URBAN DESIGN SKILLS
OBSERVING, INTERPRETING, REPRESENTING AND TRANSFORMING THE CITY

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SCHEDULE
Friday 9:00 am -1:00 pm | Class | Rm 10-485 (or on-site locations, as indicated)
Wednesday 6:00-9:00 pm | Recitation | Rm 10-485

COURSE DESCRIPTION
The Urban Design Skills course introduces urban planning students to methods for observing, interpreting, representing, and transforming the urban environment. Through various lenses of urban design, our surroundings can be understood and expressed within a framework of these four methods of professional practice. The morphology of the city and the interrelationship of built form, circulation networks, open space and natural systems will be the primary subject of this course.

The course aims to supplement existing courses that cover theory and history of city design and planning by preparing students without design backgrounds for the studio sequence. The course will concentrate on the design of urban spaces, informed by (but independent of) the demands of decision-making frameworks, economic forecasting, quantitative analysis, or planning implementation.

Using the skills developed throughout the semester, students will work in groups to prepare comprehensive design proposals in Cambridge that build on the relationship among stakeholder concerns, zoning regulations, environmental forces, and other factors that shape cities.

Through field analysis, readings, discussions, and physical design exercises, all focusing on the iterative process of design and representation, students will learn to draw on their senses and develop an ability to infer, inquire, and investigate hypotheses about how the environment is used and valued. Through various techniques of graphic representation, students will communicate their observations, impressions, and ideas, translating analysis into design concepts and giving form to strategic thinking with creative visions. Beyond familiarizing students with the lenses and methods of urban design, the course will equip them with an understanding of the social, economic and environmental implications of their decisions. Invention, creativity, and innovation will be required.

FORMAT AND REQUIREMENTS
The course is structured around four major themes: observing the city, interpreting the city, representing the city, and transforming the city. “Observing the City” will focus on walks/field surveys around metro Boston, an introduction to planning and urban design vocabulary, and tools for reading the city.
“Interpreting the City” will continue with field surveys and will fold in other analytical modes of reading the city through the use of data, mapping, and the stakeholder process. “Representing the City” will focus on the creative process and the use of urban design tools used to communicate ideas graphically. Finally, “Transforming the City” will culminate in a proposal for an urban design intervention. Each week, the scheduled course time will consist of field surveys/studio work sessions and recitations (skill-developing sessions). Both will be supplemented with lectures.
Coursework is split into four categories:

**Sketchbook/Observation Journal:** Students will keep a sketchbook to record their observations of the built environment during field visits and as part of their design process for the exercises assigned in the course. The journal will be submitted at midterm and at the end of the term.

**Readings:** Students are expected to complete short readings (available on Stellar) in advance of field trips and lectures, in order to better prepare themselves for the topics covered.

**Recitation Exercises:** During skill-development sessions, students will be asked to complete short exercises that will be handed to the TA’s at the end of each recitation.

**Assignments:** Students are required to complete one individual and multiple group assignments that synthesize the skills acquired in the course. The first assignment requires students to perform a subjective reading of an area in Cambridge and represent it in the form of hand drawings. The remaining assignments require students to work in groups to create design proposals for a new open space and a large-scale mixed use project.

**COURSE OBJECTIVES**

- Learn methods of studying the urban environment by physical observation and analysis. These methods include:
  - Reading the built environment in its current urban condition
  - Understanding the history and dynamics of a place, when it was built and for whom
  - Studying the physical and sensory indicators of economic and social change, trends, and problems

- Develop design thinking skills to understand the physical structure of the city across scales

- Acquire techniques of recording and representing what is observed and enhance the ability to communicate urban design ideas graphically and through written form

- Understand that urban design and planning ambitions are influenced by a wide variety of factors: physical, political, economic, social, and cultural

- Become familiar with studio culture and the development process of design proposals, aspects that will prepare students to engage in advanced studios within DUSP

**CRITERIA FOR EVALUATION**

15% Class Involvement (comprised of attendance and discussions)*
10% Sketchbook
15% Assignment 1
25% Assignment 2
35% Assignment 3

*Attendance is mandatory for all walks and recitations. Any known absence must be arranged with the instructor or teaching assistants in advance and work is expected to be turned in on time or per alternate arrangements.
SUGGESTED MATERIALS

Urban Design Skills is a studio, meaning there is learning by doing. Analog representational methods will be part of the course with hand drawing and model making. Below is a suggested list of materials that will be used throughout the semester:

- Sketchbook (bound) -- roughly 8” x 10”
- Roll of white trace paper (minimum 24” width)*
- Lead Holder and leads (F and H)
- Prisma color pencils
- Black Pens and Pentel Sign Pens – several widths
- Markers – Prismacolor (black, and different tones of grey, green, blue, yellow, etc.)
- Drafting dots (partner up and share these)
- Engineering scale (decimal inches)
- Eraser
- Graphic reference reader (buy from Jordan Pettis in 10-485)

COMPUTER GRAPHICS

In the design field, professionals are required to be fluent in computer graphics software in order to communicate and represent their ideas. This course will cover the fundamentals of programs that are commonly used in the industry. Since teaching computer graphics is not the main objective of the course, students are expected to invest their personal time to continuously improve their skills. Below is a list of programs that will be used during the semester:

- Adobe Illustrator, InDesign and Photoshop
- ArcMap GIS
- Autocad
- Sketchup *
- Rhino (subject to coordination with DUSP Viz Tutorials)

*Note that the stellar class site contains some free online tutorials for these applications. Many of these programs are provided for free or at a discount by the institution and its partners. Please see the CRON website http://cronlasso.mit.edu/cron/p.lasso?t=1:0:0 for additional information.

MATERIALS

Readings and other auxiliary resources will be distributed in class. They will be updated weekly and can be downloaded from the class website:


STUDIO AND ROOM 10-485

As a design studio, much of the learning within Urban Design Skills will take place within the studio from interactions with fellow students and teaching staff. Each student will have a studio work space in 10-485 for use during the semester. Students should prioritize working on exercises in the studio, as it will offer invaluable learning experiences and serves as a privilege to have assigned work space in DUSP.

It is your personal responsibility to ensure that no damage occurs to the furniture or equipment provided for use during the semester. No cutting should take place directly on table-tops, please use cutting-mats (shared studio resource). The seminar room table must not be used for cutting in any circumstances.
The custodial staff do not clean our communal workspaces every day. If there is a particularly large mess, request a special clean-up by emailing cust-coach@mit.edu.

Everyone is responsible for security in the space. The rear door will be closed and locked at all times. The front door will be locked and alarmed after 5:00. All students in the class should have key card access to the space, if you don’t have access please contact CRON.

**Writing and Communication Center**
The WCC at MIT (Writing and Communication Center) offers free one-on-one professional advice from communication experts. The WCC is staffed completely by MIT lecturers. All have advanced degrees. All are experienced college classroom teachers of communication. All are all are published scholars and writers. Not counting the WCC’s director’s years (he started the WCC in 1982), the WCC lecturers have a combined 133 years’ worth of teaching here at MIT (ranging from 4 to 24 years). The WCC works with undergraduate, graduate students, post-docs, faculty, staff, alums, and spouses. The WCC helps you strategize about all types of academic and professional writing as well as about all aspects of oral presentations (including practicing classroom presentations & conference talks as well as designing slides). No matter what department or discipline you are in, the WCC helps you think your way more deeply into your topic, helps you see new implications in your data, research, and ideas. The WCC also helps with all English as Second Language issues, from writing and grammar to pronunciation and conversation practice. The WCC is located in E18-233, 50 Ames Street). To guarantee yourself a time, make an appointment. To register with our online scheduler and to make appointments, go to https://mit.mywconline.com/ . To access the WCC’s many pages of advice about writing and oral presentations, go to http://cmsw.mit.edu/writing-and-communication-center/ . Check the online scheduler for up-to-date hours and available appointments.
### Semester Overview*

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<thead>
<tr>
<th>Observing the City</th>
<th>Begin</th>
<th>Due</th>
<th>Format</th>
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<tbody>
<tr>
<td>WK 1</td>
<td>Wed 6-Sep</td>
<td>No Class</td>
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<tr>
<td></td>
<td>Fri 8-Sep</td>
<td>Introduction to the Course</td>
<td>Intro</td>
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<td>WK 2</td>
<td>Wed 13-Sep</td>
<td>Recitation Introduction</td>
<td>1 Intro</td>
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<td></td>
<td>Fri 15-Sep</td>
<td>WALK 1: Kendall Square</td>
<td>1B 1A</td>
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<td>WK 3</td>
<td>Wed 20-Sep</td>
<td>A Methodology for Physical Analysis</td>
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<td>Fri 22-Sep</td>
<td>WALK 2: Fens/Muddy River</td>
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<th>Interpreting the City</th>
<th>Begin</th>
<th>Due</th>
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<tbody>
<tr>
<td>WK 4</td>
<td>Wed 27-Sep</td>
<td>Assignment 1 Review</td>
<td>2A Review 1</td>
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<tr>
<td></td>
<td>Fri 29-Sep</td>
<td>Student Holiday – no classes</td>
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<tr>
<td>WK 5</td>
<td>Wed 4-Oct</td>
<td>Intro to Mapping + AutoCAD Tutorial</td>
<td>2B 2A</td>
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<td>Fri 6-Oct</td>
<td>WALK 3: South End/Roxbury</td>
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<th>Representing the City</th>
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<th>Due</th>
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<tr>
<td>WK 6</td>
<td>Wed 11-Oct</td>
<td>Illustrator + Photoshop Tutorial</td>
<td>2C,2D 2B</td>
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<td></td>
<td>Fri 13-Oct</td>
<td>WALK 4: Suburbs</td>
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<td>WK 7</td>
<td>Wed 18-Oct</td>
<td>Axon and Perspective Drawing and Studio</td>
<td>2C</td>
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<td>Fri 20-Oct</td>
<td>WALK 5: Alewife</td>
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<td>WK 8</td>
<td>Wed 25-Oct</td>
<td>Studio Work</td>
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<td></td>
<td>Fri 27-Oct</td>
<td>Assignment 2 Final Review</td>
<td>Review 2</td>
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<tr>
<td>WK 9</td>
<td>Wed 1-Nov</td>
<td>Indesign Tutorial</td>
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<th>Transforming the City</th>
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<th>Due</th>
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<tr>
<td></td>
<td>Fri 3-Nov</td>
<td>WALK 6: Cambridgeport/Central Square</td>
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<tr>
<td>WK 10</td>
<td>Wed 8-Nov</td>
<td>3D Tutorial (DUSP Lightning Talks)</td>
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<td>Fri 10-Nov</td>
<td>Veterans Day -- Holiday</td>
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<td>WK 11</td>
<td>Wed 15-Nov</td>
<td>Physical Model-Making and Studio Work</td>
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<td>Fri 17-Nov</td>
<td>Pin-Up and Discussion of in-progress</td>
<td>Pin-Up work/Site Visit</td>
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<td>Studio Work/ Pin-Up</td>
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<td>WK 12</td>
<td>Wed 22-Nov</td>
<td>Open Studio</td>
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<td></td>
<td>Fri 24-Nov</td>
<td>Thanksgiving-No Classes</td>
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<td>WK 13</td>
<td>Wed 29-Nov</td>
<td>Laying out Boards + Studio Work</td>
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<td>Fri 1-Dec</td>
<td>Studio Work/ Pin-Up</td>
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<td>WK 14</td>
<td>Wed 6-Dec</td>
<td>Pin-Up</td>
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<td>Fri 8-Dec</td>
<td>Studio Work</td>
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<td>WK 15</td>
<td>Wed 13-Dec</td>
<td>Studio Work</td>
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<td></td>
<td>Fri 15-Dec</td>
<td>Final (with Guest Critics)</td>
<td>Review 3</td>
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*Semester schedule subject to change.*
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DETAILED SCHEDULE | READINGS
Readings are to be completed before class for the dates assigned.

Observing the City

1| Sept 8 (F) | INTRODUCTION
Course structure and objectives + Short walk ‘Reading’ the Campus/City
Introduction Assignment distributed

2| Sept 13 (W) | RECITATION INTRODUCTION TO URBAN SPACE
Methodology, Physical Analysis, and Representation (Marie and Mary Anne)
Intro Assignment due
Assignment 1A distributed


Recommended:

3| Sept 15 (F) | WALK 1 – Kendall Square (Eran)
Meet at the Kendall T stop at 9am

Assignment 1A due at 4 pm in 10-487m
Assignment 1B distributed


Lyme Properties, Kendall Square Design Competition Guidelines 6
Recommended:

- Boston Complete Streets Guidelines [REFERENCE]
- Rethinking Streets [REFERENCE]

4| Sept 20 (W) A METHODOLOGY FOR PHYSICAL ANALYSIS
Process: Analog + Digital Drawing (Mary Anne and Marie)


Recommended:

- “Site Inventory”, 1992 [REFERENCE]

5| Sept 22 (F) WALK 2: Fens/ Muddy River(Eran)
Meet at 77 Mass Ave at 9am


History Time: Southwest Corridor Park


Recommended:

Interpreting the City

6| Sept 27 (W) FINAL REVIEW ASSIGNMENT 1A + B

Assignment 2A distributed

7| Sept 29 (F) STUDENT HOLIDAY. No Classes.

Lloyd W. Bookout and James W. Wentling, “Density by Design,” Urban Land (June 1988)


8| Oct 4 (W) AUTOCAD (Joshua and Pitchapa)

INTRODUCTION TO MAPPING (Mary Anne and Marie)

Assignment 2A due
Assignment 2B distributed


9| Oct 6 (F) WALK 3: South End / Roxbury (Eran)

Meet in front of Massachusetts Avenue Subway Station (Orange Line) 9am

Representing the City

10| Oct 11 (W) ILLUSTRATOR + PHOTOSHOP (Pitchapa and Joshua)

Assignment 2B due
Assignment 2C + 2D distributed


Victor Dover, “Charettes for New Urbanism”, The State of New Urbanism

Recommended:


11| Oct 13 (F) WALK 4: Suburbs (Pinehills)

Suburban Developments: Nature, Community, and Zoning (Eran)

Meet at 77 Mass Ave at 8:30am (Returning at 2pm)


Eran Ben-Joseph "Double Standards, Single Goal: Private Communities and Design

Eran Ben-Joseph ReThinking a Lot: The Design and Culture of Parking [REFERENCE]

12| Oct 18 (W) **LANDSCAPE PRESENTATION** (Marie and Mary Anne)
**AXONOMETRIC + PERSPECTIVE DRAWING** (Marie and Mary Anne)


Assignment 2C due

13| Oct 20 (F) **WALK 5: Alewife**
Meet at Alewife T stop 9am

14| Oct 25 (W) **STUDIO**

15| Oct 27 (F) **FINAL REVIEW ASSIGNMENT 2A, B, C, D**
Open space and public space/place-making

16| Nov 1 (W) **MODEL-MAKING** (Luke and Pitchapa)
Modeling Existing Conditions

Assignment 3 distributed

**Transforming the City**

17| Nov 3 (F) **WALK 6: Cambridgeport / Central Square**
Meet at 77 Mass Ave 9am

18| Nov 8 (W) **SKETCHUP AND DESK CRITS** (reviewing analysis and design concepts at 1:100)

19| Nov 10 (F) **VETERANS DAY.** No class

20| Nov 15 (W) **BUILDING TYPOLOGIES PRESENTATION** (Marie)
**STUDIO** (physical model making and development of design concept)

21| Nov 17 (F) **PIN-UP AND WORK IN PROGRESS / Site Visit** (development of design concept: plans, sections, massing)

22| Nov 22 (W) **OPEN STUDIO**

23| Nov 24 (F) **THANKSGIVING.** No class

24| Nov 29 (W) **STUDIO**

25| Dec 1 (F) **STUDIO** (Informal Pin-up - Presentation and Layout)

26| Dec 6 (W) **STUDIO** (final work, Informal Pin-up - Presentation and Layout)

27| Dec 8 (F) **STUDIO** (final work)

28| Dec 13 (W) **STUDIO** (final work)

29| Dec 15 (F) **FINAL REVIEW OF ASSIGNMENT 3**
Review of final project, with outside critics. 9am 10-485

*Walks are subject to change due to schedule.