Course Description

Transportation planning is undergoing a major revolution. From emerging technologies and travel modes to new waves of societal impacts, the field faces an ever-evolving set of challenges and opportunities. In light of these shifts, UP 230 will prepare students to think critically about the following types of questions: What does our transportation system look like today, and how did we get here? Who makes decisions about transportation infrastructure and how are projects funded? What are the impacts of transportation on congestion, the environment, safety, health, and equity? How can we design streets and places that are safe for users of all travel modes, ages, and abilities? Will autonomous vehicles simply encourage more driving, or can they be harnessed to support community goals? The course is divided into four major sections that address these and other critical questions:

- **Section I: Transportation Planning Foundations.** The first section of the course provides a foundational knowledge base about transportation planning, focusing primarily on the U.S. context. Students will learn about travel patterns and trends, future projections about travel, major phases in transportation history, and the structure of transportation planning (e.g., who makes decisions, how transportation investments are funded). This section also introduces important concepts such as the distinction between mobility and accessibility and the relationship between transportation and land use.

- **Section II: Transportation System Impacts.** The second section of the course explores several major impacts of the transportation system, including congestion, the environment, safety, public health, and social equity. Students will learn about these impacts through a combination of interactive lectures and student-led case study presentations, which will consider how major U.S. cities have handled each type of impact through planning and policy actions.

- **Section III: Planning for Multiple Modes.** The third section of the course provides an overview of planning for multiple modes of transportation, highlighting key considerations for pedestrians, bicyclists, public transit, parking, and street design. Students will learn about policy and design strategies that can support a modal shift away from the automobile and toward more sustainable modes of transportation.
• Section IV: Anticipating the Future. The final section of the course explores the future of transportation planning with an emphasis on autonomous vehicles. Students will examine new developments and prepare a “call to action” for how planners can make decisions in an ever-shifting environment.

Course Objectives

By the end of the semester, students in UP 230 will be able to:

• Explain how transportation systems and travel behavior have evolved over time
• Recognize major decision-makers and funding sources in the field of transportation planning
• Understand the major impacts of transportation systems and explain how cities have addressed these impacts through policy, planning, and design approaches
• Describe innovative ways to plan for all modes of transportation
• Summarize the challenges and opportunities associated with connected and autonomous vehicles
• Engage in meaningful dialogue about key policy issues and current events in transportation planning

Course Format

This course will be taught through a combination of lectures and in-class activities (e.g., labs, discussions, debates). Students are expected and encouraged to actively engage in both lectures and in-class activities, contributing their questions, ideas, and experiences to a rich discussion of the course content.

Due to COVID, class sessions during the first three weeks of the semester will be held online. We will meet synchronously over Zoom during our regular class time for these sessions. In-person instruction is expected to begin during the week of February 7 as long as public health conditions allow. We may need to meet virtually on occasion after that point for reasons related to COVID; if this becomes the case, students will be notified as soon as possible.

Course Requirements

The table below summarizes the course requirements and how they will be weighted in calculating the final course grade. Detailed descriptions of these requirements are provided on the following page.

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Weight in Final Grade (%)</th>
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</thead>
<tbody>
<tr>
<td>Engagement Components</td>
<td></td>
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<tr>
<td>Participation</td>
<td>10</td>
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<tr>
<td>Labs (x4)</td>
<td>12</td>
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<tr>
<td>Transportation News Brief</td>
<td>5</td>
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<tr>
<td>Assignment Components</td>
<td></td>
</tr>
<tr>
<td>Assignment 1 (individual, written)</td>
<td>15</td>
</tr>
<tr>
<td>Assignment 2 (group, oral)</td>
<td>15</td>
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<tr>
<td>Assignment 3 (group, written)</td>
<td>15</td>
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<tr>
<td>Exam Components</td>
<td></td>
</tr>
<tr>
<td>Study Guides (x2)</td>
<td>8</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
Engagement Components

Participation. Active engagement with the course materials, with the instructor, and with other students in the class is essential for success in this course. In addition to strong attendance (with exceptions for illness and quarantine periods when class is being held in person), engagement can be demonstrated in multiple ways. Students are expected to complete the assigned readings prior to class and to come to lectures prepared for thoughtful participation. Lectures will be interactive and students will be expected and encouraged to engage in active dialogue about key concepts and real-world examples. Additionally, all students can demonstrate engagement through proactive communication with the instructor and classmates. Note that regularly engaging in distracting behaviors (e.g., repeated tardiness, texting, laptop use unrelated to class) will result in a lower participation grade.

Labs. Students will complete four labs over the course of the semester, collaborating in small groups during class but submitting individual work. Students who miss class on designated lab days will be expected to complete the work outside of class (collaboration with classmates is still allowed). Individual lab submissions will be due to Canvas the Friday after each lab session for a check of completion and understanding.

Transportation News Brief. Staying engaged in the “real world” of transportation planning is essential to making informed arguments and decisions. To bring this engagement into the classroom, we will devote the beginning of selected class sessions to brief (5 minutes maximum) student updates about recent news items related to transportation planning. News items may include events, policy decisions, planning efforts, projects, studies, or any other updates relevant to the course content.

Each student will provide a news brief once during the semester (sign-ups during second week of class). News briefs should be informal, consisting of a single PowerPoint slide that includes a link to the article and conveys (1) concise background information, (2) a description of the event, decision, effort, project, study, etc., (3) a summary of the major implications for transportation planning, and (4) 1-2 discussion questions for the class. To keep the discussion current, students should focus on a news item that occurred in the week prior to their update. Students should send a link to an online article about their news item to the instructor via email (lmbran@illinois.edu) by 5:00 PM the day before their update.

Assignment Components

Assignments. Students will complete three assignments that apply concepts learned in class to real-world examples in practice. One of the assignments will be completed individually and two will be completed in small groups. The assignments will cover the following topics:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Format</th>
<th>Deliverable</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>City Profile: Travel Patterns and Trends</td>
<td>Individual</td>
</tr>
<tr>
<td>A2</td>
<td>Case Study Presentation: Transportation Impacts</td>
<td>Group</td>
</tr>
<tr>
<td>A3</td>
<td>City Profile: “Alternative” Modes and Policies</td>
<td>Group</td>
</tr>
</tbody>
</table>

Exam Components

Study Guides. To help with ongoing preparation for the final exam (see below), students will be asked to submit two study guides during the course of the semester. In these study guides, students will use information from readings, lectures, and other course activities to respond to questions provided by the instructor. (A third study guide will be provided for the final section of the course, but submission will be optional.)
Final Exam. A cumulative final exam covering lecture materials and course readings will be held during the official University final exam period. The University policy on deferred, missed, and make-up exams will be followed (please see http://studentcode.illinois.edu/article3/part2/3-201/).

Grading

Grading Scale. Numeric grades will be converted into letter grades using the scale outlined below. The course will not be graded on a curve, and there will be no rounding applied to numeric grades.

- A+: 97.0–100.0
- B+: 87.0–89.9
- C+: 77.0–79.9
- D+: 67.0–69.9
- F: Less than 60.0

- A: 94.0–96.9
- B: 84.0–86.9
- C: 74.0–76.9
- D: 64.0–66.9
- A-: 90.0–93.9
- B-: 80.0–83.9
- C-: 70.0–73.9
- D-: 60.0–63.9

Detailed instructions for completing each assignment will be provided. Submitted assignments will be graded and returned promptly with detailed feedback. The general grading rubric is as follows:

- An “A” assignment demonstrates original thought and synthesis of ideas and sophisticated, cogent analysis. It is clearly written and presented. Outstanding work.
- A “B” assignment includes above average analysis with appropriate evidence to support ideas. It is clearly written and presented. Good work.
- A “C” assignment shows a basic level of understanding, with analysis limited to obvious arguments. Writing is competent. Developing but adequate work.
- A “D” assignment misunderstands or misrepresents the material, or is so poorly written or presented as to obscure the analysis. Inadequate work.

Late Assignments. Students are expected to turn in all deliverables (assignments, labs, etc.) on time. However, I understand—now more than ever—that challenges, unanticipated obligations, and illnesses will arise. If you are unable to meet a particular deadline, it is your responsibility to make prior arrangements with me regarding the deliverable. Otherwise, work submitted past the deadline will receive a five-percentage-point deduction, and work submitted later than five days past the deadline may not be considered for grading unless consent has been given by the instructor. Please communicate with me proactively about any challenges, illnesses, or emergencies that arise—I am here to work with you and help you do your best!

Readings

There is no required text for this course. All readings will be posted on Canvas and/or available through the University of Illinois library. Readings for each session are listed at the conclusion of this syllabus.

Course Policies and Other Items/Resources

Attendance. Attendance and active participation are necessary for adequate performance in this course. This is not a “normal” semester, and flexibility will be given for absences related to illness and quarantine (when class is being held in person). However, students are expected to notify the instructor in advance of any sessions that will be missed. It is the instructor’s decision as to when a student’s absences, without proactive communication with the instructor, become excessive and should be reported. If in the opinion of an instructor the attendance of a student becomes so irregular that their scholarship is likely to be impaired, the instructor may submit an irregular attendance form to the Associate Dean of the student’s college. A copy is forwarded to the student, who should contact the instructor immediately to work out a solution. If irregular attendance continues without excuse, the instructor may request the student be
withdrawn from the course. This request for withdrawal would result in a grade of E for the course. Extenuating circumstances will always be considered when supporting evidence is presented. See Rule 1-501 and Rule 1-502 in the Student Code for more information.

**Academic Accommodations.** This course will accommodate students with documented disabilities. To obtain disability-related academic adjustments and/or auxiliary aids, students should contact both the instructor and the Disability Resources and Educational Services (DRES) as soon as possible. You can contact DRES at 1207 S. Oak Street, Champaign, by phone at (217) 333-1970, or via email at disability@illinois.edu.

**Academic Integrity.** This course follows the guidelines set forth by the University Student Code. See [http://www.admin.uiuc.edu/policy/code/article_1/a1_1-401.html](http://www.admin.uiuc.edu/policy/code/article_1/a1_1-401.html) for specific guidelines, examples, and punishment associated with academic dishonesty. In written work, any ideas that are not your own must be properly cited. The consequences for plagiarism may include receiving no credit for an assignment or, at the discretion of the instructor, failure of the course.

**Counseling.** The University 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/](https://counselingcenter.illinois.edu/).

**Class Climate.** The Department of Urban and Regional Planning (DURP) is committed to maintaining a learning environment that is rooted in the goals and responsibilities of professional planners. By enrolling in a class offered by DURP, students agree to be responsible for maintaining an atmosphere of mutual respect in all DURP activities, including lectures, discussions, labs, projects, and extracurricular programs. See Student Code Article 1-Student Rights and Responsibilities, Part 1. Student Rights: §1-102.

**Safety and Security in the Classroom.** Emergencies can happen anywhere and at any time. It is important that we take a minute to prepare for a situation in which our safety or even our lives could depend on our ability to react quickly. When we’re faced with any kind of emergency—like fire, severe weather, or if someone is trying to hurt you—we have three options: run, hide, or fight. For more information please refer to the General Emergency Response Recommendations at [http://police.illinois.edu/emergency-preparedness/run-hide-fight/resources-for-instructors/](http://police.illinois.edu/emergency-preparedness/run-hide-fight/resources-for-instructors/).

**Netiquette.** In any social interaction, certain rules of etiquette are expected and contribute to more enjoyable and productive communication. The following are tips for interacting via email or other online messages, adapted from guidelines originally compiled by Chuq Von Rospach and Gene Spafford (1995):

- Remember that the person receiving your message is someone like you, deserving and appreciating courtesy and respect.
- Be brief; succinct, thoughtful messages have the greatest effect.
- Your messages reflect on you personally; take time to make sure that you are proud of their form and content.
- Use descriptive subject headings in your emails.
- Think about your audience and the relevance of your messages.
- Be careful when you use humor and sarcasm; absent the voice inflections and body language that aid face-to-face communication, internet messages are easy to misinterpret.
- Cite appropriate references whenever using someone else’s ideas, thoughts, or words.
## Course Schedule

*(Subject to revision)*

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td><strong>Section I: Transportation Planning Foundations</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1</td>
<td>Jan 18</td>
<td>Course Overview and Major Themes</td>
<td>Online session</td>
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<tr>
<td></td>
<td>Jan 20</td>
<td>Travel Behavior Part 1: Past + Present</td>
<td>Online session</td>
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<tr>
<td>2</td>
<td>Jan 25</td>
<td>Travel Behavior Part 2: Future + Measures</td>
<td>Online session; Lab 1</td>
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<tr>
<td></td>
<td>Jan 27</td>
<td>History Part 1: Walking City + Transit</td>
<td>Online session</td>
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<td>3</td>
<td>Feb 1</td>
<td>History Part 2: Rise of the Automobile</td>
<td>Online session</td>
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<td></td>
<td>Feb 3</td>
<td>Transportation and Land Use Connections</td>
<td>Online session</td>
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<td>4</td>
<td>Feb 8</td>
<td>Transportation Planning Process</td>
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<td></td>
<td>Feb 10</td>
<td>Transportation Finance</td>
<td>A1 due Friday</td>
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<tr>
<td><strong>Section II: Transportation System Impacts</strong></td>
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<tr>
<td>5</td>
<td>Feb 15</td>
<td>Congestion Part 1: Fundamentals</td>
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<td></td>
<td>Feb 17</td>
<td>Congestion Part 2: Case Study (New York City)</td>
<td>A2 due – Group 1</td>
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<tr>
<td>6</td>
<td>Feb 22</td>
<td>Environment Part 1: Fundamentals</td>
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<tr>
<td></td>
<td>Feb 24</td>
<td>Environment Part 2: Case Study (San Francisco)</td>
<td>A2 due – Group 2</td>
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<tr>
<td>7</td>
<td>Mar 1</td>
<td>Safety Part 1: Fundamentals</td>
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<td></td>
<td>Mar 3</td>
<td>Safety Part 2: Case Study (Chicago)</td>
<td>A2 due – Group 3</td>
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<td>8</td>
<td>Mar 8</td>
<td>Public Health Part 1: Fundamentals</td>
<td>SG1 due Friday</td>
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<td></td>
<td>Mar 10</td>
<td>Public Health Part 2: Case Study (Minneapolis)</td>
<td>A2 due – Group 4</td>
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<td>9</td>
<td>Mar 15</td>
<td>NO CLASS – Spring Break</td>
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<td></td>
<td>Mar 17</td>
<td>NO CLASS – Spring Break</td>
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<td>10</td>
<td>Mar 22</td>
<td>Social Equity Part 1: Fundamentals</td>
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<td></td>
<td>Mar 24</td>
<td>Social Equity Part 2: Case Study (Los Angeles)</td>
<td>A2 due – Group 5</td>
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<tr>
<td><strong>Section III: Planning for Multiple Modes</strong></td>
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<tr>
<td>11</td>
<td>Mar 29</td>
<td>Planning for Pedestrians</td>
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<td></td>
<td>Mar 31</td>
<td>Planning for Pedestrians (continued)</td>
<td>Lab 2</td>
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<tr>
<td>12</td>
<td>Apr 5</td>
<td>Planning for Bicyclists</td>
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<td></td>
<td>Apr 7</td>
<td>Planning for Bicyclists (continued)</td>
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<tr>
<td>13</td>
<td>Apr 12</td>
<td>Multimodal Street Design</td>
<td>SG2 due Friday</td>
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<tr>
<td></td>
<td>Apr 14</td>
<td>Multimodal Street Design (continued)</td>
<td>Lab 3</td>
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<tr>
<td>14</td>
<td>Apr 19</td>
<td>Planning for Public Transit</td>
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<td>Apr 21</td>
<td>Planning for Parking</td>
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<tr>
<td><strong>Section IV: Anticipating the Future</strong></td>
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<tr>
<td>15</td>
<td>Apr 26</td>
<td>Autonomous Vehicles</td>
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<td></td>
<td>Apr 28</td>
<td>Call to Action for Planners</td>
<td>Lab 4</td>
</tr>
<tr>
<td>16</td>
<td>May 3</td>
<td>Course Wrap-Up + Exam Review</td>
<td>A3 due</td>
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<td></td>
<td>—</td>
<td><strong>Final Exam</strong> (1:30–4:30 PM)</td>
<td>Final Exam</td>
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</tbody>
</table>
Readings

Course Overview and Major Themes


Travel Behavior Part 1: Past + Present


Travel Behavior Part 2: Future + Measures


History Part 1: Walking City + Transit


History Part 2: Rise of the Automobile


Transportation and Land Use Connections

Transportation Planning Process


Transportation Finance


Congestion Part 1: Fundamentals


Congestion Part 2: Case Study

- Readings/resources to be assigned by presenting students (Group 1)

Environment Part 1: Fundamentals


Environment Part 2: Case Study

- Readings/resources to be assigned by presenting students (Group 2)

Safety Part 1: Fundamentals

Safety Part 2: Case Study
- Readings/resources to be assigned by presenting students (Group 3)

Public Health Part 1: Fundamentals

Public Health Part 2: Case Study
- Readings/resources to be assigned by presenting students (Group 4)

Social Equity Part 1: Fundamentals

Social Equity Part 2: Case Study
- Readings/resources to be assigned by presenting students (Group 5)

Planning for Pedestrians

Planning for Bicyclists
Multimodal Street Design


Planning for Public Transit


Planning for Parking


Autonomous Vehicles


Call to Action for Planners

- Links to policy statements on autonomous vehicles:
  - Human Factors and Ergonomics Society (HFES)
  - National Association of City Transportation Officials (NACTO)
  - Institute of Transportation Engineers (ITE)
  - Association of Pedestrian and Bicycle Professionals (APBP)