I. INTENT

To be successful, designers of the built environment must understand the context in which their designs will sit. Typically (and unfortunately) such understanding is often left to the individual to acquire along the way, with only mixed success. Often there are gaps between the imagined use of designed spaces and their actual performance. Understanding the larger social, cultural, economic and behavioral forces that give architecture and built space meaning is critical to sensitive and enduring design.

This course seeks to lead you, the student, towards a better understanding of the larger framework in which we design and build. It will, after discussing a particular approach to urban design, focus on cognitive mapping as one essential element to understanding how spaces are used. Staying at the urban level (city scale), you will learn how to map perception, followed by an investigation of real time mapping of city use. You will be asked to explore and share your acquired understanding of the underlying challenges.

This class will require you to answer progressive problems around the above issues. Each student is expected to be prepared to discuss in class a cumulative understanding of the benefits and challenges of cognitive mapping.

II. LEARNING OBJECTIVES

This course is designed to enable you to achieve a number of interrelated objectives:

1. To develop an understanding of the organizational processes that underscore planning and design.
2. To develop an approach to complex design problem solving, employing both analytical rigor and creative intuition to create designs that can be both explained and defended.
3. To understand how urban environments can be mapped to show how such spaces are used.
4. To understand the value of a consistent mapping vocabulary.
5. To discuss the inherent benefits and limitations of such mapping.
6. To explore new methods in real time mapping.
7. To discuss the potential of such mapping and its future uses.

III. CLASS OUTLINE & SCHEDULE

This course is divided into three phases.

PHASE 1 - Complex Design Problem Solving and Synthesis

Phase one begins with a brief introduction to the nature of complex design problems and related problem solving strategies. Logical constructs that support defensible designs will also be briefly introduced. The primary emphasis of this phase will be to set the framework for the role of cognitive mapping within the complex act of designing. The class will debate the proposed framework and begin discussions on the relationship between behavior and built space.

<table>
<thead>
<tr>
<th>SCHEDULE</th>
<th>ASSIGNMENTS</th>
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<tbody>
<tr>
<td>1. Thur. April 1</td>
<td>Intro, class goals, assignment schedule. Theory and basis for urban design (3 hrs) Assign 1</td>
</tr>
<tr>
<td>2. Thur. April 8</td>
<td>Assign 1 due – Class Discussion. Discussion of Assignment 1, the nature of complex design problems, an overview of problem solving techniques/models, an introduction to cognitive mapping. (3 hrs) Assign 2</td>
</tr>
<tr>
<td>3. Thur. April 15</td>
<td>Assign 2 due – Class discussion of cognitive mapping. Part II of above. (3 hrs) Assign 3</td>
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PHASE 2 - Understanding Real Time Mapping

Phase two is a broad investigation and collective discussion on emerging methods that attempt to measure how cities are used in real time. Trade-offs and future scenarios should provide for a thoughtful but fun conclusion to these sessions. In class pin-up discussions will help underscore the above.

SCHEDULE

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Description</th>
<th>Assigned</th>
<th>Due</th>
<th>Time</th>
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<tbody>
<tr>
<td>4. Thur. April 22</td>
<td>Cognitive Mapping – lecture and basis for mapping, discussion (3 hrs)</td>
<td>Thur. April 1</td>
<td>Thur. April 8</td>
<td>7 days</td>
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<tr>
<td>5. Thur. April 29</td>
<td>Assignment 3 due - presentations (4 hrs)</td>
<td>Thur. April 8</td>
<td>Thur. April 15</td>
<td>7 days</td>
</tr>
<tr>
<td>6. Sat. May 1</td>
<td>Team start up reviews of assignment 4 (by team and appt.) (4 hours, noon-4pm)</td>
<td>Thur. May 6</td>
<td>Thur. June 10</td>
<td>34 days</td>
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PHASE 3 – Understanding Cognitive Mapping

Phase three concludes this seminar class with an attempt to better understand the human response to the built environment. Coincident with ongoing class exercises, the class will hear and discuss the role of design in the behavioral aspects of “good civitas” (i.e. designing from an understanding of behavioral psychology) and collectively debating the extents to which the designed environment can (or should) influence behavior.

A team cognitive mapping exercise will be your final assignment. Plan to present your work in an extended final class on June 10th.

CLASS TIMES:

Please note the uneven class day, time and duration. Typically classes will be on Thursdays from 4-7 pm. Presentation day class time will be longer (note times). There will be no classes most of May but there will be some Saturday team assignment help and review (note times). The class location will be announced separately.

ASSIGNMENT SCHEDULE

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Description</th>
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<th>Due</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assign. 1</td>
<td>Commentary (Individual)</td>
<td>Thur. April 1</td>
<td>Thur. April 8</td>
<td>7 days</td>
</tr>
<tr>
<td>Assign. 2</td>
<td>Cognitive Mapping Reading &amp; Commentary</td>
<td>Thur. April 8</td>
<td>Thur. April 15</td>
<td>7 days</td>
</tr>
<tr>
<td>Assign. 3</td>
<td>Real Time Mapping – potential and issues</td>
<td>Thur. April 15</td>
<td>Thur. April 29</td>
<td>14 days</td>
</tr>
<tr>
<td>Assign. 4</td>
<td>Develop a Cognitive Map</td>
<td>Thur. May 6</td>
<td>Thur. June 10</td>
<td>34 days</td>
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</table>

IV. INSTRUCTION METHODS

Class instruction will be a combination of presentations, lectures, group discussions, and individual attention. In-class critiques at both the individual and team level will be formal (class pin-up) as well as informal (in class critiques). In all these forums, each student is encouraged to debate actively. External critics may be invited for added perspective.
V. READINGS & REFERENCES

There is no one text that adequately covers the material taught in this course. While students are encouraged to examine the texts listed below on their own, the instructor will, in conjunction with class instruction, indicate specific portions of interest and attention. In selected instances, handouts of text and passages relevant to homework assignments will be provided.

RECOMMENDED READING (Selected Passages as advised)


PHASE 1 - Complex Design Problem Solving and Synthesis


PHASE 2 - Understanding Cognitive Mapping


GENERAL BUT RELATED URBAN DESIGN READINGS

- Rudofsky, Bernard, “Architecture without Architects: A Short Introduction to Non-Pedigreed Architecture”, University of New Mexico Press,
- Urban Villages Group, “Urban Villages”, BAS Printers, 1992
VI. EVALUATION/GRADING

1. A total of 4 take home assignments are scheduled. All of these assignments will have time allocated during class hours for discussion and review. Key design assignments will require student presentations before peers and invited critics. Failure to present will influence the grade for that exercise (late work). Although presentations will not focus on your individual oratory skills, your ability to explain your efforts is important. Only the merits of the material being presented or submitted will be judged.

   IMPORTANT II: ALL material (i.e. all separate sheets/drawings) submitted for review or as homework, should have your name, date, assignment number and page number (preferably, “page x of y”) on them. For written material, please do not hand in unbound or loose sheets.

2. Late work will not be accepted more than two classes after it is due. Late work will also receive a 15% penalty reduction in scoring. Students may be asked to redo or improve upon assignments at the discretion of the instructor. Students are expected to attend and work if required in class during designated class hours. Valuable lessons are picked up from the instructor and fellow students during this time. Your final grade will reflect any failure to participate.

3. Grading will be based upon comprehension of the problem; the strength of ideas; the coherence, resolution and articulation of solutions as well as their effective visual transmission. The course relies on your ability to build upon the collective skills acquired in previous classes. Consequently, your graphic and representational skills are expected to be somewhat developed.

   Each assignment will be graded as a numerical score out of the total assignment percentage listed below. At the individual assignment level, there are no cutoffs for a grade, so do not draw any premature conclusions about how you are doing (when in doubt, ask!).

   Experience has shown that because of the diverse skills required for each assignment, your performance (relative to the rest of the class) may vary. Final grades will be assigned based upon the total score accumulated by each student, with the higher overall scores getting the higher grades. Typically, class grading profiles are loaded in the middle. Please note that your efforts in the final two assignments influence your grade the most. Your success in understanding the intent of the earlier assignments is however, key to doing well.

4. The breakdown of grading by assignment is as follows:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Description</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Assignment 1</td>
<td>Reading and Commentary (Individual)</td>
<td>10%</td>
</tr>
<tr>
<td>Assignment 2</td>
<td>Cognitive Mapping Reading &amp; Commentary</td>
<td>10%</td>
</tr>
<tr>
<td>Assignment 3</td>
<td>Real Time Mapping – potential and issues</td>
<td>30%</td>
</tr>
<tr>
<td>Assignment 4</td>
<td>Develop a Cognitive Map</td>
<td>50%</td>
</tr>
</tbody>
</table>
<pre><code>                   | Total                                             | 100%       |
</code></pre>

5. Office hours will be scheduled on an individual, as-needed basis. Outside assigned classroom opportunities, you are encouraged to arrange time to review projects, assignments, work or grades. Your instructor will do everything possible to be available. Scheduling such meetings as much in advance as possible will be appreciated.