

URBPLAN-772: Pedestrian and Bicycle Transportation Syllabus (1/16/23)

Spring 2023—3.0 Credits
Monday, 2:30 p.m. to 5:10 p.m., AUP Room 345

Course Instructor: Dr. Robert Schneider (rjschnei@uwm.edu, 414-977-7740)
Office Hours: By Appointment (flexible times), Online

Course Overview

Walking and bicycling are essential components of a sustainable transportation system. In response to growing concerns about personal mobility and safety, access to transit, equity, air quality, public health, and other issues of community sustainability, many government agencies are developing plans to improve pedestrian and bicycle transportation.

Pedestrian and bicycle transportation are influenced by micro-scale elements of the built environment, such as sidewalks, bicycle lanes, traffic speeds, and roadway crossings, as well as by macro-scale characteristics, such as community-wide pathway systems and regional land use patterns. As a result, walking and bicycling issues bridge the disciplines of urban planning, urban design, and civil engineering.

This graduate-level course is structured to provide students with information about current practices in the pedestrian and bicycle transportation field. It will cover historical and institutional frameworks, benefits and obstacles to pedestrian and bicycle planning, policy development, perceived and actual safety, facility design, network development, and practical methods of estimating demand and evaluating walking and bicycling conditions. Students will be challenged to evaluate the existing methods critically and develop ideas for improving pedestrian and bicycle planning practices. The course will focus mainly on practices in the United States, though it will include examples of innovative international strategies.

The course will include lectures, guest speakers, a field trip, and several assignments. Most classes will include a presentation by the course instructor. References from the reading list will also be discussed in class. To facilitate discussions, students will be selected to the “Expert” for specific readings in the next class period. The “Expert” should be prepared to provide a brief overview and one or two discussion questions for the readings. Guest speakers (and panels of speakers) will be professionals working for government agencies, advocacy and other non-profit organizations, and consulting firms who will provide a practical perspective on the issues discussed in class. When guest speakers are scheduled, the last portion of the class period will be reserved for their presentation and discussion.

I am looking forward to a great term with all of you!
Bob

Course Objectives

By completing this course, students should be able to:

- Explain historical and institutional frameworks, including the development of roadway facilities for specific user groups, Complete Streets and Vision Zero policies, and current state and federal policies related to multimodal transportation.
- List specific benefits of pedestrian and bicycle transportation and understand obstacles to promoting pedestrian and bicycle transportation.
- Provide at least one possible description of the thought process that people follow when choosing a specific mode (e.g., walking or bicycling) for routine travel.
- Understand roadway design, user characteristics, and vehicle characteristics associated with perceived and actual pedestrian and bicycle safety.
- Understand the rationale behind standard pedestrian and bicycle facility design practices as well as the debates surrounding new, innovative pedestrian and bicycle facilities.
- Apply spreadsheet formulas to evaluate pedestrian and bicycle conditions based on objective roadway measurements.
- Identify the most common factors used in pedestrian and bicycle demand (volume) models.
- Evaluate the existing pedestrian and bicycle planning and engineering methods critically and develop ideas for improving professional practice.
- Explain general differences in pedestrian and bicycle travel behavior and facility design in the United States and several other countries.
- Work with group members to propose pedestrian and bicycle improvements to specific local situations.

COVID-Related Policies for Spring 2023

Text in this section is taken directly from and modified from the UW-Milwaukee "COVID-19 Syllabus Statements, Fall 2022" website: <https://uwm.edu/cetl/covid-19-syllabus-statements/>.

Panther Community Health and Safety Standards: UWM has implemented reasonable health and safety protocols, taking into account recommendations by local, state and national public health authorities, in response to the COVID-19 pandemic. As a member of our campus community, you are expected to abide by the Panther Interim COVID-Related Health & Safety Policy (<https://apps.uwm.edu/secure/policies/storage/other/SAAP%2010-12.%20COVID%20Health%20and%20Safety%20Policy.pdf>), which was developed in accordance with public health guidelines.

Additional details about student and employee expectations can be found on the UWM COVID-19 webpage (<https://uwm.edu/coronavirus/>).

Attendance Policy

Our class is designed for in-person instruction throughout the semester. However, do not attend your in-person class if you have COVID-19, if you are experiencing symptoms consistent with COVID-19, if you have been in close contact with others who have symptoms, if you need to care for an individual with COVID-19, or have other health concerns related to COVID-19.

- You should be aware of each of your course's attendance policies. In case of illness, you should contact me immediately to discuss options for completing course work while ill.
- Notify me in advance of the absence or inability to participate, if possible.

- If you are ill, participate in class activities online and submit assignments electronically, to the extent possible.
- Reach out to me if illness will require late submission or other modifications to deadlines.
- As your instructor, I will trust your word when you say you are ill, and in turn, I expect that you will report the reason for your absences truthfully.

Face-to-Face Class Recording (Lecture Capture)

Our class sessions will be audio-visually recorded for students who are unable to attend in person and for students who are unable to attend at the scheduled time. Note that the recordings may not capture all aspects of small group discussions or student questions, and there may be technical difficulties. Students who participate during an in-person class session are agreeing to have their audio/video or image recorded. If and when students participate in class remotely, they are also agreeing to have their audio/video or image recorded.

Potential for Reversion to Fully Online Instruction

Changing public health circumstances for COVID-19 may cause UWM to move to fully online instruction at some point during the semester. UWM will communicate with students about moving to fully online instruction if the situation develops.

Other Course Policies

This course adheres to campus policies regarding students with disabilities, religious observances, active military service, incompletes, discriminatory conduct, academic misconduct, complaints about the course, grade appeals, and firearms. For details about these policies, see <https://uwm.edu/secu/syllabus-links/>.

If you are sick, please let me know prior to class and stay home. If necessary, homework and communication can be done electronically.

UWM Campus Resources: Dean of Students Office

<https://uwm.edu/deanofstudents/assistance/>

- For imminent threats to safety (including suicide and/or threats to others): **University Police:** 414-229-9911
- For mental health crises that occur during standard business hours (M-F between 8:00 a.m. and 4:30 p.m.): **UWM Main Campus Counseling Services:** 414-226-4133
- 24-hour Crisis Lines for mental health crises that occur after hours:
 - **Milwaukee County Crisis Line:** 414-257-7222
 - **National Suicide Prevention Lifeline:** 1-800-273-8255
- Please visit <https://uwm.edu/mentalhealth/> for more information.

Mental Health America Resource Locator

<https://www.mhanational.org/finding-help>

Students in Need

Any student who faces challenges securing their food, housing, or technology, or is struggling with mental, physical, or emotional health, and believes this may affect their performance in the course is urged to contact the Dean of Students (dos@uwm.edu) for support. Furthermore, please notify me if

you are comfortable doing so. This will enable me to help provide any resources that I can and also connect you to the Dean of Students.

Academic Misconduct and Plagiarism

All work in this course should be your own, though you will draw upon other references. In written work, cite your sources for quotes, facts, and opinions, both in the body of your work (at the end of the specific sentence where the information is cited) and in the bibliography. Do not copy word for word unless you place the words in quotation marks. Do not paraphrase the ideas of others without identifying the sources.

Students are expected to adhere to conduct policies at the following website:

<https://uwm.edu/deanofstudents/academic-misconduct-2/> (UWM Dean of Students Office, "Academic Misconduct," August 2022).

According to this source, "Academic misconduct is an act in which a student:

- seeks to claim credit for the work or efforts of another without authorization or citation
- uses unauthorized materials or fabricated data in any academic exercise
- forges or falsifies academic documents or records
- intentionally impedes or damages the academic work of others
- engages in conduct aimed at making false representation of a student's academic performance
- assists other students in any of these acts

"Prohibited conduct includes but is not limited to...submitting a paper or assignment that contains ideas or research of others without appropriately identifying the sources of those ideas."

Any academic misconduct (plagiarism) will be dealt with as a serious ethical breach. If you have questions about whether you are crossing an ethical line, ASK me.

Diversity, Equity, and Inclusion

The Department of Urban Planning is committed to addressing systemic racism across all of its dimensions in our curriculum. Towards this goal, the Department of Urban Planning acknowledges the historical roles of urban planning in creating and replicating racial inequities in the built environment. We are committed to developing pedagogical approaches and curricular content to train urban planners on anti-racist planning strategies.

We desire to foster and reinforce an inclusive culture in which democratic principles embrace the richness of our diverse society. The Department of Urban Planning facilitates and advances respectful dialogues among participants (students, instructors, class project clients, community members, and so on) of diverse backgrounds and experiences. This course welcomes diverse backgrounds and thoughts and strives to make our community more equitable and inclusive.

Readings and Class Participation

You are expected to attend lectures and participate in class during the designated class times. A different topic from the pedestrian and bicycle planning field will be covered each class session. The readings listed under each session below are required readings. Readings will be available on the course Canvas website. All students are expected to read all the assigned readings BEFORE class and to actively

participate in the discussion. A separate list of references titled, "Supplemental References," will also be posted online.

Active participation in class is an important component of this course. Being able to express concepts and opinions clearly and ask good questions are critical skills in the professional world. Class attendance will be taken. However, class participation grades are based on the quality of active participation in class discussion, not simply on attendance. In the interest of promoting a productive learning environment for all, please:

- Arrive on time and stay for the duration of class.
- Turn off or mute audible mobile devices for the duration of class.
- Turn off laptops unless they are being used for notes, you are checking facts discussed in class, or if you are instructed otherwise. Bottom line: stay engaged in the class discussions.

Behaviors that detract from class learning will be penalized in the class participation grade.

Class Assignments

The three assignments are designed to give practical experience with elements of the active transportation realm, including policy development, research, and design. All work should have a practical focus. For example, work should be done with the intention of presenting findings to planners and engineers at a municipal agency or distributing the results to members of the Association of Pedestrian and Bicycle Professionals. Writing and producing graphics to communicate ideas are important skills in the pedestrian and bicycle field, and the clarity and organization of all assignments will be evaluated as a part of the grading process. Sources must be referenced in all assignments. Any reference style is acceptable; the keys are to give credit to your sources and to provide support for your arguments. All assignments should be uploaded to the course Canvas site by 2:30 p.m. on the due dates listed. The assignments are described below.

Assignment #1: Attend a local transportation meeting and turn in a 2-page summary memo (Due Friday, February 17th) (individual assignment)

This assignment is designed as an introduction to the political realm of decision-making. The final product should be a two-page, single-spaced memorandum in a standard memo form with a meeting summary and analysis. You should address the memo to the executive director of the local advocacy organization (real or fictitious) of your choice. The final memo should be submitted as a Microsoft Word document so that comments can be provided in Track Changes. Your memo should contain the following three sections:

- A very brief description of the role and function of the organization whose meeting you attended. (about 1 paragraph)
- A short summary of the purpose of the meeting and the specific topics discussed. If the agenda included a large number of items you may choose to focus on one or two key topics. (1 to 2 paragraphs)
- Your detailed comments on the following question: What did this experience teach you about citizen participation and public decision-making with regard to bicycle and pedestrian planning? (1 to 1.5 pages)

Before attending the meeting, skim a few background materials about the group sponsoring the meeting and any reports and analyses prepared specifically for the meeting. Also obtain and review any materials that are handed out or presented at the meeting. Examples of appropriate meetings include:

- City of Milwaukee Transportation-related committee meetings (Public Works, Economic Development, Zoning, Public Safety) (<https://milwaukee.legistar.com/Calendar.aspx>)
- City of Milwaukee Pedestrian and Bicycle Committee. Friday, January 20th from 8:30 to 10:00 am, Zeidler Municipal Building, 5th Floor Commissioner’s Conference Room.
- City of Wauwatosa Bicycle and Pedestrian Facilities Committee Meeting, fourth Monday of each month from 5:30 to 7:00 pm, which would be January 23rd (<https://wauwatosacitywi.iqm2.com/Citizens/Board>)
- City of Wauwatosa—Other transportation-related meetings (see <https://wauwatosacitywi.iqm2.com/Citizens/calendar.aspx>)
- Village of Shorewood—Transportation-related meetings (see <https://www.villageofshorewood.org/AgendaCenter>)
- Milwaukee County Committee Meetings (<https://milwaukeecounty.legistar.com/Calendar.aspx>)
- Any other meeting of local municipalities, including the Milwaukee County Trails Council, or the Southeast Wisconsin Regional Planning Commission that has a transportation issue on the agenda (*if you aren’t sure if the meeting is a good fit, just e-mail me to check*)

Assignment #2: Produce a Pedestrianization Case Study to inform Brady Street Pedestrianization (Select teammates by Wednesday, February 15th; Assignment Due Monday, March 27th) (work in pairs)

The Brady Street Business Improvement District (BID) made headlines in 2022 when it indicated a desire to pedestrianize portions of Brady Street.¹ Recognizing increased traffic safety concerns along Brady Street and in Milwaukee as a whole, one of the primary motivations for pedestrianizing Brady Street is to improve safety for pedestrians and bicyclists. The BID also sees an opportunity to transform Brady Street into a more vibrant public space that attracts more people to local businesses and becomes an even greater neighborhood asset. In January 2023, the BID announced that it hired local consulting firms to propose ideas and engage in public conversations about pedestrianizing the street.²

One challenge for promoting pedestrianization is that it takes many different forms. Examples include prohibiting motor vehicles completely; restricting automobile access to certain types of vehicles (e.g., buses, emergency vehicles, delivery trucks); restricting automobile access to certain blocks and certain times of day, days of week, or seasons of the year; making a variety of physical changes to the street infrastructure that complement a pedestrian-priority street; using a variety of types of barriers to restrict automobile access. Therefore, case studies of pedestrianization from other communities will be useful for the Brady Street BID.

This assignment will allow you to contribute to the public conversations that will occur around pedestrianizing Brady Street. You and a partner will conduct a case study on a pedestrianized street in another community. You will present the results of your case study on a PDF poster (34” x 44” or 36” x 48”) and in a 3-to-5-page (single spaced) supplemental report. The Brady Street BID will print and display your poster at public engagement efforts about pedestrianization. Your poster should contain the most important information and will be the main product from your case study. The layout is flexible, but it should be focused on images and graphics and use text sparingly. Your poster should have a large-font title that includes the name of your case study street. Your supplemental report should contain

¹ Jannene, J. “Should Brady Street be Pedestrian Only,” Urban Milwaukee, September 15, 2022, <https://urbanmilwaukee.com/2022/09/15/transportation-should-brady-street-be-pedestrian-only/>.

² Wild, M. “Brady Street officially exploring pedestrianization options, hires GRAEF and TKWA for study,” Milwaukee Record, January 16, 2023, <https://milwaukee-record.com/city-life/brady-street-officially-looking-into-pedestrianization-options-hires-graef-and-tkwa-for-study/>.

additional details about your findings and methods (i.e., put most of your text here, not on the poster). It must include references and may include additional images. Neither references or images count against the page limit. **If you use images from the internet or other sources on your poster or in your report (i.e., you do not create them yourself), you must provide the source information on or directly below the image.**

Your pedestrianization case study should, at a minimum, provide the following information:

- For how many years has the street been pedestrianized? What is the length of the pedestrianized section? Over what time periods are vehicles restricted? How are vehicles restricted?
- What is the general design of the street (e.g., building-to-building width, curb-to-curb width, number and type of lanes, traffic volume and speed limit when cars are allowed)?
- What is the street context (e.g., type and size of buildings, types of businesses, types of land uses)?
- Why did the street become pedestrianized? Who advocated for it? Who was opposed to it?
- What happened to the existing traffic from the street? How was automobile parking affected? How did the community react to these changes, both in the short-term and long-term?
- What changes have been made to the pedestrianization design, maintenance, or other policies to make it work better (if any)?
- What are the most successful aspects of the pedestrianized street?
- What are the most challenging aspects of the pedestrianized street?
- How did you research your case study? How did you search for information? Who did you talk to? (on your poster, thank these people in an Acknowledgement section)
- Importantly: Based on what you learned from this case study, what specific suggestions do you have for Brady Street? (Save plenty of space on your poster for this.)

Your case study community should have a relatively similar climate to Milwaukee. Examples of communities with pedestrianized (or formerly pedestrianized) streets include Boulder, Burlington (VT), Chicago, Denver, Iowa City, Kalamazoo, Madison, Minneapolis, Montreal, New York, Quebec City, and Sheboygan. Research for your case study should include reviewing online news stories, reports, and other academic references. **It must also include at least one interview with a local practitioner who is familiar with the history and operation of the pedestrianized street (e.g., city pedestrian and bicycle coordinator, multimodal advocate, business district manager, etc.). Hint: ask them the questions listed above.**

Rachel Taylor (executivedirector@bradystbid.com) will be your client for this project. She will be a guest speaker in class on Monday, February 13th. You should e-mail the instructor to propose who you are working with and a specific case study street by Wednesday, February 15th. If two teams are interested in studying the same street, the first team to e-mail their proposed street will get to study it. The other team will need to choose a different street.

You will have an opportunity to share your pedestrianization case study posters in class on Monday, March 27th. You may also choose to accompany your posters and engage with the public at future Brady Street BID public engagement events after this class is over.

***Final Project (Final Examination): Situational Design & Policy Guidance
(Proposed Team & Topic Due Wednesday, March 29th; Final PowerPoint Presentation and Final Documentation Due on Monday, May 8th)***

Your project should be conducted in groups of 3 to 4 students, and it will involve planning, design, and engineering skills. The goal of the assignment is to recommend, illustrate, and justify a set of pedestrian and bicycle improvements that would apply to a common type of street context in Milwaukee. Possible topics for this project include:

- Repurpose one side of boulevard streets into play streets and/or pedestrian and bicycle corridors. Determine how automobile access might still be provided (e.g., closure of through automobile access every other block with local parking still allowed).
- Improve pick-up/drop-off near schools by reimagining how bus and automobile access might be restricted and how school streets adjacent to schools could be redesigned.
- Close right-turn slip lanes, including how to prioritize lanes for closure, what physical infrastructure should be used for the closure, and how art or programming should be provided for this reclaimed space.
- Make the Winter Parking Regulations permanent on certain streets. These regulations prohibit parking on one side of streets. Show what design improvements would be made possible on these streets (e.g., reduce street width and/or allow for better pedestrian and bicycle access and visibility).
- Remove unwarranted traffic signals by converting them to always flashing red, all-way stop signs, or cross-street stop signs.
- Prohibit Right Turn on Red in more locations throughout the city.

Your project should make design and policy recommendations to the City of Milwaukee Department of Public Works. These recommendations should be based on field work and research into strategies being used in other communities. Your final presentation must include illustrations and other descriptions of changes that should be made to at least one specific location in Milwaukee. Your final presentation must also include a list of at least four other locations where similar improvements could be made.

The final product will be a 15-minute professional presentation (with 15 additional minutes for questions) that is delivered during the last week of class. Time limits on presentations will be strictly enforced. The presentation should be given from a carefully-constructed PowerPoint file. This PowerPoint file will be the main product of this assignment, but it should be accompanied by necessary supporting documentation (appendices). A separate report document is not required; the presentation file is the main deliverable for this assignment. The appendices do not need to be formatted carefully, but they need to be understandable.

Required components of the project to be included in the final presentation include:

- A brief discussion of why these types of locations should be improved for pedestrians and bicyclists. Provide a convincing justification for the design or policy change to DPW.
- What is your example location? What are at least four other locations where a similar type of treatment could be applied?
- Which widths and contexts might work best for this type of treatment? What criteria should be established for prioritizing locations for this type of treatment?
- A description of how motor vehicle access to streets or properties would need to change under your recommended improvements, including any policies or laws that would need to change. Describe challenges to making these changes. Describe contexts where the recommendations

might work best versus where they might not be appropriate (e.g., surrounding land uses, motor vehicle volume ranges, pedestrian or bicycle activity levels).

- An illustration of the current design of one example location in plan view, including key roadway and sidewalk measurements and speed limits.
- An illustration of the cross-section existing conditions for the major roadway at your example location, including key roadway and sidewalk measurements.
- Two-hour traffic counts for pedestrians and bicyclists during a morning or afternoon “peak” travel period. These counts may be taken at each leg of one intersection or at a minimum of two screenline locations, depending on the focus of your recommended improvements.
- An illustration of the proposed redesign at your example location in plan view, including key roadway and sidewalk measurements and speed limits.
- An illustration of the cross-section of the proposed redesign at your example location, including key roadway and sidewalk measurements.
- Bicycle Level of Traffic Stress (LTS) on one or more roadway segments at your example location under 1) existing conditions and 2) redesigned conditions.
- Pedestrian crossing suitability for one or more roadway segments at your example location under 1) existing conditions and 2) redesigned conditions.
- A qualitative or quantitative assessment of how the redesigned conditions could affect automobile travel.
- Rough, order-of-magnitude cost estimates for the improvements at your example location. See spreadsheet provided by the instructor with common facility costs in Milwaukee. Also consider searching for other cost estimates online.
- Other education or enforcement strategies that may complement the physical changes.
- Conclusions about the benefits of your recommended design changes: 1) appropriate for surrounding roadway and land use context (e.g., does the improvement improve route network connectivity, access to transit, connections between activity centers?), 2) improves suitability for all roadway users without significant deterioration of conditions for a certain user group, 3) reduces crash risk, 4) is not excessively costly, 5) complements recommendations from previous pedestrian or bicycle plans, etc.
- Challenges to implementing the recommendations: 1) citizens or other groups who may oppose changes, 2) physical design constraints, 3) cost constraints, etc.
- Short-term versus future phases of the project that could be completed with more public support and funding.
- Source information for graphics and images that are not your own.

One member from each group should email the instructor with the group members’ names and the proposed topic by Wednesday, March 29th. The final group presentations will be given in the final class. These will be professional presentations. Leaders of neighborhood organizations, advocacy groups, agency staff, and possibly elected officials will be invited to attend. The final PowerPoint presentation plus supporting documentation for cost estimates, suitability analysis, and other conclusions should also be submitted in advance of the final class. The instructor will share the presentation and supporting documents with individuals and groups listed above. Grading will be done based half on the formal presentation and half on the final materials submitted.

Note that accuracy will be more important than precision in this exercise (i.e., it is more important to demonstrate knowledge of the difference in magnitude of costs between various infrastructure types, rather than know exactly how much each type costs). In addition, Illustrations should include key dimensions, such as street and lane widths, to communicate the existing conditions and proposed

changes accurately, but they do not need to be developed using special software. Base aerial photos from Google Earth plus PowerPoint illustrations are sufficient for this project. AutoCAD, Adobe Illustrator and other design software is optional but can increase the attractiveness of the final recommendations.

At the end of this assignment, each individual team member will assess other student contributions to his or her group by awarding up to 100 points to each other team member. This team member assessment will be factored into each individual's grade for the assignment. Ratings must be submitted confidentially by each group member and will not be shared by the course instructor. See Appendix for more detail.

Grading

Grades will be given on an A to F scale based on the following components of the class:

- Overall class attendance and participation (10%)
- Assignment #1: Memo summarizing agency pedestrian or bicycle meeting (10%)
- Assignment #2: Option A (Photographic essay & video) or Option B (Brady Street pedestrianization) (40%)
- Final Project (Final Examination): Situational Design & Policy Guidance (40%)

Assignments are due by 2:30 p.m. on the dates listed above. Each calendar day late will result in loss of one grade (i.e., an "A" assignment will be given a "B"). A paper received at 1:31 p.m. on the due date is considered one day late.

The grading scale will be based on points earned out of 100 possible points in each component area. This scale is:

98 and above = A+	81 to 82.9 = B-
93 to 97.9 = A	78 to 80.9 = C+
91 to 92.9 = A-	73 to 77.9 = C
88 to 90.9 = B+	71 to 72.9 = C-
83 to 87.9 = B	(and so on)

Grading is based on a combination of factors that contribute to professional-quality work. These include completeness of presentations and documents, logic, clarity, and creativity. Each of these factors is explained in the table on the following page. Assignments that are judged to be professional quality will receive an "A". Assignments with some deficiencies in the four factors described in the table will receive lower grades. The instructor will provide written feedback (and additional oral feedback, as requested) so that students can understand aspects of their work that may need improvement. While the table on the following page provides some guidance, it falls well short of experiencing the process of completing assignments, receiving feedback, and taking this feedback into account on your next assignment.

Grading is based on the quality of work produced. It is not based on student background, prior education, or natural talent.

Time Requirements

In general, it is expected that students will spend approximately three hours in class per week plus an additional seven hours per week on readings, assignments, and other preparation. However, grading is based on the quality of work produced rather than amount of time spent working.

Main Factors Considered when Grading Assignments

Factor	Definition	Low Quality	Medium Quality	High Quality
Completeness	The degree to which all aspects of the assignment are addressed in documents or presentations. In general, more thorough discussions are better, but this must be balanced with length limits.	Parts of questions are not answered or sections of a policy analysis are not included.	All parts of questions are answered and all sections of a policy analysis are included, but some responses or discussions may not cover the issue in depth.	All parts of questions are answered and sections of a policy analysis are included, and all responses and discussions are thorough.
Logic	The degree to which an argument written in text, presented on a map, or described in an oral presentation makes sense. Good arguments are supported by well-researched examples, high-quality studies, and/or well-analyzed data.	Many arguments do not make sense or are not supported by examples, studies, and/or empirical data.	Some arguments do not make sense or have weak support from examples, studies, and/or empirical data.	All arguments make sense and are supported by examples, studies, and/or empirical data.
Clarity	The degree to which an assignment is written and organized well. For maps and graphics, this includes attractiveness of the layout and ease of understanding what you are trying to show. For presentations, this includes the and the organization of the presentation.	The writing is wordy, uses poor sentence structure, grammar, punctuation, etc. The writing is inconsistent and poorly organized, making it very difficult to understand the issue, analysis, or conclusions.	The writing is understandable, but it suffers from some wordiness, errors, and poor proofreading. The writing has several inconsistencies or poorly organized sentences or paragraphs.	The writing is in a professional tone that is concise and has no grammatical errors. It communicates a clear sense of the issue, analysis, & recommendations; paragraphs and sentences are organized logically.
Creativity	The degree to which an assignment or presentation considers a wide range of relevant analysis approaches and relevant possible solutions, including some that may not be readily apparent to a client. This also includes recognizing limitations of your approach.	Analysis approaches and possible solutions are obvious or limited in number, other potential approaches and solutions were not considered, and limitations were not discussed.	Several analysis approaches and possible solutions were considered, potentially including some that were not readily apparent to a client. A few limitations were discussed.	A wide range of relevant analysis approaches and relevant possible solutions were considered, including some that were not readily apparent to a client. Most limitations were discussed.

Class Topics and Reading List

Class 1: Pedestrian and Bicycle Transportation Institutions and Trends (1/23/23)

- 1.1. Clifton, K.J. and K.M. Currans. Illustrated by J. Golez. *Moving from Cars to People*, National Institute for Transportation and Communities, Portland State University, Available online, https://ppms.trec.pdx.edu/media/project_files/MovingFromCarsToPeople_Digital_20221128_lowres.pdf, 2022.
- 1.2. Sandt, L. and J.M. Owens. *Discussion Guide for Automated and Connected Vehicles, Pedestrians, and Bicyclists*, Pedestrian and Bicycle Information Center, Federal Highway Administration and National Highway Traffic Administration, Available online, http://www.pedbikeinfo.org/cms/downloads/PBIC_AV_Discussion_Guide.pdf, 2017.
- 1.3. Fang, K., A.W. Agrawal, A.M. Hooper. *How and Where Should I Ride This Thing? 'Rules of the Road' For Personal Transportation Devices?* Mineta Transportation Institute, Project 1713, <https://transweb.sjsu.edu/research/1713-Rules-Personal-Transportation-Devices#:~:text=Working%20from%20these%20principles%2C%20core,as%20a%20class%2C%20not%20device%2D>, 2019.
- 1.4. Global Designing Cities Initiative (GDCI). *Global Street Design Guide*, <https://globaldesigningcities.org/publication/global-street-design-guide/>, 2016.

Class 2: Benefits of Pedestrian and Bicycle Transportation & Advocacy Movements (1/30/23)

- 2.1. de Hartog, J.J., H. Boogaard, H. Nijland, and G. Hoek. "Do the Health Benefits of Cycling Outweigh the Risks?" *Environmental Health Perspectives*, Volume 118, pp. 1109-1116, 2010.
- 2.2. Frontier Group and U.S. PIRG Education Fund. *Who Pays for Roads? How the "Users Pay" Myth Gets in the Way of Solving America's Transportation Problems*, Authors: T. Dutzik, G. Weissman, and P. Baxandall, Available online, <http://www.uspirg.org/sites/pirg/files/reports/Who%20Pays%20for%20Roads%20vUS.pdf>, 2015. (read pp. 19-23)
- 2.3. Manjoo, F. "I've Seen a Future Without Cars, and It's Amazing," *New York Times*, <https://www.nytimes.com/2020/07/09/opinion/sunday/ban-cars-manhattan-cities.html>, July 9, 2020.
- 2.4. Quetin, G. "It's a Car Car World—We Just Live in It," *The Urbanist*, <https://www.theurbanist.org/2021/01/13/its-a-car-car-world-we-just-live-in-it>, January 13, 2021.

Class 3: Travel Behavior: Shifting Automobile Travel to Walking and Bicycling (2/6/23)

- 3.1. Schneider, R.J. "Theory of Routine Mode Choice Decisions: An Operational Framework to Increase Sustainable Transportation," *Transport Policy*, Volume 25, pp. 128-137, 2013.

3.2. Dill J. and N. McNeil. "Revisiting the Four Types of Cyclists: Findings from a National Survey," *Transportation Research Record: Journal of the Transportation Research Board*, Volume 2587, pp. 90-99, 2016.

>>>Memo for Assignment #1 due on Friday, 2/17/23.

Class 4: Pedestrian and Bicycle Data Collection and Performance Measures (2/13/23)

4.1. League of American Bicyclists. *Bicycling and Walking in the United States: 2018 Benchmarking Report*, https://bikeleague.org/sites/default/files/Benchmarking_Report-Sept_03_2019_Web.pdf, 2018. (Skim pp. 178-347; find two interesting statistics to share...you can also report data from the most recent years here: <https://data.bikeleague.org/show-your-data/>)

4.2. Federal Highway Administration. *Guidebook for Developing Pedestrian & Bicycle Performance Measures*, Authors: Semler, C., A. Vest, K. Kingsley, S. Mah, W. Kittelson, C. Sundstrom, and K. Brookshire, Available online, https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/performance_measures_guidebook/pm_guidebook.pdf, March 2016. (pp. 12-21, pp. 36-37)

>>>Proposed Partners and Topic for Assignment #2 due by Wednesday, 2/15/23.

Class 5: Pedestrian and Bicycle Safety: Crash Data and Risk Perceptions (2/20/23)

5.1. Pedestrian and Bicycle Information Center. *Toward a Shared Understanding of Pedestrian Safety An Exploration of Context, Patterns, and Impacts*, http://pedbikeinfo.org/resources/resources_details.cfm?id=5231, June 2020.

5.2. Vision Zero Network. *Core Elements for Vision Zero Communities*, https://visionzeronetwork.org/wp-content/uploads/2022/07/Vision_Zero_Core_Elements.pdf, 2018.

5.3. Schneider, R.J. "United States Pedestrian Fatality Trends, 1977 to 2016," *Transportation Research Record: Journal of the Transportation Research Board*, Volume 2674, Number 9, pp. 1069-1083. DOI: 10.1177/0361198120933636, 2020.

5.4. Jacobsen, P.L. "Safety in Numbers: More Walkers and Bicyclists, Safer Walking and Bicycling," *Injury Prevention*, Volume 9, pp. 205-209, 2003.

5.5. Governors Highway Safety Association (GHSA). *Pedestrian Traffic Fatalities by State: 2021 Preliminary Data*, Spotlight on Highway Safety, Author: Macek, K., <https://www.ghsa.org/sites/default/files/2022-05/Pedestrian%20Traffic%20Fatalities%20by%20State%20-%202021%20Preliminary%20Data%20%28January-December%29.pdf>, 2022.

5.6. Baker, P.C. "Collision Course: Why are Cars Killing more and more Pedestrians?" *The Guardian*, <https://www.theguardian.com/technology/2019/oct/03/collision-course-pedestrian-deaths-rising-driverless->

[cars?CMP=fb_gu&utm_medium=Social&utm_source=Facebook&fbclid=IwAR0LQkvLNNtgJ2C08xq8Ceza_Glqbv3YuaAlg7v1_TJObe3NBb1x1elsG_0#Echobox=1570098515](https://www.fhwa.gov/ohrt/ohrt/cars?CMP=fb_gu&utm_medium=Social&utm_source=Facebook&fbclid=IwAR0LQkvLNNtgJ2C08xq8Ceza_Glqbv3YuaAlg7v1_TJObe3NBb1x1elsG_0#Echobox=1570098515), October 3, 2019.

Class 6: Pedestrian Design Fundamentals (2/27/23)

6.1. Federal Highway Administration. *Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations*, Authors: L. Blackburn, C. Zegeer, and K. Brookshire, FHWA-SA-17-072, Available online, https://safety.fhwa.dot.gov/ped_bike/step/docs/STEP_Guide_for_Improving_Ped_Safety_at_Unsig_Loc_3-2018_07_17-508compliant.pdf, 2018. (skim document, but focus on p. 16 and p. 32)

6.2. National Cooperative Highway Research Program. *Application of Pedestrian Crossing Treatments for Streets and Highways*, NCHRP Synthesis 498, Authors: Thomas, L., N. Thirsk, and C.V. Zegeer, Available online, <http://www.trb.org/Publications/Blurbs/175419.aspx>, 2016. (Read pp. 35-60)

6.3. Pedestrian and Bicycle Information Center. *PEDSAFE: Pedestrian Safety Guide and Countermeasure Selection System*, “Countermeasures,” <http://www.pedbikesafe.org/PEDSAFE/countermeasures.cfm>, 2022. (Read all pages under “Along the Roadway” and “At Crossing Locations”)

6.4. Sanders, R., B. Schultheiss, B. Judelman, R. Burchfield, K. Nordback, D. Gelinne, L. Thomas, D. Carter, C. Zegeer, C. Semler, and M. Sanders. NCHRP Report 926, *Guidance to Improve Pedestrian and Bicyclist Safety at Intersections*, <https://www.trb.org/Main/Blurbs/180624.aspx#:~:text=The%20TRB%20National%20Cooperative%20Highway,and%20bicyclists%2C%20and%20the%20most>, 2020. (skim pp. 109-184)

Class 7: Bicycle Design Fundamentals (3/6/23)

7.1. Association of American State Highway and Transportation Officials, *AASHTO Guide for the Planning, Design, and Operation of Bicycle Facilities*, Fourth Edition, 2012. (Skim Chapter 4 and Chapter 5)

7.2. Pedestrian and Bicycle Information Center. *BIKESAFE: Bicycle Safety Guide and Countermeasure Selection System*, “Countermeasures,” <http://www.pedbikesafe.org/BIKESAFE/countermeasures.cfm>, 2023. (Read all pages under “On-Road Bike Facilities” and “Intersection Treatments”)

7.3. Association of Pedestrian and Bicycle Professionals. *Essentials of Bike Parking*, Available online, https://www.apbp.org/assets/docs/EssentialsofBikeParking_FINA.pdf, 2015.

7.4. Federal Highway Administration. *Bikeway Selection Guide*, Authors: Schultheiss, B., D. Goodman, L. Blackburn, A. Wood, D. Reed, and M. Elbech, Available online, https://safety.fhwa.dot.gov/ped_bike/tools_solve/docs/fhwasa18077.pdf, 2019.

Class 8: Pedestrian and Bicycle Facility Design Innovations (3/13/23)

8.1. National Association of City Transportation Officials. *NACTO Urban Street Design Guide*. Available online: <http://nacto.org/publication/urban-street-design-guide/>, 2013. (skim document)

8.2. National Association of City Transportation Officials. *NACTO Urban Bikeway Design Guide*. Available online: <http://nacto.org/publication/urban-bikeway-design-guide/>, 2011. (skim through several designs)

8.3. National Association of City Transportation Officials. *NACTO Guidelines for Regulating Shared Micromobility*, Version 2, https://nacto.org/wp-content/uploads/2019/09/NACTO_Shared_Micromobility_Guidelines_Web.pdf, 2019.

>>>Assignment #2 due on Monday, 3/27/23.

>>>Proposed topic and group members for Assignment #3 due on Wednesday, 3/29/23.

Class 9: Assignment #2 Presentations & Introduction to Pedestrian and Bicycle Equity (3/27/23)

9.1. Sandt, L., T. Combs, and J. Cohn. *Pursuing Equity in Pedestrian and Bicycle Planning*, Pedestrian and Bicycle Information Center, Available online, http://www.pedbikeinfo.org/cms/downloads/PBIC_WhitePaper_Equity.pdf, 2016.

9.2. Adkins, A., C. Makarewicz, M. Scanze, M. Ingram, and G. Luhr. "Contextualizing Walkability: Do Relationships Between Built Environments and Walking Vary by Socioeconomic Context?" *Journal of the American Planning Association*, Volume 83, Number 3, pp. 296-314, 2017.

9.3. McAndrews, C., R.J. Schneider, and Y. Yang. "Toward a Gender-Inclusive Complete Streets Movement," *Journal of Planning Literature*, <https://doi.org/10.1177/08854122221087472>, 2022.

9.4. Toole, J., T.L. Butler, and J. Chrzan. "How to Place Equity at the Center of Our Work," *ITE Journal*, pp. 37-41, https://www.nxtbook.com/ygsreprints/ITE/ITE_February2020/index.php#/p/36, February 2020.

Class 10: Field Trip—Field Trip in area south of UWM (4/3/23)

10.1. Hoehner, C. and R. Brownson. "Active Neighborhood Checklist and Protocol," Available online, http://activelivingresearch.org/sites/default/files/Protocol_ActiveNeighborhoodChecklist.v2.pdf, 2011.

Class 11: Pedestrian and Bicycle Plans & Implementation (4/10/23)

Groups will be assigned one of the following plans to read and review:

A. City of Milwaukee, WI. *Milwaukee Pedestrian Plan*, <https://city.milwaukee.gov/dpw/infrastructure/multimodal/Milwaukee-Pedestrian-Plan>, 2019.

B. City of Chicago. *Vision Zero Chicago: Action Plan, 2017-2019*, https://securservercdn.net/198.71.233.109/8gq.ef1.myftpupload.com/wp-content/uploads/2016/05/17_0612-VZ-Action-Plan_FOR-WEB.pdf, 2017.

C. Village of Shorewood, WI. *Village of Shorewood Pedestrian and Bicycle Master Plan*, Available online, <http://villageofshorewood.org/DocumentCenter/View/2991>, 2015.

D. Chicago Department of Transportation. Chicago Streets for Cycling 2020 Plan, Available online, <http://www.cityofchicago.org/content/dam/city/depts/cdot/bike/general/ChicagoStreetsforCycling2020.pdf>, 2012.

Small group discussion questions will include:

- Why did the agency develop the plan? (What motivated them to develop the plan?)
- What was your favorite part of the plan? What was the “strongest” part of the plan?
- What was your least favorite part of the plan? What was the “weakest” part of the plan? Importantly, what do you think was *missing* from the plan?

Full class discussion will address:

- Common strengths & weaknesses (2-3 from each group)
- Differences between local and regional plans

Class 12: Pedestrian and Bicycle Suitability Assessment Methods (4/17/23)

12.1. Mekuria, M.C., P.G. Furth, and H. Nixon. Low-Stress Bicycling and Network Connectivity, Mineta Transportation Institute, Report 11-19, Available online, <http://transweb.sjsu.edu/PDFs/research/1005-low-stress-bicycling-network-connectivity.pdf>, May 2012. (pp. 1-27)

Updated Bicycle Level of Traffic Stress (LTS) tables available:

Furth, P.G. “Level of Traffic Stress Criteria for Road Segments, Version 2.0,” <http://www.northeastern.edu/peter.furth/wp-content/uploads/2014/05/LTS-Tables-v2-June-1.pdf>, June 2017.

12.2. (i-RAP) Central Asia Regional Economic Cooperation Program. STAR Ratings for Road Safety Audit: CAREC Road Safety Engineering Manual 5, Available online, <https://www.adb.org/sites/default/files/publication/814761/carec-rse-manual-5-star-ratings-road-safety-audit.pdf>, 2022

12.3. Seattle Department of Transportation. *Public Life Study: 2018 Summary Report*, Available online, [https://www.seattle.gov/Documents/Departments/SDOT/UrbanDesignProgram/PublicLifeStudy_2018Summary_Report2\(0\).pdf](https://www.seattle.gov/Documents/Departments/SDOT/UrbanDesignProgram/PublicLifeStudy_2018Summary_Report2(0).pdf), 2018. (see other related work in Seattle at: <https://www.seattle.gov/transportation/projects-and-programs/programs/urban-design-program/public-life-program>)

Class 13: Pedestrian and Bicycle Demand Estimation & Prioritization Methods (4/24/23)

13.1. Schneider, R.J., A. Schmitz, and X. Qin. “Development and Validation of a Seven-County Regional Pedestrian Volume Model,” Transportation Research Record: Journal of the Transportation Research Board, <https://doi.org/10.1177/0361198121992360>, 2021.

13.2. Lagerwey, P.A., M.J. Hintze, J.B. Elliott, J.L. Toole, and R.J. Schneider. *Pedestrian and Bicycle Transportation Along Existing Roads: ActiveTrans Priority Tool Guidebook*, National Cooperative Highway

Research Program Report 803, http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_803.pdf, 2015. (skim pp. 1-11; review spreadsheet tool)

13.3. Portland Bureau of Transportation. *PedPDX: Portland's Citywide Pedestrian Plan*, Chapter 5: Prioritizing Pedestrian Needs, <https://www.portlandoregon.gov/transportation/78224>, 2019.

Class 14: International Pedestrian and Bicycle Transportation & Work Session (5/1/23)

14.1. International Transport Forum. *Road Safety Annual Report 2022*, <https://www.itf-oecd.org/sites/default/files/docs/irtad-road-safety-annual-report-2022.pdf>, 2022.

14.2. World Health Organization. *Global Status Report on Road Safety, 2018*, Available online, https://www.who.int/violence_injury_prevention/road_safety_status/2018/en/, 2018. (Skim document)

14.3. United Nations. *Global Outlook on Walking and Cycling 2016*, Published by the UN Environment, ISBN No: 978-92-807-3616-8, Available online, <https://europa.eu/capacity4dev/unep/document/global-outlook-walking-and-cycling-policies-realities-around-world>, 2016. (Skim document)

14.4. Pucher, J. and R. Buehler. "Cycling to the Future: Lessons from Cities Across the Globe," Presentation available online, http://bloustein.rutgers.edu/wp-content/uploads/2014/10/Pucher_BikeUrbanism_SeattleUW_18June.pdf, 2013. (Skim document)

14.5. Reid, C. "Copenhagen Plans Greater Restrictions On Car Use As Cycling Surges To 49% Of Commuter Journeys," *Forbes*, <https://www.forbes.com/sites/carltonreid/2019/05/28/copenhagen-plans-greater-restrictions-on-car-use-as-cycling-surges-to-49-of-commuter-journeys/#739e2da13a9f>, May 28, 2019. (including video: <https://vimeo.com/16369933>)

Class 15: In-Class Presentations of Class Projects/Course Wrap-Up (5/8/23)

>>>Presentation file and supporting documentation for Assignment #3 due on Monday, 5/8/23.

Appendix. Team Member Grading and Evaluation

Group Work Grades

To incentivize individual contributions to group work assignments, student group members will be asked to provide confidential evaluations of their teammates' efforts at the end of the source. Grade adjustments will be made, as necessary, to individual students' grades for each case. The student evaluation will involve each team member assigning a set of ten 1 (lowest) to 10 (highest) scores representing the contribution of all other team members to the group assignment. A total of 100 points are possible, and each team member can give 100 points to all other team members. We will use the form on the following page. You are expected to take team member scores seriously and provide a few sentences to justify your reasoning. The instructor reserves the right to NOT make an adjustment to a team member score if sufficient justification is not provided. The instructor also reserves the right to increase a team member's score if other team member explanations of her or his contribution show particularly outstanding contributions to the group (e.g., "I wish that I could have given Team Member X a score of 11 for many of these criteria!"). Any adjustments to a single individual's score is independent of other team member scores.

Note: the scores that you assign and comments that you make in your team member assessment provide important information for me to consider, but they are not tied to a specific, pre-determined change any teammate's overall grade. Since it is my responsibility to assign scores and grades, I will take your input under advisement and make any final grade adjustments as fairly as possible.

Team Member Evaluation Form (may be administered as an online survey)

Group member being evaluated:

Your name:

Please enter a score of 1 to 10 for each of the 10 items. Then please add some narrative regarding your evaluation at the bottom of the form.

Use the following scale for all items:

1 = poor; 10 = sufficient (if a particular criterion is not applicable, please enter a score of 10)

The Group Member...	Score (1-10)
1. Contributed to a fair share of the workload.	
2. Met the deadlines set forth by the team.	
3. Participated in and contributed effectively to discussions.	
4. Helped keep discussions organized and the team focused on completing tasks.	
5. Resolved any conflicts in a professional manner.	
6. Showed respect toward others and helped maintain a positive climate.	
7. Listened to others and did not dominate or withdraw from discussions.	
8. Contributed to the development of the team project initially and as it progressed.	
9. Contributed towards the submission of the final team deliverables.	
10. I would like to work with this person again given an opportunity to do so.	
Total Points	

Comments (at least two to three sentences to justify the scores given above):