Course Overview
This seminar explores technology through the lens of multiple perspectives from popular culture, to Science and Technology Studies (STS), to critical perspectives, to other pragmatic and theoretical approaches within and outside the boundaries of city and regional planning.

We focus on many of the analytical and participatory aspects of information and communication technologies in the course. This includes crowdsourcing and community mapping tools, participatory GIS methods, location-based apps and social media, e-government and digital participation, regional scenario planning tools, 3D visualization and analysis of the built environment, spatial analytical methods, among other technological tools. In addition, a more expansive view of technological artifacts including the city itself as technology.
We will “disassemble” and critically analyze technology in the context of planning. Then we will create technology proposals and recommendations. Participants will work on final projects that: 1) critically investigate a technological trend or artifact of their choice and how it intersects with planning or 2) propose a new technological tool. The class will also craft recommendations on the technological tools within the City of Ithaca’s planning processes.

**Prerequisites**

A working knowledge of geographic information systems and information and communication technology is useful, but not required. The only prerequisite is a strong interest in the role of technology in the practice of planning and in the shaping of cities.

**Course Format**

This course is a seminar. All participants are expected to prepare for class and actively contribute to class discussions.

**Learning Objectives**

This course has the following learning objectives:

- Support student generated research on the social shaping of technology, cities, and planning;
- Supporting creative and analytical thought about the role and development of tools in planning;
- Familiarity with a broad range of tools and spatial analytical methods that can augment the practice of planning.

This course fulfills the following planning accreditation learning objectives, emphasizing the connections between technology and the following:

- **Planning Theory**: appreciation of the behaviors and structures available to bring about sound planning outcomes.
- **The Future**: understanding of the relationships between past, present, and future in planning domains, as well as the potential for methods of design, analysis, and intervention to influence the future.
- **Research**: tools for assembling and analyzing ideas and information from prior practice and scholarship, and from primary and secondary sources.
- **Written, Oral and Graphic Communication**: ability to prepare clear, accurate and compelling text, graphics and maps for use in documents and presentations.
- **Quantitative and Qualitative Methods**: data collection, analysis and modeling tools for forecasting, policy analysis, and design of projects and plans.
- **Leadership**: tools for attention, formation, strategic decision-making, team building, and organizational/community motivation.
- **Governance and Participation**: appreciation of the roles of officials, stakeholders, and community members in planned change.
- **Social Justice**: appreciation of equity concerns in planning.
Texts

Required book:


Optional, recommended books:


Course readings will be made available through Blackboard and/or placed on library reserve.

Evaluation

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<thead>
<tr>
<th>Evaluation Area</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Mini Weekly assignments</td>
<td>20%</td>
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<tr>
<td>Lead Discussion</td>
<td>20%</td>
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<tr>
<td>Midterm project</td>
<td>20%</td>
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<tr>
<td>Technology Recommendation Paper and Tech Talk</td>
<td>30%</td>
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<tr>
<td>Class Participation</td>
<td>10%</td>
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Policies

Laptops and Tablets - You may bring a laptop or tablet to class; however, do not use it for unrelated e-mail checking, social media, or other distracting activities. We may use laptops for engaged learning opportunities; however, laptops may not be used while guest speakers visit the classroom in person or via Skype.

Attendance – You are expected to be in class and participate. Attendance is mandatory and absences will affect your grade. For every class you miss, 10% will be deducted from your class participation grade. In the event of an illness or family emergency, you should send an e-mail indicating the reason for your absence. You are also expected to actively participate in class activities.

Academic Integrity – Your work must be your own. When you use a map, photograph, or diagram from another source or when you quote text, you must provide a reference to the artist or author. All of your work should be consistent with Cornell’s Code of Academic Integrity, available here: [http://cuinfo.cornell.edu/Academic/AIC.html](http://cuinfo.cornell.edu/Academic/AIC.html).

Note to students with disabilities: If you have a disability-related need for reasonable academic adjustments in this course, please provide the instructor with an accommodation notification letter from Student Disability Services as soon as possible. A notification letter should be provided within the first two weeks of the semester or from the occurrence of an injury or illness. I would like to invite you to set up a meeting with me to discuss needed accommodations in a confidential environment. If you have not done
so already, I encourage you to meet with Student Disability Services for disability verification and determination of reasonable accommodations.

**Tentative Course Schedule**

The contents of this syllabus may shift throughout the semester to enhance class learning objectives and outcomes. If changes are made in the readings or assignments, this information will be communicated as early as possible.

**January 21**

**Week 1 - Class Overview and Objectives; Class Concept Mapping – Technology**

No readings due.

**January 28**

**Week 2 – The Janus Faces of Technology**

*Guest Speaker(s) from the City of Ithaca: JoAnn Cornish, Planning Director and Megan Wilson, Planner, to talk about planning needs, introduce questions concerning use of technology in Ithaca’s planning processes.*

Readings due for class:


Mini-assignment #1 due by class time:

- See blackboard for instructions for the Detroit Industry Mural revision assignment. Upload paper to Blackboard and bring 2 powerpoint slides to class.

**February 4**

**Week 3 – Cities as Artifacts, Artifacts with Politics, Space of Flows, and Smart Cities Part I**

Readings due for class:


Mini-assignment #2 due by class time:

- See blackboard for instructions
February 11
Week 4 - E-government, Open Government

Readings due for class:


Mini-assignment #3 due by class time:
- 1-page proposal due for team-based memo to advise the City of Ithaca on matters of technology.

February 18
Week 5 - Mobile Devices, Apps, Sense of Place; Social Media and Social Networks

Virtual Guest Speaker - Nader Afzalan, Lecturer at San Jose State University; PhD Candidate at University of Colorado Denver; Vice-Chair of the Technology Division of the American Planning Association.

Readings due:

- de Souza de Silva, Adriana and Jordan Frith. Chapters 1 and 2 in Mobile Interfaces in Public Spaces. P. 25-74.

Mini-assignment #4 due by class time:
- 1-page proposal due for midterm and final project.
February 25
Week 6 – Digital Divides

Readings due:
- Anonymity Online: http://pewinternet.org/Reports/2013/Anonymity-online.aspx

Mini-assignment #5 due by class time:
- See blackboard for instructions

March 4
Week 7 – Crowdsourcing, Citizen Science, Citizen History

Readings due:
- “Combining crowdsourcing and google street view to identify street-level accessibility problems” CHI 2013, April 27 – May 2, 2013, Paris, France.

Mini-assignment #6 due by class time:
- See blackboard for instructions

March 11
Week 8 – The Power of Maps; Participatory and Critical GIS

Readings due:

Midterm Project Due. No mini-assignment.

Wednesday, March 18
Week 9 – Seeing and Surveillance
Readings due:

• de Souza de Silva, Adriana and Jordan Frith. Chapters 4 and 5 in Mobile Interfaces in Public Spaces. P. 25-74. P. 111-158.

Mini-assignment #7 due by class time:
• See blackboard for instructions.

Wednesday, March 25
Week 10 - Serious Games
Virtual Guest Speaker: Florian Witsenberg, CEO of Tygron
(Note: Due to time difference, may need to reschedule for a different time this week)
Readings due:

• Poplin, Alenka. “Playful public participation in urban planning: A case study for online serious games.”

Mini-assignment #8 due by class time: See blackboard for instructions.
Spring Break

Wednesday, April 8
Week 11 – Visualizing Alternate Future Scenarios

Mini-assignment due (see Blackboard for instructions)

Readings due:


Mini-assignment #9 due by class time:
- See blackboard for instructions.

Wednesday, April 15
Week 12 – Augmented Visualization; Enhanced Deliberation?

Virtual Guest Speaker: Eric Brady, Bergmann Associates

Readings due:

- Eric Gordon and Edith Manosevitch. “Augmented deliberation: Merging physical and virtual interaction to engage communities in urban planning” New Media & Society February 2011 vol. 13 no. 1 75-95.

Mini-assignment #10 due by class time:
- See blackboard for instructions.
Wednesday, April 22

Week 13 – Urban Models and the Statistical Power of Planning

Readings due:

- Agent-based modeling of urban land-use development, case study: Simulating future scenarios of Qazvin city.
- Green, Nick. “A policymaker’s puzzle, or How to cross the boundary from agent-based model to land use policymaking” in Transactions of the Institute of British Geographers, 38. 1. 2013.

For class: Draft Team Memo to the City of Ithaca due.

Wednesday, April 29

Week 14 – Smart Cities, Augmented Reality, Driverless Cars, Nanotechnology, and Further Speculation on the Future of Technology

Readings due:

- Against the Smart City

No mini-assignments due, but must be prepared for class discussion based on readings. We will return to “Concept Maps.”

Wednesday, May 6

Week 15

Last Class – Tech Talks.
Assignments

Weekly Mini-assignments
There will be limited, weekly exercises intended to help you reflect on the readings and prepare for class.

Facilitation of Class Discussion
A student will be assigned to facilitate a discussion of the readings each week. Plan on providing an overview of the readings, describing the connections and interesting concept you have identified in them. Then bring questions for all to discuss.

Team-based City of Ithaca Recommendation Memo
With a partner or team, you will draft a 3-5 page memo to the City of Ithaca Planning Department regarding the use of a particular technology in Phase 2 of its comprehensive planning process. A proposal is due week 4 and a draft memo will be due April 22nd in class. The final version of the memo will be due May 15 by midnight.

Midterm project
In a midterm project, you will critically investigate a technological trend or artifact of your choice and how it intersects with planning or you will propose a new technology. The paper should be 7-10 pages single spaced.

Final Term paper
Building from your mid-term project, you will complete your individual research paper. The last day of class, you will present on your topic.

Credit options:
- For 1 credit: Must attend classes and participate; facilitate a class discussion; and participate in weekly mini-assignments (skipping proposals).
- For 2 credits: Must attend classes and participate; facilitate a discussion; participate in weekly mini-assignments (skipping proposal for midterm/final project); and do a team-based recommendation memo.
- For 3 credits: All assignments.