

Syllabus: PLA1703H - TRANSPORTATION PLANNING AND INFRASTRUCTURE

Monday 1:00-3:00pm

First Two Weeks Virtual on Zoom (link provided on Quercus)

Remainder of course in person (Room: MP118)

Instructor

Professor Matti Siemiatycki
Room 5041 Sidney Smith
Email: siemiatycki@geog.utoronto.ca
Office hours: Tuesday, 10am – Noon

Course Description

Infrastructure is the term that describes the transportation systems, sewers, pipes, power lines, health, education, justice and recreation facilities that provide urban dwellers with necessary public services. In recent years, billions of dollars of public money have been spent upgrading existing transportation systems and infrastructure assets, and planning and delivering new facilities. Infrastructure has many impacts on the way that people in cities live. The way that transportation and infrastructure systems are planned, financed, and distributed impact on environmental sustainability, job creation, social equity, exclusion, economic development, and urban livability. Now the COVID-19 pandemic has upended the provision and usage of transportation and infrastructure, with dramatic impacts on communities and their futures.

Through lectures, discussions, workshops, readings of scholarly articles and case studies, the course will aim to engage students in the key topics and debates related to the provision of urban transportation systems and infrastructure in a post-pandemic world. Topics to be covered will include: project planning, causes and cures for cost overruns, infrastructure and its impacts on equity and social exclusion, financing mechanisms such as public-private partnerships, and the politics of facility planning and management.

Learning Outcomes

At the end of this course students will gain an understanding of the core principles and debates of infrastructure and transportation planning, and insight on the dynamics that drive decision-making.

Course Organization

Access to Course Materials & Readings

All course materials including presentation slides will be available to students through Quercus. Required class readings are all available online through the University of Toronto library website or at the links included in the syllabus.

Submissions

Detailed description of each assignment will be distributed to students in class during the term. All assignments are due at the beginning of the class. Submissions are to be made through Quercus. There will be a 5% penalty per day for late assignments, which counts on weekends as

Assignments and Evaluation

Key Dates

Detailed descriptions of each assignment will be posted on Quercus and discussed during the scheduled class time during the term.

35% Assignment 1: Infrastructure Usage Diary Assignment – October 18, 2021

50% Assignment 2: Project Evaluation Paper – December 6, 2021

15% Class Participation/Presentation

Participation

Regular and consistent attendance in graduate courses is expected. This course will run in seminar style classes, which involve collaborative work and in-class discussions with other students and the instructor. Students are expected to contribute to class discussions and breakout groups.

Late Policies

There will be a 5% penalty per day for late assignments, which counts on weekends as well. Assignments will only be accepted for one week after the deadline. Extensions without penalty will be granted for reasons of accommodation, illness or emergencies when appropriate documentation is submitted to the instructor. If you are experiencing any difficulties, please contact the course instructor as early as possible to make accommodations.

Course Schedule and Readings

PART I: FOUNDATIONS

Week 1 (13 September 2021): Introduction: Transportation and Infrastructure in a Post Pandemic World, September

Recovery spending – build back better; ‘do no harm planning’; congestion, rent-seeking; strategic misrepresentation

Readings

- Siemiatycki, M. (2013). Riding the wave: explaining cycles in urban mega-project development. *Journal of Economic Policy Reform*. 16(2), 160-178.
- Building Back Better Post-COVID 19 Task Force. Green Infrastructure. <https://ipolitics.ca/2020/07/22/green-infrastructure-can-revive-post-covid-19-world/>
- Thomas, D. (2020, June 8). ‘Safe Streets’ Are Not Safe for Black Lives. *CityLab*. Retrieved September 6, 2020, from https://www.citylab.com/perspective/2020/06/open-streets-transportationplanning-urban-design-racism/612763/?utm_source=twb

Assignment 1 Handout: The Importance of Infrastructure – Usage Diary Project

Week 2 (20 September 2021): Transportation Planning, Land Use, Social Equity and Health

Readings

- Golub, A., Marcantonio, R.A. and Sanchez, T.W. (2013). Race, Space, and Struggles for Mobility: Transportation Impacts on African Americans in Oakland and the East Bay. *Urban Geography*, 34 (5), 699-728.
- Jabareen, Y.R. (2006) Sustainable Urban Forms: Their Typologies, Models, and Concepts. *Journal of Planning Education and Research*. 26, pp.38-52
- Newman, P. (1996). Reducing automobile dependence. *Environment & Urbanization*, 8(1), pp. 67-92.

Week 3 (27 September 2021): Infrastructure, Economic Growth, and Sustainability

Key Concepts: The history and role of infrastructure – developed and developing countries; Importance of connectivity; economic growth; social equity for those excluded; peak oil; climate change; disasters;

Readings

- Graham, S. and Marvin, S. (2001). *Splintering urbanism: networked infrastructures, technological mobilities and the urban condition*. New York: Routledge. Prologue and Introduction, p1-36.
- Sahely, H. R., Kennedy, C.A. and Adams, B. (2005). Developing sustainability criteria for urban infrastructure systems. *Canadian Journal of Civil Engineering*, 32(1), 72-85.
- Soyinka, KWM Siu., Lawanson, T. and Adeniji, O. (2016). Assessing smart infrastructure for sustainable urban development in the Lagos metropolis. *Journal of urban management*. 5 (2), 52-64.

Week 4 (4 October 2021): VIRTUAL FIELD TRIP – TORONTO WATERFRONT TOUR

Review plans and proposals on Waterfront Toronto website.

PART II: INFRASTRUCTURE POLICY AND DECISION MAKING

Week 5 (18 October 2021): Evidence Based Transportation and Infrastructure Planning

Key Concepts: Program and project appraisal approaches; Procurement strategies, integrating climate and resilience considerations into project assessments

- Sager, T. (2016). Why don't cost-benefit results count for more? The case of Norwegian road investment priorities. *Urban, Planning and Transport Research*. 4(1):101-121
- Vickerman, R. (2007). Cost-benefit analysis and large-scale infrastructure projects: state of the art and challenges. *Environment and Planning B*. 34(4), 598-610.

Week 6 (25 October 2021): Infrastructure Planning and Community Engagement

Key Concepts: Public participation; deliberative planning; social marketing; opposing transportation and infrastructure projects

Readings

- Arsenault, R., Bourassa, C., Diver, S., McGregor, D., and Witham, A. 2019. Including Indigenous Knowledge Systems in Environmental Assessments: Restructuring the Process. *Global Environmental Politics* 19(3):120-132. DOI: 10.1162/glep_a_00519.
- Lehrer, U. and Laidley, J. (2008). Old mega-projects newly repackaged? Waterfront redevelopment in Toronto. *International journal of urban and regional research*, 32(4), p. 786-803.

Assignment 2 Handout: Infrastructure Assessment Project

Week 7 (1 November 2021): Mega-Projects and Risk

Key Concepts: Cost overruns; delivery delays; unmet expectations;

Readings

- Flyvbjerg, B. (2009). Survival of the unfittest: why the worst infrastructure gets built—and what we can do about it. *Oxford Review of Economic Policy*, 25(3), 344–367.
- Kelman, L. and Soberman, R.M. (2010). “Getting it Right”: Lessons from the St. Clair Streetcar for the Implementation of Transit City. Toronto: Toronto Transit Commission

PART III: CURRENT ISSUES IN INFRASTRUCTURE PLANNING

Week 8 (8 November 2021): Innovation in the Transportation and Infrastructure Sector

Key Concepts: Revolutionary and Evolutionary Innovation; Productivity;

Readings

- Himmel, M. and Siemiatycki, M. (2017). Infrastructure public–private partnerships as drivers of innovation? Lessons from Ontario, Canada. *Environment and Planning C. First View*.
- Young, M. and Farber, S. (2019). The who, why, and when of Uber and other ride-hailing trips: An examination of a large sample household travel survey. *Transportation Research Part A: Policy and Practice* 119, 383-392.

Week 9 (15 November 2021): Ownership and Paying for Transportation and Infrastructure

Key Concepts:

Readings

- Hart, O. (2003). Incomplete Contracts and Public Ownership: Remarks, and an Application to Public-Private Partnerships. *The Economic Journal*. 113(486), C69-C76.
- Siemiatycki, M. (2010). Delivering Transportation Infrastructure through Public-Private Partnerships: Planning Concerns. *Journal of the American Planning Association*. 76(1), p. 43-58.

Week 10 (22 November 2021): Transportation and Infrastructure in Indigenous Communities

Key concepts: Condition of infrastructure in Indigenous communities; who plans infrastructure, owns and operates infrastructure

Readings

- Bennett, M.M. (2018). From state-initiated to Indigenous-driven infrastructure: The Inuvialuit and Canada's first highway to the Arctic Ocean. *World Development*. 109. 134-148.
- Beaudin, J. (2021). Water is Life: The fatal links between water infrastructure, COVID-19, and First Nations in Canada. *Yellowhead Institute Policy Brief*. Issue 89. <https://yellowheadinstitute.org/wp-content/uploads/2021/03/j-beaudin-water-is-life-yi-brief-3.2021.pdf>

Week 11 (29 November 2021): Transportation Planning and Infrastructure in Developing Countries

Key concepts: Role of international development agencies such as the World Bank and IMF; China and the One Belt One Road Initiative; economic growth; social equity

Readings

- Estache, A. (2004). Emerging infrastructure policy issues in developing countries: a survey of the recent economic literature. World Bank Policy Research Working Paper 3442, World Bank Publications.
- Yu, H. (2016). Motivation behind China's 'One Belt, One Road' Initiatives and Establishment of the Asian Infrastructure Investment Bank. *Journal of Contemporary China*. 26(105), 353-358.

Week 12 (6 December 2021): Group Presentations and class wrap up

In this class students will present the findings of their major group research projects.

Major Term Essay Due

Policies

The department's full [Graduate Course Policies](#) apply to all courses offered.

Accessibility Services

The University of Toronto is committed to accessibility. If you require accommodations because you are disabled, or have any accessibility concerns about the course, the classroom or course materials, please contact Accessibility Services as soon as possible.

Where there is an accommodation recommended by [Accessibility Services](#), the department and/or instructors will be provided with an accommodation letter.

Academic Integrity

Academic misconduct by graduate students is taken very seriously. The University's policy on academic misconduct is found in the [Code of Behaviour on Academic Matters](#) (the Code). Students in graduate studies are expected to commit to the highest standards of integrity and to understand the importance of protecting and acknowledging intellectual property. For example, it is assumed that they bring to their graduate studies a clear understanding of how to cite references appropriately, thereby avoiding plagiarism.

Regarding plagiarism, the Code includes the following statements:

B.i.1. It shall be an offence for a student knowingly:

(d) to represent as one's own idea or expression of an idea or work of another in any academic examination or term test or in connection with any other form of academic work, i.e., to commit plagiarism.

Wherever in the Code an offence is described as depending on "knowing," the offence shall likewise be deemed to have been committed if the person ought reasonably to have known.

Other academic offences include the possession and/or use of unauthorized aids in examinations, submitting the same paper for different courses without the knowledge of the instructors, forgery (whether of academic records or other documents), concocting facts or references to sources, personating someone, and other forms of cheating and academic dishonesty. Please refer to sections B.i.1. and B.i.3. in the Code for detailed descriptions of offences applicable to students.

The [SGS Academic Integrity Resources webpage](#) outlines the policy on academic misconduct and the process for handling an allegation of academic misconduct.

Religious Accommodations

Students must alert instructors in a timely fashion to any upcoming religious observances and anticipated absences. Instructors will make every reasonable effort to avoid scheduling tests, exams or other compulsory activities at these times. In the case of an unavoidable conflict with a compulsory activity, every reasonable effort is made to give students the opportunity to make up missed work.

Copyright in Instructional Settings

If a student wishes to record (tape, video, photograph, etc.) any lecture presentations or other similar materials provided by the instructor; the instructor's written consent must be obtained beforehand. Otherwise, all such reproduction is infringement of copyright and prohibited. In the case of private use by students with disabilities, the instructor's consent shall not be unreasonably withheld.

Extension Requests

The authority to grant an extension to submit coursework beyond the sessional grade deadline is with the department and not the instructor of the course. To request a formal extension beyond a grade deadline, students must submit a Coursework Extension Form, completed by both the student and course instructor, to the relevant graduate department prior to the final grade deadline.

In order to ensure fairness in granting extensions, the department must be reasonably certain that:

- The reasons for delay are serious and substantiated.
- The student is not granted unfair advantage over other students in the course.
- The student has a reasonable chance of completing the outstanding work within the time allotted.
- The normal and satisfactory completion of any new coursework is not in jeopardy.

Extension requests for medical reasons (e.g. short-term illness) must be accompanied by a medical note. Extension requests for students with accommodations due to disability must be supported by documentation from Accessibility Services. Extension requests for other reasons must be detailed in the form or a note to the department.

Mental Health Statement

As a student at U of T, you may experience circumstances and challenges that can affect your academic performance and/or reduce your ability to participate fully in daily activities. An important part of the University experience is learning how and when to ask for help. There is no wrong time to reach out, which is why there are resources available for every situation and every level of stress.

Please take the time to inform yourself of available resources, including:

- [Geography & Planning Mental Health Support Website](#)
- [Graduate Wellness Services](#)
- [Student Mental Health Resources](#)
- [Emergency support if you're feeling distressed](#)

An important part of the University experience is learning how and when to ask for help. Please take the time to inform yourself of available resources.

Other Student Services and Support Resources

- [Links to Additional Student Services and Support Resources](#) (general services and support for students, international student support, Health & Wellness, financial aid and professional development)