Course Number | PLAN 221
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Course Credit(s) | 3
Course Title | City Visuals
Term | 2017-2018
Day | Friday
Time | 2:00 to 5:00pm

Instructor | TBA
Office | n/a
Telephone | n/a
Email | TBA
Office Hours | TBD

**Short Course Description**
This course is an exploratory journey through the vast world of visualizing the city. Students will gain an understanding of the types and hierarchies of visualizations of the city and how to interpret them and use them to read the city. *This course is open to all UBC students in 2nd year and above, regardless of prior experience.*

**Course Format**
Course will meet twice a week for 1.5 hours each session. Course material will be structured using a combination of presentations and in-class exercises, discussions and tutorials. Class sessions will emphasize visual material, which will be guided by course instructors but also supplied, informed and analyzed by students. Students will see images, watch videos and listen to audio works about the city.

**Course Overview, Content and Objectives**
This course is an exploratory journey through the vast world of visualizing the city. How has our way of understanding and representing cities evolved from old parchment maps to dynamic real-time data capture with user-interactive visualizations of urban regions? How do we represent spatial data and what do we use, when and how?

Broadly, students will gain a historical understanding of how the city has been represented visually, as well as the fundamentals of representation types and information design, in the service of reading and interpreting visualizations of the city. Future creators and consumers of city visuals will be exposed to the data sources and production processes behind a wide variety of representations including; videos, maps, diagrams, plans, charts, fly-through animations, interactive graphics, comics and music. A series of exercises—experiential and otherwise—will allow students to comprehend and use the principles for creating clear and powerful graphic narratives of the city.

The following summarizes the larger sections covered in the course:

**A history of settlement/city representation** - Although this will be delivered continuously (as precedents will be shown throughout the course), giving students a sense of how people have represented the built landscape over time will be an integral part of the course content. This will ground more recent works
within a lineage of attempts to capture the complexity of built landscapes, and related information, at a number of scales. It will also allow students to understand representational relationships across cultures and eras.

**Fundamentals of representation types** - This includes an understanding of drawing types—i.e. what is a cross-section? what is a plan? what is a paraline drawing? etc.— and what type of information each excels at conveying as well as its limitations. This will also cover other more popular representation types—i.e. maps, etc.—but the focus will be on representation types not commonly known. This understanding will be the building blocks for more in-depth discussions about, and interpretations of, city visuals.

**Fundamentals of information/graphic design** – This will focus on the principles of organizing and visualizing complex information. The pioneering work of Edward Tufte and Richard Saul Wurman will be the highlighted. This element will give students a basic understanding of how to put a variety of information together in a coherent way, giving them a basis for critically analyzing and constructively critiquing city visuals.

**Application** – As a whole, the aspects described above give students a solid foundation in terms of reading, interpreting and critiquing city visuals. But reading and learning about design principles, history, criticism, etc. is different than applying that knowledge, and this course will seek to round out that base information through a series of creative exercises that synthesize and demonstrate their foundational knowledge.

This course has a number of learning objectives and offers students a series of fundamental tools and principles for engaging, interpreting and representing visual information about the city.

**Learning Outcomes**
At the end of this course, students will have achieved the following:

- Understand the general history of city representations
- Read and interpret 2-dimensional and 3-dimensional information about the city
- Understand, read and interpret fundamentals of orthographic drawings of the city
- Understand the fundamentals of clear information design
- Understand key precedents of city visualizations
- Articulate a graphic assessment of the physical features of an urban space
- Interpret and explain city information at different scales
- Undertake basic information design about the city at a variety of scales (street, block, neighbourhood, region, etc.)
- Critical observation and appreciation of the everyday urban environment
- Apply the foundational knowledge about reading, interpreting and critiquing city visuals through the a series of a exercise

**Additional Course Requirements**
Given that the course requires some understanding of the built environment, students will be expected to conduct research outside of class time in the form of observation and mapping of urban settings as assigned and/or selected in class. Students will also be expected to conduct typical library and web-based searches.

**Attendance**
Regular attendance and punctuality are essential for successful completion of course requirements. Because of the visual and interactive nature of the course format, late arrivals, early departures, prolonged breaks and absences will compromise students’ ability to successfully complete course assignments and may lead to poor overall performance.

**Evaluation Criteria and Grading**

- This course is graded on a numeric (percentage) grade.
- The following is a sample of possible assignments that students will be required to complete:
  1. **Mid-term written exam 25%**
     - Students will be asked to identify, interpret and comment on images and visuals.
     - Learning objectives achieved through this requirement are
       - Understanding the general history of city representations
       - Reading and interpreting 2-dimensional and 3-dimensional information about the city
       - Understanding reading and interpreting fundamentals of orthographic drawings of the city
       - Understanding key precedents of city visualizations

  2. **Visualizing Yourself 25%**
     - Students will be required to gather data and information about themselves over a set period of time and—using the wonderful work of Nicholas Feltron as a precedent—create a ‘board’ or document that presents themselves through series of maps, statistics and graphics.
     - Learning objectives achieved through this requirement are
       - Articulating a graphic assessment of the physical features of an urban space
       - Interpreting and explaining city information at different scales
       - Articulate a graphic assessment of the complex information in urban space

  3. **Interrogating Visuals 25%**
     - Students choose a major city, research different contemporary visual representations, and provide a critical commentary on each visual selected—what it tells us, and what it does not.
     - Learning objectives achieved through this requirement are
       - Understanding the fundamentals of clear information design
       - Interpret and explain city information at different scales

  4. **Narrative in Visuals 25%**
     - Using Alexandra Horowitz’s *On Looking: A Walker’s Guide to the Art of Observation* as a starting point, students will be asked to tell a story about walking around their block through a visual narrative, using at least 3 different types of representation.
     - Learning objectives achieved through this requirement are
       - Undertake basic information design about the city at a variety of scales (street, block, neighbourhood, region, etc.)
       - Critical observation and appreciation of the everyday urban environment

Submitted assignments will generally be marked according to the following rubric
<table>
<thead>
<tr>
<th>Completeness (25%)</th>
<th>Format, layout and organization (25%)</th>
<th>Writing mechanics (25%)</th>
<th>Graphics (25%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(90-100%)</td>
<td>Report tells a very clear and coherent story with seamless and compelling transitions</td>
<td>Report is virtually error-free, and contains no reader distractions</td>
<td>All graphics are easy to understand, and are clearly linked to the text. Story can be told almost entirely through figures</td>
</tr>
<tr>
<td>(85-89%)</td>
<td>Report is clear and tells a coherent story, strong throughout</td>
<td>Report is logical and easy to read, and contains very few errors causing minimal reader distraction</td>
<td>All graphics can be understood with information given and are linked to text. One figure or table may need improvement</td>
</tr>
<tr>
<td>(80-84%)</td>
<td>Report is generally clear and coherent, but has some weak sections</td>
<td>Report is logical and clear but contains errors causing reader distraction</td>
<td>Graphics generally need clarification or improvement. May need more figures to tell the story.</td>
</tr>
<tr>
<td>(68-79%)</td>
<td>Report has gaps in story and some weak areas</td>
<td>Report is generally clear, but distracting errors and flow make it difficult to follow at times</td>
<td>Graphics are hard to understand, are not all linked to text. Several more figures are needed to tell story</td>
</tr>
<tr>
<td>(55-67%)</td>
<td>Report is poorly organized, and difficult to understand</td>
<td>Report contains many distracting mistakes, making it generally difficult to follow</td>
<td>Graphics are hard to understand, not adequate to advance the story. Tables are not useable as presented</td>
</tr>
<tr>
<td>(54 and below)</td>
<td>Report is very poorly organized, inconsistent and confusing</td>
<td>Report contains many mistakes and is incomprehensible</td>
<td>Graphics are absent or incomplete</td>
</tr>
</tbody>
</table>

Required Readings and Videos
Edward Tufte, *Envisioning Information*
Richard Saul Wurman, *Information Anxiety*
Royksopp, *Remind me video*

Recommended Readings
Brian M. Ambroziak and Jeffrey R. Ambroziak, *Infinite Perspectives: Two Thousand Years of Three-Dimensional Mapmaking*
Jeremy Black, *Metropolis: Mapping the City*
DK, *Great City Maps*
Mario Gandelsonas, *X-Urbanism: Architecture and the American City*

Paul Laseau, *Visual Notes for Architects and Designers*

Paul Laseau, *Graphic Thinking for Architects & Designers*

William Lidwell, Kritina Holden, Jill Butler - *Universal Principles of Design*

Manuel Lima, *Visual Complexity: Mapping Patterns of Information*

Morioka and Stone, *Color Design Workbook: A Real World Guide to Using Color in Graphic Design*

Bruce Macdonald, *Vancouver: A Visual History*

Mohsen Mostafavi, *Cartographic Grounds: Projecting the Landscape Imaginary*

Sandra Rendgen (and Julius Wiedemann, Editor), *Information Graphics*

Daniel Rosenberg, *Cartographies of Time: A History of the Timeline*

Edward Tufte, *Visual Display of Quantitative Information*

Edward Tufte, *Visual Explanations*

Edward Tufte, *Beautiful Evidence*

Susan Weinschenk, *100 Things Every Designer Needs to Know About People*

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**General Bibliography**

Christopher Alexander, *A Pattern Language*


Brian M. Ambroziak and Jeffrey R. Ambroziak, *Infinite Perspectives: Two Thousand Years of Three-Dimensional Mapmaking*

Edmund Bacon, *Design of Cities*

John Berger, *Ways of Seeing*


Jeremy Black, *Metropolis: Mapping the City*

Peter Bosselman, *Representations of place*

James Corner, Alex S. MacLean, and Denis Cosgrove, *Taking Measures Across the American Landscape*

David McCandless, *Knowledge Is Beautiful: Impossible Ideas, Invisible Patterns, Hidden Connections--Visualized*


Peter Chasseaud and The Imperial War Museum, *Mapping the Second World War: The history of the war through maps from 1939 to 1945*

Gordon Cullen, *The Concise townscape*

DK, *Great City Maps*

Lorraine Farrelly, *Drawing for Urban Design*

Mario Gandelsonas, *X-Urbanism: Architecture and the American City*

Stephen Graham, *Vertical: The City from Satellites to Bunkers*

Steven Heller and Rick Landers, *Infographics Designers’ Sketchbooks*

Derek Heyes, *Historical Atlas of Vancouver*


Spiro Kostof, *The City Shaped: Urban Patterns and Meanings Through History*

Spiro Kostof, *The City Assembled*

Eduard Imhof, *Cartographic Relief Presentation*

Eric j. Jenkins, *Drawn to Design: Analysing Architecture Through Freehand Drawing*
Paul Laseau, *Visual Notes for Architects and Designers*
Paul Laseau, *Graphic Thinking for Architects & Designers*
Paul Lewis et al., *Manual of Section*
William Lidwell, Kritina Holden, Jill Butler - *Universal Principles of Design*
Manuel Lima, *Visual Complexity: Mapping Patterns of Information*
Carl Liungman, *Dictionary of Symbols*
Morioka and Stone, *Color Design Workbook: A Real World Guide to Using Color in Graphic Design*
Bruce Macdonald, *Vancouver: A Visual History*
Anuradha Mathur and Dilip da Cunha, *Mississippi Floods: Designing a Shifting Landscape*
Mohsen Mostafavi, *Cartographic Grounds: Projecting the Landscape Imaginary*
Lisa Peattie, *Planning: Rethinking Ciudad Guayana*
Sandra Rendgen (and Julius Wiedemann, Editor), *Information Graphics*
Daniel Rosenberg, *Cartographies of Time: A History of the Timeline*
Edward Tufte, *Envisioning Information*
Edward Tufte, *Visual Display of Quantitative Information*
Edward Tufte, *Visual Explanations*
Edward Tufte, *Beautiful Evidence*
Richard Saul Wurman, *Information Anxiety*
C. Steenbergen J. van der Zwart, *Atlas Of The New Dutch Water Defence Line*
Susan Weinschenk, *100 Things Every Designer Needs to Know About People*
Edward White, *Site Analysis*
Denis Wood, *The Power of Maps*
Nathan Yau, *Visualize This: The Flowing Data Guide to Design, Visualization, and Statistics*

**Course Schedule**
A tentative schedule of the course is provided, as follows. Please note that in-class work sessions will integrated into classes:

- **Week 1**
  - **Session 1** – Introduction and course overview
  - **Session 2** – Pre-print era: cartographic depictions and classical renderings
- **Week 2**
  - **Session 3** – Print era: production, photo production and mass production
  - **Session 4** – Digital era: image tooling and retooling
- **Week 3**
  - **Session 5** – Connected era: multitude of sources and consolidated outputs
  - **Session 6** – Projections, distortions and depictions – transit maps
- **Week 4**
  - **Session 7** – Projections, distortions and depictions – building drawings
  - **Session 8** – Projections, distortions and depictions – street cross-sections
- **Week 5**
  - **Session 9** – Realistic capture: satellite photos and street views
  - **Session 10** – Blended images: photo draping and 3D rendering
- **Week 6**
  - **Session 11** – 3D Digital modeling and animation: functional depictions
- **Session 12** – 3D Digital modeling and animation: fantastical depictions

- **Week 7** –
  - **Session 13** – Geographic Information Systems and spatial layering
  - **Session 14** – Interpreting images in satellite and aerial photos

- **Week 8** –
  - **Session 15** – Digital asset mapping and rating: from passive tracking to active yelping
  - **Session 16** – Community and asset mapping

- **Week 9** –
  - **Session 17** – Mid-term exam
  - **Session 18** – Place based gaming: Pokémon go and digital scavenger hunts

- **Week 10** –
  - **Session 19** – The city in film: From Hollywood backdrops to urban documentaries
  - **Session 20** – Real estate branding and marketing

- **Week 11** –
  - **Session 21** – Fundamentals of visual communication
  - **Session 22** – Infographics and the visual translation of data

- **Week 12** –
  - **Session 23** – Visualization in urban planning: data sources, platforms and models
  - **Session 24** – Visualization in urban planning: citizen participation and preference voting

- **Week 13** –
  - **Session 25** – Infographics and social media: how to tell truth from fiction
  - **Session 26** – Whose city is it? Visualization as power in urban politics

- **Week 14** –
  - **Session 27** – The city through photos
  - **Session 28** – The city through visual art

**Special Needs**
Please inform the course instructor as soon as possible if you have special needs and require accommodation of any kind. Please visit [http://www.students.ubc.ca/access/](http://www.students.ubc.ca/access/) for more information on campus resources.

**Academic Integrity**
The academic enterprise is founded on honesty, civility, and integrity. As members of this enterprise, all students are expected to know, understand, and follow the codes of conduct regarding academic integrity. At the most basic level, this means submitting only original work done by you and acknowledging all sources of information or ideas and attributing them to others as required. This also means you should not cheat, copy, or mislead others about what is your work.

Violations of academic integrity (i.e., misconduct) lead to the breakdown of the academic enterprise, and therefore serious consequences arise and harsh sanctions are imposed. For example, incidences of plagiarism or cheating may result in a mark of zero on the assignment or exam and more serious consequences may apply if the matter is referred to the President’s Advisory Committee on Student Discipline. Careful records are kept in order to monitor and prevent recurrences.

A more detailed description of academic integrity, including the University’s policies and procedures, may be found in the Academic Calendar at [http://calendar.ubc.ca/vancouver/index.cfm?tree=3,54,111,0](http://calendar.ubc.ca/vancouver/index.cfm?tree=3,54,111,0).