

URP6716 (Section 4790)
Transportation Policy and Planning

Class Meets:
Tuesdays (Period 2-4) 8:30 a.m.-11:30 a.m. in 439 ARCH

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Office Hours: Mondays: 2:00-4:00 pm¹ and by appointment
E-learning in Canvas: [http:// http://elearning.ufl.edu/](http://http://elearning.ufl.edu/)

Course Overview

This course deals with urban transportation planning and policy. The course is an overview of transportation planning issues largely in a metropolitan context. Because urban transportation is a broad field, the course will be a survey of a number of topics of importance in urban transportation planning.

In the first part of the course, we will establish a common understanding of policy-making processes, identify critical issues in transportation policy, and review the history of U.S. transportation policy at the federal, state, and local level. We then discuss how transportation planners understand and plan for movement within cities, including the four-step transportation modeling process and activity-based modeling, the use of disaggregate data and geographic information systems in planning and the regional transportation planning process. Finally, we discuss a variety of policy issues related to the transportation system: public transportation, land use impacts of transportation investments, transportation and energy, urban transportation finance, social and environmental justice issues, environmental regulation of transportation and energy and air quality associated with the transportation sector. Case study examples and examples from the United States and other countries will be used throughout the course.

At the completion of this course, students should have a basic understanding of urban transportation planning and policy in its multiple dimensions. Students should also have developed in-depth knowledge of an area of transportation planning that is the subject of their research paper.

This course is a required course for Urban Planning students in the online program and on-campus students who are pursuing the specialization in Transportation and Land Use. It also meets an elective core requirement in Section B.2 (The Built Environment: Land Use/Growth Management/Design/Transportation/Housing/Real Estate) for students in the on-campus Masters of Urban and Regional Planning. It is open to graduate students and advanced undergraduates in related disciplines.

Objectives of the Course

After successful completion of this course, students should be able to:

- 1) Develop a basic understanding of urban transportation planning processes and policy in its multiple dimensions.
- 2) Show a common understanding of transportation policy-making processes.
- 3) Identify and analyze critical issues in transportation policy and planning and the historic development of a metropolitan region.
- 4) Review the history of US transportation policy at the federal, state and local level and consider the elements that might be applicable in other country contexts.
- 5) Discuss how transportation planners understand and plan for movement within cities, including the regional transportation planning process, four-step transportation modeling process, activity-based models, and

¹ These hours are tentative pending decisions about research and committee meetings. Also, when I travel on Mondays, I may schedule office hours on other days of the week. Please sign up on my sharepoint at this address: https://uflorida-my.sharepoint.com/:x/g/personal/rsteiner_ufl_edu/EXkseKAWCbNPi_MSHMHFya4B0vUcvtHTqnwevYPEFZ-aBQ?e=e8ZSYj. Hint: If you are unable to edit the spreadsheet, be sure to hit the "Edit Anyway" at the top of the page.

the use of geographic information systems (GIS) and a variety of disaggregated data in transportation planning.

- 6) Discuss a variety of policy issues related to the transportation system: public transportation, land use impacts of transportation investments, transportation and energy, the geography of urban transportation finance, social and environmental justice in transportation, and transportation and the environment.
- 7) Apply concepts of transportation policy and planning to a specific transportation planning policy context.

Structure of the Course

This course will include a wide range of topics that we will discuss through a variety of methods. Each new topic is introduced with a lecture, special readings and, as appropriate, presentations by guest lecturers. The course consists of four elements: reading assignments, lectures and class discussion, an in-class presentation, and written assignments. Because so many topics are being presented in this course, I will attempt to respond to areas of special interest to members of the class. This will be possible through the written assignments and the presentations.

In conjunction with the University of Florida's emphasis on technology in teaching, E-learning in Canvas will be used in this class. Students should already be familiar with word processing, and Internet-browsing software. E-learning in Canvas (<http://elearning.ufl.edu>) may be new to some of you but it is relatively simple to use. If you do not know how to use E-learning in Canvas or have trouble accessing materials or submitting assignments, contact the UF Computing Help Desk directly (<https://elearning.ufl.edu/student-help-faqs/>) or (352) 392-4357.

Because of the ongoing COVID-19 pandemic, the on-campus version of the course will be offered this fall in a synchronous manner using Zoom.

Teaching Philosophy

Transportation is a part of our daily lives. We often take for granted that the decisions we make about transportation apply across all populations. The framework for transportation planning has developed over several decades. Recent changes in cities – the emergence of the shared economy and e-commerce, the changes in employment to include the gig economy, and changes in location decisions – all affect the transportation sector in a variety of ways. More recently, the emergence of COVID-19 has disrupted our way of life in many ways. That disruption has had both direct and indirect impacts on the transportation. Throughout this course, I will challenge you to go beyond the changes in your own lives to consider how these short-term and long-term changes are affecting how we travel in communities, how certain subsets of the population travel, and ultimately our transportation system.

The assignments of this course and all courses that I teach have been designed to allow students to practice the kinds of skills they will use as planning professionals. The exercises have been designed to develop the following skills that will be important in professional practice: (1) critical thinking; (2) presentation (verbal) communication; (3) evaluation and critique; (4) argumentation; and (5) written communication skills. Consistent with the expectations of professional conduct in this course, all written assignments, except minor in-class exercises, must be typed. No hand-written assignments will be accepted.

Students will be asked to exercise their critical thinking skills throughout the course. In the summary of the readings and in the class discussion, they will read and analyze the perspective of the various authors, understand the assumptions being made by the authors, summarize and present the argument to the class, and contrast the readings with other course materials. In the writing assignments, students will be asked to consider the diverse perspectives on transportation and develop their own perspective. All students will develop their presentation skills through the presentation of their research paper. In the weekly class discussion, students will be required to respond to questions from the instructor and other members of the class. Each student will be required to evaluate the arguments of the authors of the required readings. In the research paper and in the comments of the readings, students will be required to develop a basic argument and present it in a manner that is easily understood (thus developing good written communication skills). These skills are important because in professional practice, transportation professionals need to write in a manner that clearly states the goals of the writing, develops the argument persuasively and is written in a manner that is easily understood.

Course Readings

The following book, which can be purchased at the University Bookstore and online, is the required text for the course:

Giuliano, G. & Hanson, S. 2017. *The Geography of Urban Transportation Fourth Edition*. New York: The Guilford Press.

Additional required readings, available online, are listed in the syllabus. Supplemental readings may be added to the course as needed and will generally be added to the University of Florida Library Reserve Readings.

Additional Readings

The field of transportation planning is well-documented on sources on the internet. Here is a partial list of organizations that can provide a national perspective on certain aspects of transportation planning. This list is only partial but can be helpful in identifying best practices, diverse perspectives and perspectives on transportation topics.

- [Bureau of Transportation Statistics](#) was organized within the US Department of Transportation in the early 1990s to centralize the development, organization and dissemination of transportation information and statistics. The website links to a wide range of official federal and state transportation documents and data.
- [Transportation Research Board](#) is one of six major divisions of the National Research Council— a private, nonprofit institution that is the principal operating agency of the National Academies in providing services to the government, the public, and the scientific and engineering communities. The mission of the TRB is “to promote innovation and progress in transportation through research.” “In an objective and interdisciplinary setting, TRB “facilitates the sharing of information on transportation practice and policy by researchers and practitioners; stimulates research and offers research management services that promote technical excellence; provide expert advice on transportation policy and programs; and disseminates research results and encourages their implementation.”
- [The Bloomberg CityLab](#), which was recently purchased from the Atlantic, has an ongoing series on the [Future of Transportation](#) that was published in 2014. CityLab “informs and inspires the people who are creating the cities of the future – and those who want to live there.” They routinely have an entire section on transportation topics. Bloomberg also has a separate section on [Hyperdrive](#), which includes features on the future of transportation.
- [Reason Foundation](#) advances a free society by developing, applying, and promoting libertarian principles, including individual liberty, free markets, and the rule of law in a variety of policy areas, including transportation.
- [Eno Center for Transportation](#) is a neutral, non-partisan think-tank that promotes policy innovation and provides professional development opportunities across the career span of transportation professionals.
- [The Urban Institute](#) “gathers data, conducts research, evaluates programs, offers technical assistance overseas, and educates Americans on social and economic issues — to foster sound public policy and effective government.” Their Metropolitan Housing and Communities Policy Center addresses housing and place. “With an emphasis on place – from cities and suburbs to tribal lands – [they] investigate the factors that shape the quality of life in American Communities. Their cross-center initiative on Inequality and Mobility addresses access to opportunities for communities of color, immigrants and women.
- [Brookings Institution](#) - is a nonprofit public policy organization based in Washington, DC who is “devoted to independent, in-depth research that leads to pragmatic and innovative ideas on how to solve problems facing society”. They have a Cities and Region program in [Infrastructure](#).
- [Smart Growth America](#) is an organization comprised of national, state and local partners that advocate for Innovative State Transportation Policy that “s to improve safety, enhance economic opportunity, improve reliability, preserve system assets, accelerate project delivery, and help to create healthier, more livable neighborhoods.”
- [Center for Transit-Oriented Development \(CTOD\)](#) is a national organization providing innovative practices, policy reform, research, analysis, and investment tools to support the implementation of transit-oriented development.
- [Transportation for America \(T4\)](#) “is an advocacy organization made up of local, regional and state leaders who envision a transportation system that safely, affordably and conveniently connects people of all means and ability to jobs, services, and opportunity through multiple modes of travel.”
- [Association of Metropolitan Planning Organizations](#) (AMPO) - is a “nonprofit, membership organization established in 1994 to serve the needs and interests of ‘metropolitan planning organizations (MPOs)’ nationwide. Federal highway and transit statutes require, as a condition for spending federal highway or transit funds in urbanized areas, the designation of MPOs, which have responsibility for planning, programming and coordination of federal highway and transit investments.”
- [American Public Transportation Association \(APTA\)](#) is an organization that has represented public transportation organizations since 1882. Their “membership is engaged in every aspect of the industry – from planning, designing, financing, constructing and operating transit systems to the research, development, manufacturing and

maintenance of vehicles, equipment and transit-related products and services. Additionally, academic institutions, transportation network companies, transit associations and state departments of transportation are APTA members.”

- [Streetfilms](#) is a non-profit that “produces short films showing how smart transportation design and policy can result in better places to live work and play”.
- [Pedestrian and Bicycle Information Center](#) (PBIC) is funded by the Federal Highway Administration (FHWA) and the National Highway Traffic Safety Administration (NHTSA) to provide information on bicycling and walking. Since 1999, the PBIC’s “mission has been to improve the quality of life in communities through the increase of safe walking and bicycling as a viable means of transportation and physical activity.”
- [League of American Bicyclists](#) “represents bicyclists in the movement to create safer roads, stronger communities, and a bicycle-friendly America. Through information, advocacy and promotion, [they] work to celebrate the freedom cycling brings...”
- [Association of Pedestrian and Bicycle Professionals \(APBP\)](#) “is a community of practitioners working to create more walkable, bikeable places. [They] foster peer knowledge sharing, advance technical expertise, and support the professional development of our members.”

Student Responsibilities and Grading

Grades will be based upon five components: a policy/planning research paper, a metropolitan transportation profile, policy debates, class attendance and participation, and attendance at a transportation meeting, and weighted as follows:

Assignment and due date	Points
Planning/Policy Research Paper	
Paper Topic Paragraph – September 20 at 11:55 p.m.	10
Outline of Paper – October 18 at 11:55 p.m.	40
Abstract – December 15 at noon	50
Paper – December 15 at noon	320
Presentation on Research Paper – November 30 or December 7 at 11:55 p.m. (presentation in class on December 1 and December 8, respectively)	80
Metropolitan Transportation Profile - October 25 at 11:55 p.m.	240
Policy Debates (1 debate @ 120 points) – as assigned; paper due on Monday evening at 11:55 p.m.	120
Class Attendance and Participation – ongoing	120
Transportation-Related Data – September 7 at 11:55 p.m.	
Travel Diary – September 28 at 11:59 a.m.	
Class Attendance and Participation	
Transportation Meeting – December 15 at noon	20
TOTAL POINTS	1000

Assignments

All assignments should be submitted to E-learning in Canvas by 11:55 p.m. on the due date unless otherwise specified. Like all professional work, all written assignments (except minor in-class assignments) must be type-written. Students at the graduate level should be prepared to write a critical argument rather than simply describe relationships. If you have any questions about what is expected at the graduate level, please talk to the instructor.

Policy Debates: Students will be required to participate in a policy debate on current transportation issues. The format for the debate is a two-minute opening argument for the pro-side and a two-minute opening argument for the con-side followed by a few minutes of questions from class members. Students may also take an additional minute to provide an overview prior to the start of the debate. During the class prior to the debate, students will be assigned a position to take in the debate. Upon reading the required reading(s) associated with the class (and other authoritative sources available on the web), each participant in the debate will prepare a two-to-four page, double-spaced position paper outlining the arguments **both for and against** the question of the debate. During the class, be prepared to present your position and arguments supporting or rebutting that position and respond to questions and comments. The grade will be based equally on your written and oral arguments. Your research paper cannot be on the same topic as your debate paper unless you complete your debate early in the semester.

Metropolitan Transportation Profile: In this assignment, you will develop an overview of the land use and transportation of a comprehensive statistical area (CSA) (see p. 104 of the following document for a list of CSAs: <https://obamawhitehouse.archives.gov/sites/default/files/omb/bulletins/2013/b13-01.pdf>. (see also <http://www.planning.dot.gov/mpo.asp> for a pop-down menu of the metropolitan planning organizations in the US)). This assignment will be completed in two parts that relate to different modules in the course. It will be turned in as a single assignment upon completion of both parts of the assignment.

In the first part of the assignment, you should provide information that relates to the patterns of residential and employment patterns and other travel trends that were discussed in Module 1. This information should include the following: (1) the CSA's/MPO's population (distribution, age, demographics, socio-economic, etc.); (2) the CSA's/MPO's economy (e.g., major sectors and employers, historic trends, economic strengths and weaknesses); and (3) the CSA's/MPO's residential and employment patterns and accessibility throughout the region.

In second part of the assignment, you should use transportation and urban form concepts from Module 2 in a discussion of your selected CSA/MPO to complete the profile. The second part of the profile should include (1) all components of the region's transportation system; (2) land uses and development patterns historically, currently, and in the future; (3) pedestrian, bicycle, and transit facilities; and (4) plans for investments in various modes of transportation. The presentation should conclude with a discussion of how the population and economic activities and geography of the region combine to produce the transportation patterns of the metropolitan region.

This information can be provided in one of several formats that summarizes the information, including: a PowerPoint, Prezi, keynote presentation with the associated comments, a set of tables, charts, figures and maps (see <http://writingcenter.unc.edu/handouts/figures-and-charts/> for instructions on using tables and figures) or any other format that includes both visual and written communication. You should be able to provide this information in approximately 20-25 slides (evenly divides between Module 1 and Module 2. You can find no shortage of recommendations about how to prepare a PowerPoint presentation (conduct a search on "rules for PowerPoint presentations").

The written summary (included in the notes of the presentation or as a separate document) should include **one or more complete paragraphs** that describe what the table, chart, figure or map shows. The profile summary should provide the reader (who you should assume is unfamiliar with the region) with a comprehensive understanding of transportation and land use in the selected CSA/MPO. The notes should include proper citations using the APA citation format (See, *Use of Reference Material, below.*)

The profile or parts of it can be used for the final paper for the course; please discuss this option with your instructor when you turn in your paper topic paragraph, or the outline of your paper. If you prefer to complete a profile of a region outside of the United States, please discuss this option with your instructor.

Transportation Meeting: During the semester, each student will be required to attend one meeting (or at least two hours of a longer meeting) of a transportation policy making body in the region where you live or have lived and summarize what happened during the meeting. Due to COVID-19, most of these meetings have gone to online meetings (e.g., Zoom, GoToWebinar) and in some cases (e.g., the Citizens Advisory Committee) to a phone call-in. As such, please be sure to plan for these meetings in advance. With this assignment, please submit a link to the meeting agenda (if available), or to the meeting minutes, a one- to two-page summary what you observed, heard or learned, and any other comments on what happened in the meeting. While you could listen to a recording of the meeting, I would prefer that you participate in the meeting at the time it takes place so that you could participate, as appropriate.

These policy making bodies could include: a metropolitan organization (MPO), a regional planning organization (RPO), the Citizens Advisory Committee (CAC) to the MPO, the Technical Advisory Committee (TAC) to the MPO, a Community Traffic Safety Team, Bicycle/Pedestrian Advisory Board (B/PAB), an advisory board that works with a regional transit system, airport or other transportation organizations, and other meetings as approved by the instructor (for example, you may be able to use a discussion by the County or County Commission on transportation issues, a meeting on the transportation element of a local government comprehensive plan to meet this requirement). Generally, you can find meeting agendas posted on the agency website.

Your instructor will not accept excuses at the end of the semester that you were not able to attend any of these meetings because you could not find one that fits your schedule. If you absolutely can't attend any of these meetings, let the instructor know by the end of the second module, so we can make other arrangements. Failure to turn in a summary of one of these meetings by the end of the course will result in zero (0) for this particular assignment.

Class Attendance and Participation. An important requirement for this course is class attendance and participation. Attendance is mandatory on time. **Please arrive to class on time and stay until the end of the class. Tardiness or an early departure will count as a partial absence.** Late arrivals and departures distract your colleagues and your instructor. If you expect to miss a class, please notify the instructor via e-mail in advance of class time. Excessive absences may justify a lower grade, expulsion, or a failing grade. Requirements for class attendance and make-up assignments, and other work in this course are consistent with university policies that can be found at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

Students will be expected to be prepared for class and participate in the class discussion. The following rules apply to the discussion in class:

- Be critical of ideas, not people
- Listen to everyone's ideas even if you don't agree
- Try to understand all sides of an issue
- Talk through issues, don't try to change other's minds
- Stay focused; stick to the subject
- Avoid overly long stories, anecdotes, or examples
- Don't dominate the conversation; let all participate
- Remember there are no right answers; most policies involve tradeoffs.

In summary, good participation requires careful listening, responding, asking questions and making comments to others in the classroom. Each student should complete the readings prior to class and be prepared to clarify understanding in the class discussion or contribute to thoughtful discussion of issues. If you have problems with the readings, you should see the instructor during office hours so that we can discuss this. If you are not comfortable talking in class, make an effort to talk to the instructor during office hours.

In recent years, I have used a flipped classroom. In order to facilitate the flipped classroom, I will need to trust that all students have completed all of the reading and are prepared to discuss the material for that week. In order to assist the instructor in preparing for each class, students will be required to submit questions or comments that will assist the instructor in preparing for the class. Please submit the questions by noon on Monday for the discussion on Tuesday morning. Students will be allowed to take a break in the preparation of these questions during two weeks of the semester, excluding the first and last class. The submission of these questions will be essential to learning in an online environment. The instructor may call upon students to clarify their comments and questions.

Distractions are a part of our daily activities and they often result from electronic technology (e.g., laptops, tablets, cellphones). The challenge is to ensure that they take a proper role in teaching and learning. The use of Zoom for class instruction places a great burden on both the instructor and students to be actively engaged in the class room. Because this course is designed to maximize participation, students should plan to minimize the interference of technology during class. Students will turn off and put away cellphone and other hand held, tablet and other devices that are not a direct part of the educational experience in the online environment. Any student who misuses technology may receive a lower or failing grade, or be kicked out of the class. To facilitate learning, the instructor has learned about a variety of methods to more actively engage students. Nonetheless, we are all learning how to actively engage each other as we go along. If you have any ideas that would improve your learning experience, please do not hesitate to discuss it with the instructor.

Research Paper: Every student is required to complete a term paper on a transportation topic of his or her choice. The preparation of this paper will be a useful exercise in preparing for your thesis, research project, dissertation, and your professional work. Students will be required to define and investigate a topic of their choice in depth. Each student should plan to meet with the instructor before October 20 to discuss his/her paper topic. If you have a particularly complicated topic, or project, and would like to write a paper with another member of the class, please let the instructor know so we can discuss this option. Papers are expected to be 18-25 double-spaced pages long (with margins no

greater than 1 inch on each side and no larger than a 12 point font size), with citations of at least 8 different sources (not including Wikipedia or other websites used to define concepts).

A one-paragraph topic statement describing your research is due Sunday, September 20. In the topic statement, state your research question and the data that you expect to use to explore that research question. A paper outline including a restatement of your research topic, an outline of your paper, and a properly formatted list of at least 5 references is due Sunday, October 18. You may submit a draft paper for preliminary review no later than Sunday, November 1 (no grade will be issued). The final paper is due Monday, December 15 at noon. PLEASE NOTE: You must submit an electronic copy of the final paper via Canvas AND a hard copy in the instructor's mailbox in the departmental office. During the last two class meetings, you will give a short presentation (no more than 15 minutes, or less depending upon the number of students in the course) about your paper. This presentation should include a description of the topic, the method used and a brief explanation of the principal finding and their implications for practice.

The statement of the proposed research topic and the outline should include a clear statement of the research to be conducted, the importance of the research (it should answer the question, "so what?"), and the method you expect to use to gather the information (and/or the data source you expect to use). You may want to interview policy makers regarding the topic of your paper, you may manipulate data that is available through public sources, you may observe and count transportation activity, or you may choose to use a combination of these and other methods. Unless you choose to do a critical literature review, you will be required to do some original research. Summarizing someone else's books or journal article does not constitute graduate or advanced undergraduate work. If you choose to conduct interviews or surveys or other research that involves human subjects, you will be required to obtain permission to do so from the University of Florida Institutional Review Board (IRB-02). See <http://irb.ufl.edu/irb02/> for additional information on their requirements. If you collect information from public officials, you are likely to receive an exemption but you will still need to fill out the paperwork.

The paper, like all good research, should contain the following sections: (1) abstract or executive summary; (2) introduction – a summary of the topic and a brief introduction to the project; (3) background and literature review – explains the framework for understanding the research question; (4) methodology – explain the methodology used to gather your data for your project; (5) results/finding – explains what you learned when you conducted your research; (6) discussion – interprets the results in light of previous research (included in your literature review) on this topic; (7) recommendations and conclusions – summarizes the research and explains what the reader should do to respond to your results.

The literature review/background should categorize the previous research according to the results or arguments made by the authors. The literature review does not need to summarize every applicable article in detail (that would be an annotated bibliography). It should, however, define the terms of the debate on this topic and hint at the direction the paper will take. If you are using a different methodology than is usually used to understand well-documented relationship, be sure to include a discussion of methodologies in your literature review. If the paper is on a topic on which there is little literature but there are several policy studies, these prior studies should be summarized. The literature review should NOT focus on the case study used in your research; that material should be included in your results/findings.

The data used in this paper can come from a variety of sources, including interviews with policy makers, analysis of primary or secondary data, observations of the situation being explored, or, other forms of data that support the argument that you are arguing. The research you complete as a part of the metropolitan transportation profile can be expanded to explore a specific transportation-related issue in your chosen region. If you would like some assistance in the development of your topic or the data collection, please see the instructor.

The topic of this paper can range from the practical to the theoretical. Local governments and the University often have topics of interest for research. Please see your instructor if you would like to discuss potential paper topics.

Use of Reference Material

In written work, the format of all references should follow the format of used by the *Journal of the American Planning Association* (JAPA) and based upon *Publication Manual of the American Psychological Association, Sixth Edition* (2010) (see also, <http://www.apastyle.org/>), and *The Chicago Manual of Style, 16th Edition* (see also,

<http://www.chicagomanualofstyle.org/home.html>). This method is called the *author-date* system. Citations should appear in the text as follows: (Giuliano & Hanson, 2017) when using an idea from the text; or (Hanson, 2017: 10) when using a specific quote on the indicated page (in this case, page 10²). A good source of information on the APA format can be found on the website of the Writing Center at the University of Wisconsin – Madison: <http://writing.wisc.edu/Handbook/DocAPA.html>, under the “Frequently Asked Questions” about the APA Style at: <http://www.apastyle.org/learn/faqs/index.aspx?imw=Y>, and through the “Style Guide Resources” link on the UF Library page (<http://www.uflib.ufl.edu/tutorials/research.html>). Students from departments other than Urban and Regional Planning may use a commonly accepted format for citations from their own field; please discuss this option with the instructor before you complete the outline of the paper.

Assistance for Writing Papers

The online resources to assist you in writing are extensive. The Dial Center for Written and Oral Communication (<http://cwoc.ufl.edu/>), the University Writing Program (<https://writing.ufl.edu>), and the Smathers Library (<http://www.uflib.ufl.edu/tutorials/research.html>) at the University of Florida can assist you in different aspects of writing. You can use the Writing Center to get one-on-one help on every area of composition from basic grammar and mechanics to topics like essay organization, style, and argument. The Dial Center provides assistance on oral communications through their Public Speaking Lab. Library Support (<http://cms.uflib.ufl.edu/ask>) provides a variety of resources on conducting research through a variety of methods (e.g., chat, text, email, and phone).

Many other universities offer online handbooks on writing. The following are particularly useful: the University of North Carolina at Chapel Hill (<http://writingcenter.unc.edu/handouts/>), the University of Wisconsin (<https://writing.wisc.edu/handbook/>), and Purdue University (<http://owl.english.purdue.edu/>). I found the following handouts particularly helpful while editing papers; <http://writing.wisc.edu/Handbook/CommonErrors.html> and <https://writing.wisc.edu/handbook/style/>. The online handbooks described above discuss many aspects of writing papers. Students at the graduate level should be prepared to write a critical argument rather than simply describe relationships. If you have any questions about what is expected at the graduate level, please see the instructor. .

Grading

I expect that all graduate students should be able to accomplish the basic requirements for the course -- a “B” grade, but do not hesitate to mark lower when a student does not meet the expectation of adequately showing understanding of the material. “A” grades require performance beyond the minimum or average -- e.g., quality, depth, synthesis of ideas, originality, or creativity. Meeting deadlines matters, too! Each deadline must be honored or the grade may be lowered accordingly. The instructor will also be more sympathetic to a request for an extension one week before a deadline than one day before a deadline.

The University of Florida allows instructors to give the following grades: A, A-, B+, B, B-, etc. A grade of “A-” on a specific assignment may indicate that the work is close to an “A” but the “A-” will be averaged with other grades to determine the final grade. An “A-“ means that a student almost, but not quite, achieved “A” work. Requirements for class attendance and assignments and other work in this course are consistent with university policies that can be found at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

University of Florida Grade Policy

Percentage or points earned in class	93%-100%	90%-92.9%	87%-89.9%	83%-86.9%	80%-82.9%	77%-79.9%	73%-76.9%	70%-72.9%	67%-69.9%	63%-66.9%	60%-62.9%	Below 60%
Letter grade equivalent	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F

Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E	WF	I	NG	S-U
Grade Points	4.0	3.67	3.33	3.0	2.67	2.33	2.0	1.67	1.33	1.0	0.67	0.0	0.0	0.0	0.0	0.0

² Also, note that because the course textbook is an edited volume, the author of the chapter (Hanson) is used in the citation rather than the editors of the book (Giuliano and Hanson). See https://writing.wiscweb.wisc.edu/wp-content/uploads/sites/535/2018/07/UWMadisonWritingCenter_APADocumentation_2009_rev_27oct2017.pdf

For greater detail, see the Registrar's Grade Policy regulations at <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>.

Academic Honesty

Students MUST follow the University's policy regarding unauthorized use of materials (i.e., cheating), prohibited collaboration, and the use of copyrighted materials. Students are responsible for reading and abiding by the University's student code of conduct (<https://catalog.ufl.edu/ugrad/1617/advising/info/student-honor-code.aspx>) and the University Honor Code. UF students are bound by the Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment. The Student Conduct and Honor Code (<https://sccr.dso.ufl.edu/students/student-conduct-code/>) and the Regulations of the University of Florida (<http://regulations.ufl.edu/wp-content/uploads/2018/06/4.040-1.pdf>) specify a number of behaviors that are in violation of this code and the possible sanctions. In particular, there are rules governing plagiarism. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you directly quote someone or use an idea from another source, you must attribute that idea or those words to an original author. If you use the same material in two courses without discussing this with your instructor, you may be engaging in self-plagiarism. If you are unclear about what constitutes plagiarism or other forms of academic dishonesty, please make an appointment with the instructor to discuss this. You can also consult the above website and the graduate catalog for further information.

Help for Students/Accommodations for Students with Disabilities

The instructor will respect the needs for accommodations for students with disabilities consistent with the University's policy on such accommodations. Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter that must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester. I am happy to provide reasonable accommodations for students who register with the DRC, and ask that students inform the instructor of any request no later than the end of the second week of the course.

At times students may experience periods of increased stress when challenges related to decisions, goals and relationships arise. Often these experiences are accompanied by thoughts and emotions that produce sadness, anxiety, frustration, anger and confusion. If you are experiencing excessive stress in your life that are affecting your ability to meet the deadlines for this course, please speak to the instructor or contact the Counseling and Wellness Center (<http://www.counseling.ufl.edu/>; (352) 392-1575) to make an appointment or contact the University Police Department at 352-392-1111 or 911 for emergencies.. If you observe or know of anyone in distress, please reach out to U Matter, We Care (www.umatter.ufl.edu), 352-294-CARE (2273) or #UMatterUF

Course Evaluations

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Evaluations are typically open during the last two to three weeks of the semester, but students will be given specific times when they are open. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

Changes

As the course develops, I may make changes in the readings or assignments, and scheduling. If there are topics that you are interested in that you do not feel are adequately covered in the course, let the instructor know. This is your course, and we will make time for the exploration of new ideas, within the limits of time and reason. You should also be willing to invest some of your time into finding materials and leading discussion on those new ideas. If you define a new topic, this presentation will substitute for the required presentation.

Course Outline

Module 1: The Context of Urban Transportation (Weeks of August 30 and September 6)

Readings

Giuliano and Hanson, Chapters 1 and 2

Assignments

***During the first week: Go to the BTS website or other transportation related website and search for data on a topic that is of interest to you. Prepare a written explanation of data or a statistic about transportation that you learned about and submit it to Canvas by Sunday, September 6. This should be a transportation *statistic* or other *datum* and not simply something new about transportation. In the discussion, each student will briefly describe what s/he learned in these data sources.

Readings for Week of August 30:

Giuliano and Hanson, Chapter 1

Lay, J. (2015, July 7) Here to There: An Animated History of Transportation. Retrieved from: <http://www.theatlantic.com/video/index/397865/animated-history-transportation/>

Tomer, A. & Gutman, J. (2016, May 31). The Avenue: Shifting gears to a new transportation model. Retrieved from: <https://www.brookings.edu/2016/05/31/shifting-gears-to-a-new-transportation-model/>

Tomer, A. & Kane, J. (2016, May 31). Moving to Access. Retrieved from: <https://www.brookings.edu/research/moving-to-access/>

Ralph, K. M. (2017). Multimodal millennials? The four traveler types of young people in the United States in 2009. *Journal of Planning Education and Research*, 37(2), 150-163.

National League of Cities Center. (2015). City of the Future: Technology and Mobility. Retrieved from: <https://www.nlc.org/sites/default/files/2016-12/City%20of%20the%20Future%20FINAL%20WEB.pdf>

Recommended Readings:

Federal Highway Administration (FHWA) (n. d.). National Household Travel Survey: 2017 Data Now Available. . Retrieved on July 20, 2018 from: <https://nhts.ornl.gov/>

US Department of Transportation (USDOT), Federal Highway Administration. (n. d.) *National Household Travel Survey: Our Nation's Travel*. Retrieved on June 17, 2017 from: <http://nhts.ornl.gov/publications.shtml?keyword=brief>. This search allows you to select a survey year and a category of publication (e.g., report, journal, conference, or brief) Please find one or more topics that interest you and skim them.

U.S. Department of Transportation. (2016, April 8) The Fixing America's Surface Transportation Act or "FAST Act." Retrieved from <https://www.transportation.gov/fastact>

Readings for the Week of September 6:

Giuliano and Hanson, Chapter 2

Glass, D. (2014 October 2). "A Complete Guide to the Future of U.S. Freight Movement." CityLab. Retrieved from: <https://www.citylab.com/life/2014/10/a-complete-guide-to-the-future-of-us-freight-movement/381012/>

Module 2: Transportation and Urban Form (Week of September 13)

The Impact of Communications and Information Technologies (Week of September 20)

Readings for Week of September 13:

Giuliano and Hanson, Chapters 3 and 9

TransitCenter (2015). A People's History of Recent Urban Transportation Innovation. Retrieved from: <http://transitcenter.org/publications/a-peoples-history-of-recent-urban-transportation-innovation/>

Delucchi, M. & Kurani, K. (2015, Spring). Can We have Sustainable Transportation without Making People Drive Less or Give up Suburban Living? *Access 46*, Retrieved from: <http://www.accessmagazine.org/articles/spring-2015/can-we-have-sustainable-transportation-without-making-people-drive-less-or-giving-up-suburban-living/>

Grabar, H. (2014, June 17). The Triumphant Return of Private U.S. Passenger Rail. In *The Best of Citylab's The Future of Transportation*, pp. 68-77. Retrieved from: http://cdn.theatlantic.com/assets/media/files/FOT_ebook.pdf

Readings for the Week of September 20:

Giuliano and Hanson, Chapters 4

Machek, E., Lewis, K., Peirce, S., Berthaume, A., Colton, P., and Morton, T. Novel Surface Transportation Modes: Final Report. Prepared for the Federal Highway Administration Office of Corporate Research, Technology, and Innovation Management. Retrieved from: <http://ntl.bts.gov/lib/59000/59100/59146/NovelSurfTranspModes-web.pdf>

Shaheen, S., Cohen, A., and Zohdy, I. (2016, April). Shared Mobility: Current Practices and Guiding Principles. Prepared for the US Department of Transportation Federal Highway Administration. Retrieved from: <http://www.ops.fhwa.dot.gov/publications/fhwahop16022/fhwahop16022.pdf>

Jaffe, E. (2014, April 28). The First Look at How Google's Self-Driving Car Handles City Streets. In *The Best of Citylab's The Future of Transportation*, pp. 24-40. Retrieved from: http://cdn.theatlantic.com/assets/media/files/FOT_ebook.pdf

Bloomberg Philanthropies. (2017, March). Taming the Autonomous Vehicle: A Primer for Cities. Retrieved from: <https://www.bbhub.io/dotorg/sites/2/2017/05/TamingtheAutonomousVehicleSpreadsPDF.pdf>

Review:

National League of Cities Center. (2015). City of the Future: Technology and Mobility. Retrieved from: <https://www.nlc.org/sites/default/files/2016-12/City%20of%20the%20Future%20FINAL%20WEB.pdf>

*** For September 29 class: Keep a journal of all trips taken this week and submit them to Canvas by Monday, September 28 at 11:55 a.m. At a minimum keep track, **in tabular form**, of the following information: origin, destination, time of travel, mode of travel, distance traveled, length of time, and any other information you consider important.

MODULE 3: The Urban Transportation Planning Process/Characteristics of Travel and Techniques for Estimating Travel Demand/Activity-based Models (Week of September 27)

Readings for the Week of September 27

Giuliano and Hanson, Chapters 5, 6 and 7

Biemborn, Edward. 1995. *A Transportation Modeling Primer*. Milwaukee, WI: Center for Urban Transportation Studies. <http://www4.uwm.edu/cuts/primer.htm>

Currans, K.(2017). Issues in Trip Generation Methods for Transportation Impact Estimation of Land Use Development A Review and Discussion of the State-of-the-art Approaches. *Journal of Planning Literature* 32, 4: 335-345.

Review:

U. S. Department of Transportation Federal Highway Administration and Urban Mass Transportation Administration. 1977. *An Introduction to Urban Transportation Demand Forecasting*. Chapters 1-6 <http://ntl.bts.gov/DOCS/UT.html>

Transportation Research Board (TRB) (2015). Activity-Based Travel Demand Models: A Primer. Retrieved from: <https://www.nap.edu/download/22357>

Review:

Transportation Research Board. (2010) "Advanced Practices in Travel Forecasting: A Synthesis of Highway Practice. NCHRP Synthesis 406. Washington, DC: Transportation Research Board, page 1-56. Retrieved from: (http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_syn_406.pdf)

Module 4: Transportation Investments, Subsidy and Finance (Weeks of October 4 and October 11)

Readings for Week of October 4

Giuliano and Hanson, Chapters 8 and 9 (review), and 10

DeLucchi, Mark. (1996, Spring). "Total Cost of Motor-Vehicle Use," Access 8: 7- 13, Available at: <https://www.accessmagazine.org/spring-1996/the-total-cost-of-motor-vehicle-use/>

Anderson, M. L. (2017, Spring) Subways, Strikes, and Slowdowns Access 51. Retrieved from <http://www.accessmagazine.org/spring-2017/subways-strikes-and-slowdowns/>

Shoup, D., (2016, Spring). Cutting the Costs of Parking Requirements. Access 48. Retrieved from: <http://www.accessmagazine.org/articles/spring-2016/cutting-the-cost-of-parking-requirements/>

Drennan, M. & Brecher, C. (2012, Spring) Can Public Transportation Increase Economic Efficiency? Access 40. Retrieved from: <http://www.accessmagazine.org/spring-2012/can-public-transportation-increase-economic-efficiency/>

Landis, John. 1999. "Middle Age Sprawl: BART and Urban Development," Access 14, pp. 2-15 (see <http://www.accessmagazine.org/wp-content/uploads/sites/7/2016/07/access14-01-BART-and-urban-development.pdf>)

Readings for the Week of October 11

Giuliano and Hanson, Chapters 10

Sorenson, P. (2013, Fall). From Fuel Taxes to Mileage Fees. Access 43. Retrieved from: <http://www.accessmagazine.org/fall-2013/fuel-taxes-mileage-fees/>

Boarnet, M. G. and DiMento, J. F. (2004, Fall) The Private Sector's Role in Highway Finance Lessons from SR91. Access 25 : 26-31. Available at : <http://www.accessmagazine.org/fall-2004/private-sectors-role-highway-finance-lessons-sr-91/>

Module 5: Measure for Achieving Multimodal and Intermodal Balance: Planning for All Modes of Travel (Weeks of October 18 and 25)

Readings for the Week of October 18:

Giuliano and Hanson, Chapter 14

Taylor, B. (2017) The Access Almanac: Traffic Congestion is Counter-Intuitive, and Fixable. Access 51. Retrieved from: <http://www.accessmagazine.org/spring-2017/the-access-almanac-traffic-congestion-is-counter-intuitive-and-fixable/>

Marsden, G., Frick, K. T., May, A. D. & Deakin, E. (2010) Transfer of Innovative Policies Between Cities to Promote Sustainability. *Transportation Research Record: Journal of the Transportation Research Board*, No 2163, pp. 89-96.

Marsden, G., Frick, K. T., May, A. D. & Deakin, E. (2010). How do cities approach policy innovation and policy learning? A study of 30 policies in Northern Europe and North America. *Transport Policy* (2010) <http://dx.doi.org/10.1016/j.tranpol.2010.10.006>

Badger, E. (2014, March 6). America's Cities Are Still Too Afraid to Make Driving Unappealing. In *The Best of Citylab's The Future of Transportation*, pp. 111-15. Retrieved from: http://cdn.theatlantic.com/assets/media/files/FOT_ebook.pdf

Recommended Readings:

Hall, Sir Peter. 2007 (Fall). "Beyond the Automobile?" Access 30:10-15. Available at: <https://www.accessmagazine.org/wp-content/uploads/sites/7/2016/07/Access-30-03-Beyond-the-Auto.pdf>

Williams, K. M. and Marshall, M. A. *Managing Corridor Development: A Municipal Handbook* <http://www.cutr.usf.edu/pdf/corridor.pdf> and *Ten Ways to Manage Access in Your Community*. <http://www.cutr.usf.edu/research/10ways.pdf>

Readings for the Week of October 25:

National Association of City Transportation Officials (NACTO). (2012) Urban Streets Design Guide. Retrieved from: <https://nacto.org/publication/urban-street-design-guide/>

King, D. (2016, October 6) What Do We Know About the "First Mile/Last Mile" Problem for Transit? Transportist [Web log] Retrieved from: <https://transportist.org/2016/10/06/what-do-we-know-about-the-first-milelast-mile-problem-for-transit/>.

Stewart, J. (2016, December 16) 7 "Last Mile" Solutions That Don't Look Unacceptably Stupid. Wired. Retrieved from: <https://www.wired.com/2016/12/7-last-mile-solutions-dont-look-unacceptably-stupid/>.

Recommended Readings:

Transportation Research Board (TRB). (2012). National Cooperative Highway Research Program (NCHRP) Synthesis 436: Local Policies and Practices that Support Safe Pedestrian Environments, Washington, DC: Transportation Research Board. Available at: http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_syn_436.pdf

Vock, D. (2017 September). "Buses, Yes Buses, Are 'the Hottest Trend in Transit.'" Governing. Available at: <http://www.governing.com/topics/transportation-infrastructure/gov-big-city-bus-systems.html>

Black, Alan. 1993. "The Recent Popularity of Light Rail Transit in North America," *Journal of Planning Education and Research*, 12(3): 150-159. (on reserve)

Moore, James E. II. 1993. "Commentary on 'The Recent Popularity of Light Rail Transit in North America,'" *Journal of Planning Education and Research* 13 (1): 50-52. (on reserve)

Black, Alan. 1993. "Author's Response," *Journal of Planning Education and Research* 13(1): 53-54. (on reserve)

Richmond, Jonathan E. D. 1998. "The Mythical Conception of Rail Transit in Los Angeles," *Journal of Architectural and Planning Research* 15(4): 294-320. (on reserve)

Module 6: Achieving Multimodal and Intermodal Balance: Planning for All Populations (Weeks of November 1 and November 8)

Readings for Week of November 1:

Giuliano and Hanson, Chapter 13

Litman, T., & Brenman, M. (2012). A New Social Equity Agenda for Sustainable Transportation. Victoria Transport Policy Institute, Retrieved from: <http://www.vtpi.org/equityagenda.pdf>

Farber, N., Shinkle, D., Lynott, J., Fox-Grage, W., & Harrell, R. (2011). Aging in place: A state survey of livability policies and practices, Retrieved from: <http://assets.aarp.org/rqcenter/ppi/liv-com/aging-in-place-2011-full.pdf>

Taylor, B. & Schweitzer, L. (2017) Just Road Pricing. Access 50, Special Issue: Transportation Finance. Retrieved from: <http://www.accessmagazine.org/wp-content/uploads/sites/7/2016/01/access36-justpricing.pdf>

Craven, J. (2017 January 23). "Even Breathing Is A Risk In One Of Orlando's Poorest Neighborhoods." *Huffington Post*. Retrieved from: https://www.huffingtonpost.com/entry/florida-poor-black-neighborhood-air-pollution_us_5a663a67e4b0e5630072746e?l8

Atlanta Beltline, Inc. (2016). Atlanta Beltline: Overview. Retrieved from: <http://beltline.org/about/the-atlanta-beltline-project/atlanta-beltline-overview/>

Readings for Week of November 8:

Giuliano and Hanson, Chapter 8 (review)

City of Atlanta Department of City Planning. (2017) The Atlanta City Design: Aspiring to the Beloved Community. Retrieved from: https://www.atlcitydesign.com/acd_book.html

Gabbe, C. J. & Pierce, G. (2017, Spring) The Hidden Costs of Bundled Parking. Access 51. Retrieved from: <http://www.accessmagazine.org/wp-content/uploads/sites/7/2017/05/Gabbe-and-Pierce-Access-Spring-2017.pdf>

Blumenberg, E. & Pierce, G. (2016, Spring) A Driving Factor in Moving to Opportunity. Access 48. Retrieved from: http://www.accessmagazine.org/wp-content/uploads/sites/7/2016/05/access48-webprint_adrivingfactor.pdf

Pollack, S., Bluestone, B., and Billingham, C. (2010, October). Maintaining Diversity in America's Transit-Rich Neighborhoods: Tools for Equitable Change. Retrieved from <https://www.bostonfed.org/-/media/Documents/commdev/necd/2010/issue1/diversity-transit-rich-neighborhoods.pdf>

Module 7: Environmental Impacts of the Transportation System – Overview and Regulations (Week of November 15)

Efficient Transportation Decisionmaking System (ETDM)

Guest Speaker: Mr. Peter McGilvray, Florida Department of Transportation (FDOT) Environmental Management Office (EMO) (not confirmed)

Readings for the Week of November 15

Giuliano and Hanson, Chapter 11

United States Department of Agriculture. (2011, July) "Towards Understanding the Ecological Impact of Transportation Corridors." Available at: http://www.fs.fed.us/pnw/pubs/pnw_qtr846.pdf

Transportation Research Board. 2002. *NCHRP Synthesis 305. Interaction between Roadways and Wildlife Ecology: A Synthesis of Highway Practice* Washington, DC: Transportation Research Board. Retrieved January 7, 2008 at: http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_syn_305.pdf

Meyer, M., Flood, M., Keller, J., Lennon, J., McVoy, G., Dorney, C., Leonard, K., Hyman, R. & Smith, J. (2014). *Strategic Issues Facing Transportation, Volume 2: Climate Change, Extreme Weather Events, and the Highway System: Practitioner's Guide and Research Report* (No. Project 20-83 (5)). Retrieved from: http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_750v2.pdf (read Part 1: *Practitioner's Guide*)

Wachs, M., and Lederman, J. (2016, Spring). Investing in Transportation and Preserving Fragile Environments. Access 48. Retrieved from: <http://www.accessmagazine.org/articles/spring-2016/investing-in-transportation-and-preserving-fragile-environments/>

Florida Department of Transportation. (n. d.) "Efficient Transportation Decisionmaking System. Retrieved from: <https://www.fdot.gov/environment/etdm.shtm> (browse website).

Module 8: Environmental Impacts of the Transportation System – Energy and Air Quality (Week of November 22)

Readings for Week of November 22:

Giuliano and Hanson, Chapter 12

Center for Climate and Energy Solutions. (2011, January) Reducing Greenhouse Gas from U.S. Transportation. Prepared for the Pew Center on Global Climate Change. Available at: http://web.mit.edu/globalchange/www/PewCtr_MIT_Rpt_Schafer.pdf

Mashayekh, Y., Jaramillo, P., Samaras, C., Hendrickson, C.T., Blackhurst, M. MacLean, H. L., & Matthews, H. S. (2012) Potentials for Sustainable Transportation in Cities to Alleviate Climate Change Impacts, *Environ Sci Technol.* 46, 2529-2537. Available at: <http://pubs.acs.org/doi/pdfplus/10.1021/es203353q>

U.S. Department of Energy (USDOE). (n. d.) Alternative Fuels. Retrieved on August 9, 2016 from: <http://www.fueleconomy.gov/feg/current.shtml>

Winer, a., Zhu, Y. and Paulson, S. (2014, Spring). Carmageddon or Carmaheaven? Air Quality Results of a Freeway Closure. Retrieved from: <http://www.accessmagazine.org/spring-2014/carmageddon-carmaheaven-air-quality-results-freeway-closure/>

Nahlik, M & Chester, M. (2015, Fall) Life-Cycle Impacts of Transit-Oriented Development. Access 47. Retrieved from: <http://www.accessmagazine.org/wp-content/uploads/sites/7/2015/11/access47.3nahlik.pdf>

Boriboonsomsin, K., Wu, G., & Barth, M. (2016, Spring). Going the Extra Mile: Intelligent Energy Management of Plug-In Hybrid Electric Vehicles. Access 48. Retrieved from: <http://www.accessmagazine.org/articles/spring-2016/going-the-extra-mile-intelligent-energy-management-of-plug-in-hybrid-electric-vehicles/>

Roberts, T. and Chretien, L. (2017, May 26) It'll take more than a hybrid: Transportation is moving towards electrification, just in time. Brookings Institution. Retrieved from: <https://www.brookings.edu/blog/planetpolicy/2017/05/26/itll-take-more-than-a-hybrid-transportation-is-moving-towards-electrification-just-in-time/>

Berg, N. (2014, June 17). How Running Out of Power in a Tesla on the Side of a Highway Taught Me About the Road Trip of Tomorrow. In *The Best of Citylab's The Future of Transportation*, pp. 55-67. Retrieved from: http://cdn.theatlantic.com/assets/media/files/FOT_ebook.pdf

Recker, W.W. & Kang, J.E. (2011). Charge It: The Promise of Plug-in Electric Hybrids UCTC Policy Brief 2011-01. Available at: <https://scholarship.org/uc/item/7zk4r4tj>

Small, Kenneth A. and Kurt Van Dender. 2008. "If Cars Were More Efficient, Would We Use Less Fuel?" Access 31: 8-13. Retrieved from: <http://www.accessmagazine.org/wp-content/uploads/sites/7/2016/04/Access-31-03-Cars-More-Efficient.pdf>

Sorensen, P., Light, T., Samaras, C., Ecola, L., Daehner, E. M., Ortiz, D. S., Wachs, M., Enarson-Hering, E. & Pickrell, S. (2014). Strategic Issues Facing Transportation, Volume 5: Preparing State Transportation Agencies for an Uncertain Energy Future (No. Project 20-83 (04)) Retrieved from: http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_750v5.pdf

December 1 and December 8 Student Presentations during Class

***Papers due in E-learning by noon on Monday, December 9