assignments in the course include a graphic, visual component, and are structured to engage students in exercises observing and documenting urban form by reflecting on their on experiences in the built environment.

Students will also be required to keep a sketch notebook for the course, where notations, sketches and other observations of urban form, particularly focusing on the experiential characteristics, should be recorded. It is strongly recommended that the sketch notebook and the student’s course notes be one and the same, although this is not required. Keeping a single notebook for the course will facilitate the integration of observations made throughout the semester, including plans, field studies, lectures, and readings, and will be beneficial as the midterm exam is open notes, handwritten only. Please note that I do not typically post presentation slides, although if there are specific images or references you would like to have I am generally able to comply with such requests.

Availability of Readings
There is one required book for the course: Seven Rules for Sustainable Communities: Design Strategies for the Post-Carbon World by Patrick Condon, 2010. Three other books are highly recommended, each with different strengths I will describe in class:

*The Walkable City: How Downtown Can Save America, One Step at a Time* by Jeff Speck, 2013,
*Sustainable Urbanism: Urban Design with Nature* by Douglas Farr, 2008, and
ENVIRON 590.37 – Sustainable Cities and Urban Design
Fall 2015

Readings other than the Condon book will generally be available for download from Sakai or as an electronic resource from the library. First class excepted, readings for each session should be done in advance of the respective class meeting. Additional recommended resources by date of publication include:

- How to Study Public Life, by Jan Gehl and Bridgett Svarre, 2013
- Green Cities of Europe: Global Lessons on Green Urbanism, by Timothy Beatley, 2012
- Green Metropolis: Why Living Smaller, Living Closer and Driving Less are the Keys to Sustainability, by David Owen, 2009
- Retrofitting Suburbia, by Ellen Dunham-Jones and June Williamson, 2009

Grading
There will be a midterm exam but no final. The course grade will be calculated as followed:

- 5% Class participation, including contributions to class discussions and Q&A
- 25% Urban analysis exercises (3) - including in-class discussions
- 15% Group presentations - case studies at the city scale
- 15% Midterm exam (open notebook)
- 10% Individual student presentations, related to final paper topics
- 30% Final papers (6-12 pages, double-spaced - specifics subject to change)

Duke Community Standard and the Nicholas School Honor Code
Any student enrolled in the course also agrees to uphold the Duke Community Standard. All students are required to be familiar with and to act in accordance with information as described on the Nicholas School website at https://nicholas.duke.edu/advising/nicholas-school-honor-code. Plagiarism may result in a failing grade for the course.

Policy on late submittals or missed assignments
For all but the final paper, late submittals of assignments will be subjected to a full letter grade penalty if not submitted by the deadline, to a two-letter grade penalty if not submitted within 48 hours of the due date, and assigned a grade of zero if not submitted within one week of the deadline. For the final paper, no late submittals will be accepted. Missed presentations or in-class critiques will be subject to a grade penalty at the discretion of the instructor.

Instructor Contact
You are welcome to discuss with me lectures, readings, assignments or other matters related to the course. If you would like to meet in person, Tuesday and Thursday afternoons before class will generally be best. Please e-mail me for an appointment at tony.sease@duke.edu.
ENVIROWN 590.37 – Sustainable Cities and Urban Design
Fall 2015

Course Schedule
(Subject to revision)

* Readings from the Companion to Urban Design are available electronically through the Duke library.

8/25 Introduction to Urban Form and Design


8/27 The City and Its Elements
   PATHS – The connective fabric as public realm
   EDGES – Defining place
   NODES – Forming the center
   DISTRICTS – Forming the neighborhood
   LANDMARKS – Image and identity

   (Also, skim, noting the five key elements in “The City Image and Its Elements,” 46-87.)


9/1 The Case for Sustainable Urbanism
   The built environment today; compact, complete and connected communities


9/3 LEED-ND (LEED for Neighborhood Development)
   Urban Analysis Assignment #1 Issued: Neighborhood Structure

   Also note point categories and relative weightings.

9/8 The Neighborhood Unit
   Ebenezer Howard, Clarence Perry, and the Neighborhood Unit Diagram;


   Skim:
9/10 **20th Century Development Forces**  
20th century financing, design, and transportation standardization  

**Skim:**  

9/15 **Streets and the Form of Cities**  
Streets and form, motoring and Moses, connectivity, sub-urban form, streets as public space  

**Skim:**  

9/17 **ASSIGNMENT DUE: Urban Analysis #1, Neighborhood Structure - In-class critique**

9/22 **The Social Life of Small Urban Places**  
*Urban Analysis Assignment #2 Issued: Urban Space*  

**Skim:**  

"What Makes a Successful Place?" Project for Public Spaces [website].  

9/24 **Walkability and the contemporary city: design, mobility, and the public realm**  
Pedestrian science; spatial justice  

9/29 **Group presentations I - Green cities**  

10/1 **Group presentation II - Green Cities**  

10/6 **Streets, Avenues and Boulevards**  
Allen Jacobs, intersection design, role of the street tree  


<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/8</td>
<td>Assignment Due: Urban Analysis #2, Urban Space - In-class critique</td>
</tr>
<tr>
<td>10/13</td>
<td>FALL BREAK - NO CLASS</td>
</tr>
<tr>
<td>10/15</td>
<td><strong>Urban Transformations: Downtown Durham Tour</strong></td>
</tr>
<tr>
<td>10/20</td>
<td><strong>Form-Based Codes</strong></td>
</tr>
<tr>
<td></td>
<td>* [Rain Date for Durham Walking Tour]</td>
</tr>
<tr>
<td>10/22</td>
<td><strong>Midterm Exam</strong></td>
</tr>
<tr>
<td>10/27</td>
<td><strong>Landscape Urbanism vis-à-vis Nolli’s Map of Rome</strong></td>
</tr>
<tr>
<td>10/29</td>
<td><strong>21st Century Development Trends: Water and urban design</strong></td>
</tr>
<tr>
<td></td>
<td>Video excerpts - Biological Capital</td>
</tr>
<tr>
<td></td>
<td>Peruse the Hammarby Sjöstad website, especially the “Hammarby Model”</td>
</tr>
<tr>
<td></td>
<td><a href="http://www.hammarbysjostad.se/">http://www.hammarbysjostad.se/</a></td>
</tr>
<tr>
<td></td>
<td>Skim:</td>
</tr>
</tbody>
</table>
ENVIRON 590.37 – Sustainable Cities and Urban Design
Fall 2015


11/3 Water-Centric Infrastructure & Retrofits
Case studies, possibly Co-op City, Battery Park City, Research Triangle Park


Skim:

11/5 Suburban Transformations/Transit Oriented Development
Retrofitting suburbia, & video excerpts: Ellen Dunham-Jones


Skim:
Patrick Condon, Seven Rules for Sustainable Communities: Design Strategies for the Post-Carbon World, Chapter 4, “Locate Commercial Services, Frequent Transit, and Schools within a Five-minute Walk” pp. 67-78.


11/10 Tactical Urbanism
Readings TBD

11/12 Student Presentations

11/17 Student Presentations

11/19 Student Presentations

11/24 LAST CLASS SESSION:
ASSIGNMENT DUE: Urban Analysis #3 - Urban Interventions - Pin-up/Critique

Final papers are due no later than 7pm, Tuesday, December 8th, via submittal on Sakai under ‘Assignments’. Late submittals will not be accepted.