UPA 304: Visualizing the city: Concepts, methods and tools

Course overview

All urban scholars and professionals—whether dealing with urban design, economic development, environmental planning, transportation planning, real estate, housing or public infrastructure—employ a combination of methods and tools to visualize complex urban phenomena and the underlying multifaceted processes. This course will equip the students with three critical skills that would enable them to independently visualize an urban setting. First, this course will highlight the issue of positionalities that determines how different designers and planners visualize the same phenomenon from diverse positions. Second, the course will provide a set of tools to perceive and represent what exits and what might become reality. And, finally the course would provide practical experience of composing a visualization portfolio by analyzing and representing an urban setting.

Accordingly, this course is organized in three modules. The first module is exploratory in nature and deals with the crucial issue of how to perceive and represent the richness and complexity of the "real" world. This is important because what urban scholars and professional choose to perceive and represent not only influences their own view of reality but also shapes the plans, designs and indeed the future form of cities in a significant manner. Additionally, in recent times, the importance and influence of visualization has increased as witnessed in the constant onslaught of urban imagery produced by highly advanced and sophisticated technological means such as internet, computer stimulations and hyper media. Thus, in the first module we will not only explore what visualization is but also what it can be? The second module focuses on methods and tools and is thus instructive in nature. In this module, students will learn how to represent complex urban phenomenon through a combination of visualization tools such as sketches, maps, and photographs. In the third module, invited speakers, the instructor, and student groups will present case studies of real life visualization projects to the class. Finally, the students will use the knowledge they have acquired in this course to compose a visualization portfolio that represents an urban setting.

Course objectives:

At the conclusion of this course, students should have accomplished the following:

1. Students should have comprehended the theory and methods of visualization and should have a nuanced understanding of various visualization tools. They should be able to employ a combination of these tools in a meaningful manner and recognize when, how, and with which audience they should be used.

2. Students should have understood the basic concepts of orthographic projections (e.g., plans, elevations and sections); views (e.g., linear perspective, bird's and worm's eye views); and cartography (e.g., mapping physical features and activity

patterns). They should be able to employ a mix of these methods to visualize an urban setting.

3. Students should be able to compose a visualization portfolio that represents an urban context in an efficient and effective manner.

Course requirements:

1. Comprehending and critiquing perception (Or the issue of positionalities): As some of you might be aware, the UIC library has an excellent photographic documentation of Chicago's neighborhoods. For instance, "The Comer archive of Chicago in the year 2000" (http://comerlab.lib.uic.edu/) comprises over 500,000 images. Over 200 photographers, who visited every neighborhood of Chicago to chronicle its people, places and personalities, shot these images in the year 2000. Students will collect and analyze photographs of a selected Chicago neighborhood either from the Comer or any other archive at the UIC library. They will also visit the neighborhood first hand and then write a short essay (3-4 pages) highlighting: two or three principal themes (e.g., neighborliness, celebration of everyday life, poverty or desolation) that the photographers have emphasized and critique the photographers' perception based on the experience of their own visit(s). (15% of total grade)

2. Understanding how practicing planners' visualize: American Planning Association (APA) awards prizes to a number of innovative and successful planning projects every year. Groups of students (2 to 3 students in each group) will select a project, in consultation with the instructor, from the shortlist provided at Annexure A. The groups will then analyze the visualization tools and methods deployed in the selected project. The aim of this exercise is to comprehend how planners use a combination of visualization tools to emphasize problematic issues and highlight proposed solutions. The groups will then present their findings to the class in a fifteen to twenty minute long power point presentation. (25% of total grade)

3. Composing visualization portfolio of an urban setting: Neighborhoods are often popularly perceived as possessing distinct personalities and unique traits. For example, the area around Taylor Street is still called little Italy, when the Italian immigrants are long gone. A close reading will reveal that this dichotomy is spatially manifested, for instance, in the absence of an Italian speaking population and the presence of several "Italian" restaurants, probably owned by local businessman who seek to profiteer from the popular perception. Similarly, the village of River Forest is usually perceived as a "rich" neighborhood but may have incidences of poverty within or adjacent to its boundaries. The aim of this assignment is to identify spatial manifestations of such interesting dichotomies, between popular perception and a more nuanced reading, in a Chicago neighborhood and represent these in visual format (e.g. maps, sketches, photographs, or satellite images). The final outcome of this exercise should be a meaningful composition of these visual images in a portfolio of A3 size (10.5 x 17

inches) sheets. Students may find it convenient to select the same neighborhood for assignment one and three. (35% of total grade)

4. The instructor would also hand out three in-class assignments, each worth 5% of the grade.

5. Students are required to attend all classes. Attendance and class participation would comprise 10% of the final grade.

Study and learning materials:

There are no mandatory textbooks for this course. The readings for this course consist of relevant chapters from edited volumes and pertinent sections of several books. All the required readings will be available in digital format on the "Blackboard." However, students are advised to consult the following books, available at the reserve desk of the Daley library, for a wider exposure.

1. Bosselmann, Peter. 1998. *Representation of places: reality and realism in city design*. Berkeley: University of California press.
2. Kasprisin, Ron and James Pettinari. 1995. *Visual thinking for Architects and Designers.* New York: Van Nostrand Reinhold.
3. Vale, Lawrence J. and Sam Bass Warner Jr. (Editors). 2001. *Imaging the City*. New Brunswick, N.J.: Centre for Urban Policy Research.
4. Samuels. Mike and Nancy Samuels. 1975. *Seeing with the mind's eye: the history, techniques, and uses of visualization*. New York: Random House.
5. Marcuse, Alan and Dietrich Neumann. 2007. *Visualizing the city*. New York: Routledge.
6. Campoli, Julie and Alex S. Maclean. 2007. *Visualizing Density.* Cambridge, Mass: Lincoln Institute of Land Policy.
7. Muehrcke, Phillip. 2001. *Map use: reading, analysis, and interpretation.* Madison, Wisconsin: JP Publications.
8. Dent, Borden D. 1990. Cartography Thematic Map Design. Dubuque, IA: Wm. C. Brown publishers.

The students will need a sketchbook (A3 size), a set of drawing pencils (one each of HB, H and B) and a good quality eraser. Students are also advised to budget adequate time beyond lectures for practice on computer software and field visits.

Office hours:

By prior appointment through E-mail. The instructor will be available to meet and discuss issues that are of interest to you. Students are encouraged to be proactive and seek appointments as often as needed during the course of their study.

Note:

This course has many firsts to its credit. It is being taught for the first time in the undergraduate urban and public affairs program of CUPPA. Most students taking this course are learning visualization for the first time, whereas other students (e.g., students of architecture, urban design, civil engineering, and graphics) spend several semesters learning these techniques. And, off course the instructor is also teaching a course at the UIC for the first time. The following schedule has been structured with these constraints in mind and therefore provides some room to accommodate diverse talents and expectations of the class:

Schedule of Classes:

Week one: *Introduction and overview* 26th August: Introduction to visualization 28th August: Historical overview Readings: Bosselmann, Chapter one: Concept and Experience
Week Two: *Advances in visualization* 2nd September: From Christopher Wren to Kevin Lynch Readings: Bosselmann, Chapter two: The search for a visual language in design 4th September: Continued…
Week three: *Visualizing with maps* 9th September: Visualization now: Readings: Holcomb, Place Marketing: Using media to promote cities in "Imaging the city" and Tavernor, Composing London Visually in "Visualizing the city." Optional reading: Samuels, Chapter 1-3 in Seeing with the Mind's eye 11th September: Thematic maps (1st assignment due) Readings: Dent, Chapter one: Introduction to Thematic mapping
Week four: *Orthographic projections* 16th September: Google maps and UIC Simply Map Readings: Wood, Chapter 1-2 in The power of Maps 18th September: Diagrams and plans Readings: Kasprisin and Pettinari, Introduction and Chapter one (Principles, elements and techniques of visualization) pp 3-12 and pp 32-40.

Week 5: *Plans and perspectives* 23rd September: In-class exercise, making a plan 25th September: linear perspectives and Axonometric views Readings: Kasprisin and Pettinari, Chapter one pp 12-30.
Week 6: Image editing 30th September: Using photoshop to manipulate images 2nd October: In-class exercise on photoshop
Week seven-nine: Presentation of 2nd assignment by student groups
Week ten: 3d drawing 28th October: Google Sketch-Up 30th October: In-class exercise on Sketch-Up
Week eleven: Composing a visualization 4th November: Adobe illustrator 6th November: In-class exercise on illustrator
Week twelve: 11th November: Guest lecture (presentation of a real life GIS project) 13th November: Using visualization tools in concert: Presentation by the Instructor
Week thirteen: The future of visualization 18th November: Futuristic trends Reading: Al-Kodmany, Kheir. (2002). Visualization Tools and Methods in Community Planning: From Freehand Sketches to Virtual Reality. *Journal of Planning Literature.* 17(2): pp.189-211. 20th November: Using hand drawn plans and Adobe Photoshop collectively
Week fourteen: 25th November: Using Adobe Photoshop and Illustrator collectively
Week fifteen: 2nd and 4th December: Open lab (Instructor available for help with final portfolio)
Week sixteen: Final assignment pin-up

TBA: Class excursion of about 3-4 hours duration.