1. Course Information

This course is an introduction to transportation and land use as an integrated system. It covers the theories, methods, and practices of contemporary transportation and land use planning.

The first part of the course locates transportation and land use planning within current debates about urban development, sprawl, and resource consumption. We also examine contemporary practices in transportation and land use planning, and their political and institutional contexts.

The second part of the course traces the history of urban development with a focus on land development and transportation systems. We discuss theories from geography and economics that link travel behavior, urbanization, and regional economic development. This part of the course also introduces concepts such as travel behavior, trip generation, and the practice of mitigating traffic impacts.

The third part of the course examines policy strategies for influencing land development, travel, and accessibility (and the limitations of such options), including transit-oriented development, parking, pricing, and urban design.

The course is organized as an interactive seminar. Class sessions are used for discussion of readings, in-class exercises, discussion and review of class projects, and other topics of interest.

This is a graduate-level course with no prerequisites. Students should be ready to engage with concepts and methods from a variety of disciplines, including city planning, public policy, geography, urban design, engineering, statistics, and economics.
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<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>The point</th>
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<tbody>
<tr>
<td>1</td>
<td>Jan 20</td>
<td>Critical issues and debates</td>
<td>TLU at the heart of many sprawl/sustainability debates</td>
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<tr>
<td>2</td>
<td>Jan 27</td>
<td>Facilitation and dialogue part 1</td>
<td>Contemporary multi-disciplinary practice in TLU</td>
</tr>
<tr>
<td>3</td>
<td>Feb 3</td>
<td>Actors, institutions, and politics and in-class presentations of assignment</td>
<td>Who governs transportation and land use, and what are the politics of TLU?</td>
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<tr>
<td>4</td>
<td>Feb 10</td>
<td>History and an economic/geography framing</td>
<td>Theories of transportation-land use connections</td>
</tr>
<tr>
<td>5</td>
<td>Feb 17</td>
<td>Travel demand, behavior, mode choice</td>
<td>How do people make decisions about when, why, where, and how to travel?</td>
</tr>
<tr>
<td>6</td>
<td>Feb 24</td>
<td>Trip generation, trip distribution, transportation system capacity, travel demand modeling</td>
<td>Linking land use to traffic</td>
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<tr>
<td>7</td>
<td>Mar 3</td>
<td>In-class exercise about the trip data</td>
<td>Analyzing the impacts of travel choices</td>
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<tr>
<td>8</td>
<td>Mar 10</td>
<td>Facilitation and dialogue part 2</td>
<td>How to have a good fight (about TLU)</td>
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<tr>
<td>9</td>
<td>Mar 17</td>
<td>Arterial corridors</td>
<td>Exemplar transportation, land use, design problem and opportunity</td>
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<td>10</td>
<td>Mar 24</td>
<td>No class, spring break</td>
<td></td>
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<tr>
<td>11</td>
<td>Mar 31</td>
<td>Transit-oriented development and neighborhood planning</td>
<td>Limits and potential of neighborhood and transit planning</td>
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<tr>
<td>12</td>
<td>Apr 7</td>
<td>Parking as a TLU issue</td>
<td>The power of pricing</td>
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<tr>
<td>13</td>
<td>Apr 14</td>
<td>Accessibility, jobs, and equity</td>
<td>The complicated values of auto transport</td>
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<tr>
<td>14</td>
<td>Apr 21</td>
<td>Walking and biking in rural, small, and low-density communities</td>
<td>Panel discussion</td>
</tr>
<tr>
<td>15</td>
<td>Apr 28</td>
<td>Walking and biking on suburban arterials</td>
<td>Panel discussion</td>
</tr>
<tr>
<td>16</td>
<td>May 5</td>
<td>Facilitation and dialogue part 3</td>
<td>Course debrief and plan for professional development</td>
</tr>
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</table>
Readings and Attendance

Students are expected to attend every class and to complete all reading assignments before class. Most course materials will be available electronically. Occasionally, additional materials will be handed out in class.

Most readings are intended to familiarize students with a range of current topics in transportation and land use. Students who want more training in system design, engineering, or any other specialized topic in transportation should discuss this with the instructor.

Lectures, Class Discussions, and Exercises

The course is not organized around lectures, although sometimes they may be used. Generally, class time is spent in discussion and exercises, which review and extend the material covered in the readings.

Students are expected to be active participants and leaders in these discussions and exercises, and to integrate information from lectures, readings, discussions, and exercises into their assignments.

Most students will be more expert in certain areas than in others because of disciplinary backgrounds and prior experience, but everyone has a lot to learn from one another. Students should prepare to share both their questions and their knowledge with the class to facilitate peer instruction. Additional readings, meetings with subject-matter experts, or meetings with the instructor during office hours may also help students become more proficient in topics outside of their home discipline.

Communication

Unless otherwise noted, we will use Canvas for all official course communication and it is the responsibility of each student to use Canvas settings that enable reliable communication. For example, this may mean selecting a personal e-mail address as the default in Canvas. Canvas may be used for making course announcements, changing the schedule, returning graded assignments, personal communication, or other course-related business.

Student Work on the CAP and Department of Planning and Design Websites

The Department of Planning and Design and the College of Architecture and Planning are developing a new websites with the purpose of showcasing student work. Several of the assignments for this class would be good material for the website. We ask for students’ permission to publish their work online in a release form filled in during the first week of class.

Learning Objectives
After completing this course, students will understand major debates, issues, and theories in contemporary land use-transportation planning and policy. Students will also have practical knowledge and experience applying these ideas to real transportation and land use concerns.

Per the Planning Accreditation Board’s educational outcomes criteria, the course has the following learning objectives:

1. Human settlements and history of planning: understanding the growth and development of places over time and across space.

2. Quantitative and qualitative methods: data collection, analysis and modeling tools for forecasting, policy analysis, and design of projects, policies, and plans. Each student will learn about state of practice of transportation and land use methodologies through readings, discussion, and guest speakers, and will have the opportunity to apply some of these methods in class assignments.

3. Governance and participation: appreciation of the roles of officials, stakeholders, and community members in planned change.

4. Growth and development: Appreciation of economic, social, and cultural factors in urban and regional growth and change. Transportation and land use relationships are a fundamental part of urban growth and change, and they are deeply connected to the everyday lives of people, and the quality of life in neighborhoods.

**Grading Policy**

<table>
<thead>
<tr>
<th>Date Due</th>
<th>Assignment</th>
<th>Points</th>
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<tbody>
<tr>
<td>Each class</td>
<td>Attendance and participation</td>
<td>30</td>
</tr>
<tr>
<td>One time</td>
<td>Facilitate class discussion</td>
<td>25</td>
</tr>
<tr>
<td>January 27</td>
<td>Paragon Learning Styles Inventory assessment</td>
<td>0</td>
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<tr>
<td>January 27</td>
<td>Notes on (1) disciplines/perspectives and (2) what are some TLU challenges</td>
<td>0</td>
</tr>
<tr>
<td>February 3</td>
<td>Big drama: governance memo</td>
<td>20</td>
</tr>
<tr>
<td>Week of February 16</td>
<td>Collect your own travel diary data</td>
<td>0</td>
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<tr>
<td>February 24</td>
<td>Individual travel diary data due</td>
<td>0</td>
</tr>
<tr>
<td>March 3</td>
<td>Travel diary memo and in-class analysis</td>
<td>50</td>
</tr>
<tr>
<td>April 21 and 28</td>
<td>Case studies</td>
<td>75</td>
</tr>
<tr>
<td>May 5</td>
<td>Cumulative reflection</td>
<td>0</td>
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<td></td>
<td><strong>Total</strong></td>
<td><strong>200</strong></td>
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</table>
Final grades will be based on the total number of points earned:

- 200-180 points = A/A-
- 160-180 points = B-/B/B+
- 140-160 points = C-/C/C+
- ≤ 140 points = D or below

All assignments, unless otherwise noted, must be submitted in PDF format on Canvas by 14:00 on the due date. Please compile multiple pieces of an assignment into a single PDF. Each student should be familiar with Canvas’s assignment submission procedures.

Grading will be based primarily on the quality and depth of the work presented, but organization, composition, presentation, and copy-editing will also be taken into account. For group assignments, the grade will also reflect the number of persons working on the project (i.e., a team of three will be expected to produce a commensurately more detailed and sophisticated analysis than that produced by a team of two).

Students are expected to turn in both graded and ungraded assignments on time (see schedule). Out of respect and fairness for all members of the class, extensions will be granted only in the case of an actual emergency. Late assignments (those for which an extension has not been granted) lose up to five points per day.

**Academic Honesty**

Education at the University of Colorado Denver and in the College of Architecture and Planning (CAP) depends on honesty and integrity, as well as appropriate conduct. CAP students are required to follow the Student Code of Conduct and the Honor Code. Please refer to the following link for details.


All University and College policy, as well as common sense, regarding academic honesty applies in this course. Plagiarism and cheating are not tolerated and will be handled through the University’s official process. When working in a group, it is the responsibility of everyone in the group to maintain the norms of academic integrity.

Students may do joint work with other courses only with the permission of all instructors and when the work is suitable for the topic and the course.

**Accommodations**

Any student who needs or may need accommodations due to a disability should speak with the instructors as soon as possible, and should also contact the Disability Resources and Services Office on campus to arrange accommodations.
2. Assignments

The assignments are designed to give students experience analyzing various aspects of transportation and land use planning and policy processes, and to prepare students to participate in transportation decision-making through effective communication.

Assignment 1: Participation

Due: At each class meeting

Student grades for participation are based on two elements:

(1) Attendance; and
(2) Active participation (see description).

Elements of active participation

This course offers introductory training in discussion facilitation and dialogue because these skills relate to transportation and land use planning, policy, and design practice. In addition to training in facilitating discussion, we will also practice different strategies for active participation that are appropriate for each individual’s own intentions and learning styles. Participating in and leading group discussion is a skill that one develops over time.

One example of guidance for all group participants is included below, adapted from: Lathrop A. 2006. Teaching How to Question: Participation Rubrics. The Teaching Professor, 20(2):4-5.

- Preparation: Demonstrate being prepared for seminar by taking notes, bringing notes and copies of the readings to class, researching unfamiliar or interesting topics found in the readings, and setting an intention for the meeting.

- Engagement: Actively engage with other members of the class in respectful and inclusive discussion.

- Initiative: Ask questions during discussion that focus, clarify, and summarize what the group is talking about. Be brave, and ask even the questions you feel nervous asking!

- Response: Respond to questions and discussion points in ways that build knowledge and comprehension, even if that means making discussion points that are not perfectly formulated at the moment. The group can work together to assemble disparate ideas. Try to apply ideas from the readings, experience, outside reading, or other material that makes a topic “real” to you.
• Discussion: Active participation is based in compassionate and respectful discussion with peers, and reflects higher order thinking/feeling skills (analysis, synthesis, compassion, etc.).

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<thead>
<tr>
<th>Grading Rubric: Participation</th>
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<tr>
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<tr>
<td>Attending and demonstrating engagement during class sessions, 15 total, 2 points each</td>
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<tr>
<td>Can be relied on to be present and prepared</td>
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<td>Total</td>
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Assignment 2: Design and lead a class session

To gain experience in facilitation, and to practice the training carried out through readings and in-class clinics, each student will design and lead a class session. Students will sign up for the session they want to lead during the first week of class.

In addition, there are two ungraded assignments due in the second week of class in preparation for the in-class facilitation training.

The first is to complete the Paragon Learning Style Inventory (PLSI) assessment. Students should bring their results with them to the second week of class, January 27th. This assessment, which is similar to the Meyers Briggs assessment, gives insight into how individuals participate in groups, including how we participate in class.

The second assignment for the second week is to prepare for the in-class training by taking notes on the readings from the first and second weeks addressing the following questions: (1) what are some of the disciplines/actors/perspectives that must engage in transportation and land use to address key social, environmental, and economic issues; and (2) what are some specific challenges that might arise when different perspectives meet at the table?

In addition, during the second week of class, we will complete a group exercise in which we co-create an “ideal seminar” framework, as well as a list of strategies for leading class. We will translate this “ideal seminar” framework into the rubric below, which is intentionally empty. After co-creating a strategy for leading seminar, the instructor will revise the syllabus with the new information, and will demonstrate the framework during the third week of class. If the framework needs any revision during the semester, then we will revise it together as a group.

In addition to receiving training in facilitation, and practicing facilitation skills in class, at the end of each class session each member of the class will provide constructive feedback to the
discussion leader about how class went, what they learned, what worked, and what could be improved in the next week.

A few logistical concerns for facilitating class discussion are:

Prepare for a two-hour discussion, leaving about 15 minutes at the beginning of the class for housekeeping, 15 minutes at the end of class for filling in the feedback form, and a 10- to 15-minute break.

Some class sessions will be unique, such as when we discuss assignments, and others will be more traditional sessions that focus on readings and pre-assigned topics. Each kind of session provides equally good experience for the facilitator.

For the class session that you lead, create an agenda and post it in the Canvas page that has been created for that class session.

Feel free to talk with Dr. McAndrews about your ideas for leading the class, and any questions that you may have about creating an agenda, in-class exercises, working with guest speakers, or any other topics.

| Grading Rubric: Designing and leading class discussion |
|-----------------------------|---------------------------------|-------------------|
| **Preparedness** | Excellent | Fair | Poor |
| The facilitator has identified in advance, or has a group process to collectively identify the key learning outcomes for the class session and has prepared the necessary activities and materials to help us achieve these goals (9 points) | The facilitator was prepared, technically, and we had a good time in class, but the elements of the class were not focused on a particular learning outcome or set of outcomes (or goals) (8 points) | The facilitator really needed to put more thought into preparing for class (≤ 7 points) |

| **Organization and structure of the class session** | **Engagement and focus on the needs of the group** |
|---------------------------------|---------------------------------|-------------------|
| Even if things did not always go according to plan, we definitely worked with a clear plan for the class session that was designed to help us achieve our goals (8 points) | We did a range of things in class (listening, diagramming, discussing, thinking, observing, playing) that appealed to our various learning styles and the whole class was engaged and included (8 points) | We did a range of things in class that appealed to our various learning styles, but there were problems engaging the group and including everyone (7 points) | The facilitator did not consider the needs of the group when designing the class session and as a consequence it didn’t work very well despite our good will toward one another (≤ 6 points) |

| **Total** | **24-25 Points** | **20-23 points** | **≤ 19 Points** |
Assignment 3: Big drama: Transportation and land use governance memo

Due: February 3

What is at stake in transportation and land use planning? Why is it a controversial topic, and why does it have a reputation for being difficult to coordinate in practice? The purpose of this memo is to become familiar with concrete examples of transportation and land use debates so that our discussions of theory (governance, economics) are more grounded.

First, each student will identify a contemporary or historical land use-transportation “big drama” in the Denver region. By drama, I mean a controversial, politically-important issue. Information about these dramas can be found in the popular press, through informational interviews with planners and other professionals, meeting minutes, etc. They often involve revenue (e.g., taxes), land development, spillover effects, and multiple levels of policy or government.

Each student will prepare a brief memo (no more than one page in length, single spaced) to the class that discusses the “big drama,” and each student will have about three minutes in class to present the case.

The memo should address the following questions: (1) What is the big drama here? What happened? What is at stake? (2) What are the transportation and land use implications of the big drama? And (3) What are the techniques, tools, and institutions (and limitations of these techniques, tools and institutions) available to planners and policy makers to deal with the issue at hand. Cite all sources.

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<thead>
<tr>
<th>Grading Rubric: Big drama memo</th>
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<tr>
<td></td>
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<tr>
<td>Clear and organized</td>
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<tr>
<td>composition, and well written</td>
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<tr>
<td>Presents a precise, coherent, and thoughtful analysis grounded in concrete examples and details</td>
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<td>Total</td>
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Assignment 4: Travel diary data and analysis

Due: March 3
This assignment has two parts. In the first part, each student completes a household travel diary for five days during the week of February 16 (the data collection template will be handed out prior to this). The data from each student’s weekly activities and travel are due on February 24. The instructor will compile the data that each student collects, and will return the compiled data to the class by February 25th.

Then, each student will complete an analysis of their own household travel behavior based on the compiled data set. The assignment will be passed out on February 25th, and it is due on March 3rd. This memo will form the basis of various in-class activities.

On March 3rd, as a class we will complete further analysis of the group’s household travel behavior based on the compiled data set, and we will use the data to analyze the impacts of various hypothetical travel choices and scenarios. Everyone should bring a computer to class this day, or arrange to share a computer with a fellow member of the class.

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<tr>
<th>Grading Rubric: Travel diary data and analysis</th>
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<tr>
<td></td>
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<tr>
<td>Excellent</td>
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<td>-----------------</td>
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<tr>
<td>Travel diary data collection</td>
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<tr>
<td>Travel analysis (memo and in class)</td>
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<td>Total</td>
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Assignment 5: Understanding Walking and Bicycling in Rural, Small, and Low-Density Communities and on Suburban Arterial Corridors

Due: April 21 and April 28

Non-profit hospitals are required to invest in community benefit activities to qualify for their non-profit status. Kaiser Permanente Community Benefit (KPCB Colorado) is investing in environmental and policy change to increase physical activity through its Walk and Wheel program.

http://share.kaiserpermanente.org/category/about-community-benefit/

The Walk and Wheel program supports interventions to increase walking and bicycling at 20 workplaces and communities in Colorado. Some of these communities are rural, small, or have densities that are relatively low compared to urban places. This is important because the
urban context has been the foundation for our understanding of walking and bicycling behavior—as well as the foundation for norms of good design. Yet, the urbanist wisdom may not be suitable for rural, small, and low-density contexts. Some of the reasons for this have their roots in the interaction of transportation and land use, and other reasons may be cultural or ideological.

The purpose of this assignment is to compile two sets of case studies that together represent innovative contemporary practices in pedestrian and bicycle planning in rural, small, and low-density (RSLD) communities. These cases should highlight the differences planning for ped- and bike-friendly communities in RSLD contexts and typical urban approaches.

- The first set of cases will focus on innovative practices in walking and bicycling (e.g., pedestrian and bicycle planning practice, governance, infrastructure, design, and travel behavior) in RSLD communities; and
- The second set of cases will focus on walking and bicycling (e.g., pedestrian and bicycle planning practice, governance, infrastructure, design, and travel behavior) on arterial corridors in suburban places.

These cases will focus on one innovation or interesting issue that you think should be shared widely with transportation practitioners. These case studies may be succinct in their format, but identifying this innovation and communicating why it is important requires you to synthesize the topics covered in this course. Each student will create one case study (selecting one of the two options, but not both). The instructor may re-assign students to create roughly equal numbers of cases.

For a model of transportation cases see this document:

The final deliverable has two parts:

(1) A two-page case study briefing document (such as those in the document referenced above).

The subheadings in the cases should be Background, The Problem, The Solution, Importance for Walking and Bicycling in RSLD Communities/on Arterials (this is where you discuss the difference between the urban approach and this context-sensitive approach, and any important similarities), Challenges and Future Opportunities, and References and Resources.

(2) A memo, no longer than two pages single-spaced, that describes the research methods you used to develop the case, including any field work, informational interviews, data analysis, documentary analysis that you conducted. Include in this memo any technical information that you could not include in the case study document because of the limits of its format.
NB: This assignment seems simple because of its succinct communication, but it requires 75 points worth of background research, synthesizing information, identifying the most compelling aspect of the most compelling cases, etc. Use the case study document to practice clear communication for a general audience, and use the memo to talk about the depth and quality of your information.

Each student will present his or her case study on either April 21st or April 28th.

| Grading Rubric: Active travel in RSLD communities and in suburban arterial corridors case studies |
|---------------------------------|---------------------------------|---------------------------------|
|                                 | Excellent                       | Poor                            |
| Clear and organized composition, and well written | Perfect style and copyediting (10 points) | Needs a thorough revision (≤ 7 points) |
| Analysis                        | The case study does not just describe the walk/bike innovation, it helps the reader understand it through its analytical presentation (30 points) | The case study is interesting, but it is more descriptive than analytical, which means the audience does not really understand why the case is important (24-29 points) |
| Interpretation                  | The case gives the audience insight into what is unique about ped/bike planning in RSLD communities/arterials (30 points) | The case was thoroughly interpreted, but does not really get at the question about what might be unique about RSLD/arterial context (24-29 points) |
| In-class presentation           | Clear and focused (5 points)     | Does not present or is not effective (≤ 2 points) |
| Total                           | 75 points                       | 60-74 points                    | ≤ 73 points |

**Assignment 6: Cumulative reflection essay**

**Due: May 5**

This cumulative reflection essay is an ungraded assignment. As part of class this semester we have worked with facilitation techniques for leading and participating in group discussion, and each member of the class has applied and reflected on these skills and the group dynamic in class.

Please write a short essay, no longer than 600 words, that responds to the following prompt:
Thinking of graduate-level seminar courses as professional conversations, write a short, reflective essay describing the story of your learning this semester. Pay attention to any patterns that might appear between how you learned the “content” of the class (i.e., transportation planning and policy) and the “form” of the class.

We will use these short essays as material for our final class meeting when we debrief about facilitation, group discussions, and professional development in transportation and land use planning.

3. Course Schedule and Readings

Week 1. January 20: Critical issues and debates in transportation and land use


Optional readings:


Week 2. January 27: Facilitation and dialogue part 1: Contemporary practices in transportation and land use planning


Week 3. February 3: In-class briefing of the Big Drama assignment + Transportation and land use governance: Actors, institutions, and politics


Optional readings:


**Week 4. February 10: History and classical economic/geography theory of TLU connection**


Optional readings:


**Week 5. February 17: Travel demand, behavior, and mode choice**


Optional readings:

**Week 6. February 24: Trip generation, trip distribution, and system capacity**


Optional readings:

**Week 7. March 3: In-class exercise: The consequences of travel choices**

**Week 8. March 10: Facilitation and dialogue part 2: How to have a good fight about transportation and land use**

Week 9. March 17: New directions in arterials and transportation corridors planning


Optional readings:


Week 10. March 24: No class, spring break

Week 11. March 31: Transit-oriented development and neighborhood design


Optional readings:


Week 12. April 7: Parking

Optional readings:


**Week 13. April 14: Accessibility, jobs, and equity**


**Week 14. April 21: Panel discussion and presentation of cases: Walking and bicycling in rural, small, and low-density communities**

**Week 15. April 28: Panel discussion and presentation of cases: Walking and bicycling on suburban arterial roads**

**Week 16. Mary 5: Facilitation and dialogue part 3: Professional plan**