COURSE OVERVIEW

Congestion in auto-oriented US cities has been worsening for decades. However, the government’s ability to finance new transportation infrastructure has become increasingly constrained. Further, the climate change and energy issues make any policy and public investments increasing automobile dependency unpopular. Instead, planners are increasingly turning to alternative policies that involve changing development patterns and land uses to solve transportation problems. There is ample evidence that downtown workers and residents drive less and use more sustainable modes than suburban residents. If we design and develop suburban neighborhoods like downtown neighborhoods, – with higher density, mixed land use, and transit and pedestrian friendly street layout – would people drive less?

This course is designed to discuss integrated approaches to sustainable urban transportation and land use planning and policy. It emphasizes the need to understand how the built environment and transportation system interact. How new investments on transportation infrastructure – highway or transit – subsequent development patterns? How do physical urban form and land use patterns affect the way people travel? To address these questions, students will learn land use/transportation theories and models, review empirical studies, compare different transportation/land use policies and planning techniques, and conduct their own research.

Topics to be covered in the course include:
1. Contemporary urban transportation and land use policy debates and issues
2. Theories of travel demand and behavior
3. Influences of urban form (land use) on travel patterns
4. Impacts of transportation investment on urban development
5. Integrated transportation/land use planning and smart growth
6. Travel demand management
7. Transit oriented development (TOD)

This course focuses on the interaction between transportation and land use, and is research oriented. Students who seek to learn more foundational transportation planning skills are advised to take UP 430 Urban Transportation Planning and UP 431 Travel Behavior Analysis.

TEXTBOOK

- Additional readings or the links to them will be posted on the Canvas course website.
- In most sessions, a lecture will be accompanied by discussion often led by graduate students based on reading assignments. Students should read ALL reading assignments before class.

PREREQUISITE

There is no prerequisite for this course. However, this course is open only to juniors, seniors, and graduate students.
EVALUATION

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<thead>
<tr>
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<th>Undergraduate students</th>
<th>Graduate students</th>
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<tbody>
<tr>
<td>Class Participation/Attendance</td>
<td>10 %</td>
<td>10 %</td>
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<tr>
<td>Assignments</td>
<td>40 %</td>
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<tr>
<td>Research paper presentation &amp; discussion leader</td>
<td>0 %</td>
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<tr>
<td>Best practice presentation &amp; discussion</td>
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<tr>
<td>Case study term paper &amp; presentation</td>
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<td>Research term paper &amp; presentation</td>
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COURSE AT A GLANCE

1 Aug 22 | Course overview
1 Aug 24 | Contemporary issues and debate—Land use/transportation connection
2 Aug 29 | Transportation, energy, and the environment
2 Aug 31 | The context of urban travel, mobility to accessibility [1 SLD]
3 Sep 5 | No class, Labor Day
3 Sep 7 | Theories of travel demand [2 SLD]
4 Sep 12 | Influence of land use on travel—Case study & cross-sectional study [2 SLD]
4 Sep 14 | Influence of land use on travel—More on operationalizing urban form [1 SLD]
5 Sep 19 | Influence of land use on travel—Longitudinal & meta-analysis [2 SLD]
5 Sep 21 | Influence of land use on travel—Self-selection & regional spatial structure [1 SLD]
6 Sep 26 | Influence of land use on travel—Market for smart growth [2 SLD]
6 Sept 28 | Influence of land use on travel—Integrated T/LU planning [3 BPP]
7 Oct 3 | Transportation investment and urban development—A longer view
7 Oct 5 | Transportation investment and urban development—Case studies [1 SLD]
8 Oct 10 | Transforming cities with transit, global best cases [3 BPP]
8 Oct 12 | TOD—Definition, impacts & design principles [1 SLD]
9 Oct 17 | TOD—Strategic, regional & corridor planning
9 Oct 19 | TOD—Tools, finance & affordable housing
10 Oct 24 | TOD—Best cases [3 BPP]
10 Oct 26 | Road pricing—Fundamental economics
11 Oct 31 | Road pricing—Equity [2 SLD]
11 Nov 2 | Road pricing—Case studies [3 BPP]
12 Nov 7 | Travel demand management & nudge—Case studies [1 SLD] [1-2 BPP]
12 Nov 9 | Travel demand management & nudge
13 Nov 14 | Minimum parking requirement & alternatives [1 SLD] [1-2 BPP]
13 Nov 16 | Parking pricing [1-2 BPP]
14 Nov 21 | Fall Break
14 Nov 23 | Fall Break
15 Nov 28 | Term Paper Presentation
15 Nov 30 | Term Paper Presentation
16 Dec 5 | Term Paper Presentation
16 Dec 7 | Term Paper Presentation

Final Paper due on Dec 12, Monday by NOON

[SLD] Graduate student-led research paper presentation and discussion.
[BPP] Best practice presentation led by undergraduate students.
The format for this course is a combination of lecture and discussion. Required reading and student-led presentation & discussion are central to the learning experience of this course.

**Research Paper Presentation and Discussion Leader (Graduate Students):** Each graduate student is required to present and lead discussion on one chosen research paper that is included in reading assignments. These papers are marked as [SLD] in the course schedule below. A written report is not a part of the requirement. Detailed guidelines and a sign-up Google Sheet will follow.

**Best Practice Presentation and Discussion (Undergraduate Students):** Each undergraduate student is required to present one case study of best practices and lead discussion in a chosen area in the following: integrated transportation and land use planning, transforming cities with transit, TOD, travel demand management (TDM) and nudge for sustainable transportation, congestion pricing, and parking policy & program. These presentation schedules are marked as [BPP] in the course schedule below. A written report is not a part of the requirement. Detailed guidelines and a sign-up Google Sheet will follow.

**Homework Assignments (All Students):** Four homework assignments will be given throughout the semester, including short essays and analysis papers. All homework assignments are due by 11am on due dates and late submission of homework assignments will be penalized by 10% per day, up to 30%.

**Term Paper Case Study & Presentation (Undergraduate Students):** Undergraduate students are required to conduct and present a case study, and submit a 10-page report. A study case can be a specific policy program, project, or city that highlights a successful (or not successful) implementation of sustainable transportation and land use policies. Students can choose the same topic as in their best practice presentations, but should demonstrate further development, including in-depth first-hand analysis and evaluation. Detailed instructions will follow. Students are strongly encouraged to discuss with the instructor as often as needed about the term paper research topic.

**Term Paper Research & Presentation (Graduate Students):** Graduate students are required to conduct and present term paper research, and submit a 15-page paper. The term paper must address a topic on sustainable transportation and land use. Students can do a case study, an empirical study, policy evaluation, or any other type of research or analysis on the topics covered in class. Detailed instructions about the term paper will follow. Students are strongly encouraged to discuss with the instructor as often as needed about the term paper research topic, methods, data sources, etc.

*Plagiarism:* Plagiarism in this class is unacceptable. Any accidental or willful use of words, work, or ideas of another without attribution (e.g. quotation and citation) will be penalized by a failing grade on the paper and/or a failing grade in the course. Please see the definition of plagiarism here: [https://studentcode.illinois.edu/article1/part4/1-402/](https://studentcode.illinois.edu/article1/part4/1-402/). Be reminded that all your submissions to the Canvas will go through plagiarism checking.

Schedules for term paper deadlines:
- [Oct 31] Three-page progress report documenting what has been done and what needs to be done, expected findings, and expected content in the final paper.
- [Nov 28&30, Dec 5&7] Research/Case Study presentation. PPT file is due by 10am on the presentation day.
- [Dec 12, Monday] Term paper due by Noon.
If you feel ill or are unable to come to class or complete class assignments due to issues related to COVID-19, including but not limited to testing positive yourself, feeling ill, caring for a family member with COVID-19, or having unexpected child-care obligations, you should contact your instructor immediately, and you are encouraged to copy your academic advisor. For more on COVID-19 related policy, see https://covid19.illinois.edu/

This course will accommodate students with documented disabilities. Please refer to https://www.disability.illinois.edu/ for more information and provide the appropriate documentation in the beginning of the semester.

This course follows the guidelines set forth by the University student code. See https://studentcode.illinois.edu/article1/part4/1-402/ for specific guidelines, examples, and punishment associated with academic dishonesty. Pay special attention to 1-402 b. Plagiarism.

The Department of Urban and Regional Planning (DURP) is committed to creating an environment of inclusion and opportunity that is rooted in the very goals and responsibilities of practicing planners. Conduct that interferes with the rights of another or creates an atmosphere of intimidation or disrespect is inconsistent with the environment of learning and cooperation that the program requires. By enrolling a course in the Department of Urban and Regional Planning, students agree to be responsible for maintaining a respectful environment in all DURP activities, including lectures, discussions, labs, projects, and extracurricular programs. We will be governed by the University Student Code. See Student Code Article 1—Student Rights and Responsibilities, Part 1. Student Rights: §1-102 In the Classroom.

The Department of Homeland Security and the University of Illinois at Urbana-Champaign Office of Campus Emergency Planning recommend the following three responses to any emergency on campus: RUN > HIDE > FIGHT. For more information, https://police.illinois.edu/em/run-hide-fight/

The Counseling Center is committed to providing a range of services intended to help students develop improved coping skills in order to address emotional, interpersonal, and academic concerns. The Counseling Center provides individual, couples, and group counseling. All of these services are paid for through the health services fee. The Counseling Center offers primarily short term counseling, but they do also provide referrals to the community when students could benefit from longer term services. https://counselingcenter.illinois.edu/
COURSE SCHEDULE

[SLD] Graduate student led presentation & discussion.

[BPP] Best practice presentations by undergraduate students.

* Optional reading for undergraduate; strongly suggested for graduate students.

Week 1

Aug 22 Introduction and Course Overview


*Moore, A., S. Staley, and R. Poole. 2010. The role of VMT reduction in meeting climate change policy goals. Transportation Research A 44 (8), 565–574.


Week 2

Aug 29 Transportation, Energy, and the Environment


Aug 31 Context of Urban Travel, Mobility to Accessibility

Hanson, Susan. Ch.1 Introducing Urban Transportation. In Giuliano & Hanson (2017).


Week 3

Sep 5 No Class, Labor Day

Sep 7 Theories of Travel Demand

Miller, Harvey. Ch. 5 Theories and Models in Transportation Planning. In Giuliano & Hanson (2017).


WEEK 4

Sep 12 Influence of Land Use on Travel—Introduction, case study & cross-sectional study


Sep 14 Influence of Land Use on Travel—more on operationalizing urban form


WEEK 5

Sep 19 Influence of Land Use on Travel —longitudinal and meta-analysis


Sep 21 Influence of Land Use on Travel—residential self-selection, regional spatial structure


WEEK 6

Sep 26 Influence of Land Use on Travel—market for smart growth


Sep 28 Influence of Land Use on Travel—integrated transportation and land use planning
[BPP] 3 Best practice presentations selected from Litman (2016) and Sabouri, et al. (2019).


Week 7

Oct 3 Transportation Investment and Urban Development—a longer view
Muller, Peter O. 2017. Ch.3 Transportation and urban form: Stages in the spatial evolution of the American metropolis. In Giuliano & Hanson (2017).

Giuliano, Genevieve. Ch.9 Land use impacts of transportation investments. In Giuliano & Hanson (2017).

Oct 5 Transportation Investment and Urban Development—case studies


Week 8

Oct 10 Transportation Investment and Urban Development—transforming cities with transit
[BPP] 3 Best practice presentations selected from Suzuki, et al. (2013) or other sources.
Suzuki, Cervero & Iuchi. 2013. Transforming Cities with Transit: Transit and Land Use Integration for Sustainable urban Development. Ch. 2 Lessons from sustainable transit-oriented cities (pp. 49-91).

Oct 12 TOD—definition, impacts & design principles
Center for TOD. 2008. TOD202 Station area planning: How to make great transit-oriented places


Week 9

Oct 17 TOD—strategic planning, regional planning & corridor planning
Center for TOD. 2011. TOD204 Planning for TOD at the regional scale.
Center for TOD. 2011. TOD203 Transit corridors and TOD: Connecting the dots.
* City of Denver 2014 Transit Oriented Development Strategic Plan.

Oct 19 TOD—tools, finance & affordable housing
Center for TOD. 2009. TOD201 Mixed income housing near transit: Increasing affordability with location efficiency.

Week 10

Oct 24 TOD—Best Practices
[BPP] 3 Best practice presentations on successful TOD

Oct 26 Road Pricing—Fundamental Economics

Week 11

Oct 31 Road Pricing—Equity

Nov 2 Road Pricing—Case Studies
[BPP] 3 Best practice presentations on successful road pricing related programs.
Week 12

Nov 7 Travel Demand Management & Nudge

Nov 9 Travel Demand Management & Nudge—Case Studies
[BPP] 1-2 Best practice presentations on travel demand management and nudge programs

Week 13

Nov 14 Parking—minimum parking requirement & alternatives
https://www.planning.org/planning/2022/spring/a-business-case-for-dropping-parking-minimums/
[BPP] 1-2 Best practice presentations on successful parking programs.

Nov 16 Parking—pricing parking
[BPP] I-2 Best practice presentations on successful parking programs.

Week 14 Fall Break

Week 15

Nov 28 TERM Paper Presentations
Nov 30 TERM Paper Presentations

Week 16

Dec 5 TERM Paper Presentations
Dec 7 TERM Paper Presentations

Final Paper due on Dec 12 Monday by NOON