MTM 250:

TRANSPORTATION AND THE ENVIRONMENT

FALL B 2016

Instructor:	Joseph Kott, PhD, AICP, PTP
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Office:	210 N. Fourth Street, 4th Floor
Office Hours:	by appointment
Class Days/Times	Mondays, 5:30pm – 9:30 pm
Class Web site:	SJSU Canvas site for MTM 250, Fall B 2106
Classroom:	Via videoconference

Course Description and Objectives:

Students enrolled in this course will be introduced to the complexities in the relationship of transportation and the environment. An important theme of this class is that real world trade-offs are inherent in addressing transportation as an important cause of environmental degradation. Solutions considered have technical, socio-economic, and cultural impediments that can at times appear intractable. Progress must be made in an environment of uncertainty and incomplete information. Nevertheless, there are many hopeful indications that the goal of meeting society's mobility needs without harming the natural environment and human health is achievable.

Students will learn from case studies of success in creating more environmentally-benign forms of access and mobility. Students will contribute their own ideas in class discussions and a term paper on innovation in transportation policy to address environmental concerns.

Upon completion of the course, students will be able to do the following:

1. Explain the connection between transportation system, air quality, water quality, human health, and the livability of communities.
2. Describe how motorized transportation, despite its many social and economic benefits, comes at the cost of environmental (and, arguably, socio-economic) sustainability.
3. Discuss the importance of land use in relation to the environmental impacts of transportation.
4. Explain the concept of environmental justice as it applies to the effects of transport system.
5. Evaluate the effectiveness of a variety of measures to reduce the environmental impacts of transport.

6. Envision policy innovations that point the way to more sustainable transport systems, cleaner air and water, more livable communities, and hence more sustainable cities and regions.

Students will learn about the relationship between our transportation systems, natural resources, urban land use, and human health and well-being.

Required Course Readings:

Course readings will consist of two reports that can be purchased online, as well as articles and that are available in electronic form. All of the articles will be uploaded to the course web site for students to download. All course materials will be accessible to the extent possible. If you have any questions or concerns about the accessibility of course readings and other course-related materials, please contact the instructor as soon as possible so that your needs can be met.

Course Assignments and Grading Policy:

Grading rubrics will be posted on Canvas at least two (2) weeks before the due date for each assignment with the exception of the Term Paper. The rubric for the Term Paper will be posted on Canvas at least four (4) weeks before the due date.

GRADE DISTRIBUTION

Task	% of Course Grade
QUIZ #1	20%
QUIZ #2	20%
TERM PAPER	40%
READING MEMO #1	10%
READING MEMO #2	10%
TOTAL	100%

Determination of Grades

- The letter grade calculation is shown in the table below:

Percentage	Grade
94% and above	A
90% - 93%	A-
87% - 89%	B+
84% - 86%	B
80% - 83%	B-
77% - 79%	C+

73% - 76%	C
70% - 72%	C-
67% - 69%	D+
63% - 66%	D
60% - 62%	D-
below 60%	**F**

Students who keep up with the readings will benefit most from the course.

Other grading/assignment issues

Late assignments (those turned in after the due date) will not be accepted for full credit unless students have a compelling reason, for example illness or family emergency. A 10% grade reduction will be applied for assignments turned in up to 24 hours late, 20% for the second 24 hours late, and 30% for the third 24-hour period late. After that, no assignment without a compelling reason for the lateness. If you expect you will not be able to complete an assignment on time and you let me know well before the due date, it may be possible to make alternative arrangements that will reduce the grade penalty for lateness.

Reading Memos

These will cover readings for the past three weeks, including the week of the class by which the Reading Memo is due. I will look for evidence that you have not only done the readings but have reflected on their meaning. While you are free to agree or disagree with the author(s), I hope to see that you have added value to your reading through interpretation and discussion of what you have learned. These Reading Memos should not be longer than 2 pages, either double-spaces or with a space and a half between lines. Either 11-point or 12-point font is acceptable.

Term Paper

This comprises a term paper on one of the topics listed below. If you wish to write your term paper on another topic, discuss your idea with me in advance. The Term Paper will present an argument or thesis you wish to develop, the evidence for your position, and the implications for policy. Each paper should have a bibliography of readings upon which your work was based. These papers will typically be from 15 to 20 pages in length.

The list of topics from which to choose is as follows:

- Low or no emissions vehicles: Alternatives and prospects
- Urban planning and design measures to reduce transportation-related air and water pollution
- Transit-oriented development
- Green streets, green parking lots: Applicability and prospects
- Issues in adaptation of the transportation system in response to climate change
- Car-free streets, districts, and cities: Examples and prospects

- Peak oil: Evidence and implications
- Post-carbon cities and regions: Alternatives and prospects
- Replacing physical travel with virtual presence: Examples and prospects
- Water pollution emissions from the transportation sector: Evidence and mitigation
- The health effects of transportation-related air emissions
- Ways to reduce the carbon footprint of travel by personal motor vehicle
- Public transit for livable cities: Bus rapid transit (BRT), light rail, streetcars, commuter rail, and metro systems
- Environmental justice implications of urban and regional transport policy

Students may select and research another topic with prior approval of the instructor.

Citation style

It is important to properly cite any references you use in your assignments. There are several good options, including American Psychological Association (APA) Publication Manual, Sixth Edition, the Modern Language Association (MLA) Style Manual and Guide, and the Chicago Manual of Style. The Purdue University Online Writing Lab (Purdue OWL) has excellent condensed guides to each citation method. See https://owl.english.purdue.edu/owl/section/2/ for more information.

Classroom Protocol

Lucas College and Graduate School of Business: Program Goals and Class room policy
http://www.sjsu.edu/cob/Students/policies/index.html

This course is taught as a seminar. Students are therefore expected to complete assigned readings *before* the appropriate class meeting and participate extensively during class discussions. Please be respectful of your classmates during class and be aware that the camera and microphone are unforgiving documentation of your behavior! Use of electronic devices is permitted, providing it is for class-related material.

Dropping and Adding

Students are responsible for understanding the policies and procedures about add/drops, academic renewal, etc. Information on add/drops are available at
http://www.sjsu.edu/advising/faq/index.htm#add
Information about late drop is available at
http://www.sjsu.edu/aars/policies/latedrops/**.** Students should be aware of the current deadlines and penalties for adding and dropping classes.

Assignments and Grading Policy

Class assignments and related Learning Outcomes are described on pages 2 and 3 above. Assignment due dates are specified in the Course Schedule on page 6, 7, and 8. There are no extra credit assignments or activities in this course. Late work without an excuse such as illness, bereavement, or other unanticipated and serious cause will be marked down in grade by one-

third for each day late. No assignments will be accepted that are more than three (3) days late unless there is a serious excuse such as illness, bereavement, or other unanticipated cause.

University Policies

Academic integrity

Students should know the University's Academic Integrity Policy that is available at http://www.sa.sjsu.edu/download/judicial_affairs/Academic_Integrity_Policy_S07-2.pdf Your own commitment to learning, as evidenced by your enrollment at San Jose State University and the University's integrity policy, require you to be honest in all your academic course work. Faculty members are required to report all infractions to the office of Student Conduct and Ethical Development. The website for Student Conduct and Ethical Development is available at http://www.sa.sjsu.edu/judicial_affairs/index.html

Instances of academic dishonesty will not be tolerated. Cheating on exams or plagiarism (presenting the work of another as your own, or the use of another person's ideas without giving proper credit) will result in a failing grade and sanctions by the University. For this course, all assignments are to be completed by the individual student unless otherwise specified. If you would like to include in your assignment any material you have submitted, or plan to submit for another course, please note that SJSU's Academic Policy F06-1 requires approval of instructors.

Campus Policy in Compliance with the American Disabilities Act

If you need course adaptations or accommodations because of a disability, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Presidential Directive 97-03 requires that students with disabilities requesting accommodations must register with the DRC (Disability Resource Center) to establish a record of their disability.

University Policies

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs' Syllabus Information web page at http://www.sjsu.edu/gup/syllabusinfo/"

Lucas College and Graduate School of Business:

Mission: We are the institution of opportunity in Silicon Valley, educating future leaders through experiential learning and character development in a global business community and by conducting research that contributes to business theory, practice and education.

MSTM Program Learning Goals

MSTM Program Learning Goals		
1	**Management of Transportation Organizations: System and International**	Develop a system-level and global perspective on the management of transportation organizations.
2	**Transportation Policy**	Develop an awareness of the transportation policy environment, including fiscal mechanisms, legislative structures, and intergovernmental coordination.
3	**Leadership**	Develop potential for leadership in transportation organizations.
4	**Communication Skills**	Develop written communication skills and techniques.
5	**Analytical Skills**	Develop ability to analyze management issues and situations using appropriate conceptual approaches.
6	**Information Technology**	Develop basic understanding of commonly used information technology applications used by the transportation industry.

Academic integrity statement, plagiarism, and citing sources properly

Your commitment, as a student, to learning is evidenced by your enrollment at San Jose State University. The University Academic Integrity Policy S07-2 at http://www.sjsu.edu/senate/docs/S07-2.pdf requires you to be honest in all your academic course work. Faculty members are required to report all infractions to the office of Student Conduct and Ethical Development. The Student Conduct and Ethical Development website is available at http://www.sjsu.edu/studentconduct/.

SJSU's Policy on Academic Integrity states: "Your own commitment to learning, as evidenced by your enrollment at San Jose State University, and the University's Academic Integrity Policy requires you to be honest in all your academic course work. Faculty members are required to report all infractions to the Office of Student Conduct and Ethical Development" (Academic Senate Policy S07-2). The policy on academic integrity can be found at http://www.sjsu.edu/senate/S07-2.htm.

Plagiarism is the use of someone else's language, images, data, or ideas without proper attribution. It is a very serious offense both in the university and in your professional work

Here are some examples of plagiarism that you should be careful to avoid:

- If you use a sentence (or even part of a sentence) that someone else wrote and don't reference the source, you have committed plagiarism.
- If you paraphrase somebody else's theory or idea and don't reference the source, you have committed plagiarism.
- If you use a picture or table from a webpage or book and don't reference the source, you have committed plagiarism.
- If your work incorporates data someone else has collected and you don't reference the source, you have committed plagiarism.

If you still have questions, feel free to talk to me personally.

Accommodation for Disabilities

If you need course adaptations or accommodations because of a disability please make an appointment with me as soon as possible.

If any student requires instructional materials in a different format, please contact me.

Disclaimer

This syllabus is intended as a class guide and is designed to be as accurate as possible. It is likely, however, that this syllabus may change during the semester as class needs change. Any changes will be discussed in class with as much notice as possible. Since our course only meets once per week, e-mail and the class web site in Canvas will be used as the primary form of communication. If you have difficulty with e-mail, or limited access, please let me know so that we can arrange an alternative means of communication.

MTM 250: CONTEMPORARY ISSUES IN TRANSPORTATION –

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TENTATIVE COURSE SCHEDULE

The course schedule listed below is tentative and it is likely that it will be updated as the course progresses. Assignment deadlines, however, are unlikely to change.

Date (Semester Week)	Topic	Readings	Assignments Due
Oct 17 (Week 1)	Introductions; Course Overview; Viewing the Film *Sprawling from Grace*		
Oct 24 (Week 2)	Carbon Emission from Transport: Problem Definition and Policy Alternatives	Falconer, R. & Newman, P. (2008). Transport policy for a fuel constrained future: An overview of options. *World Transport Policy & Practice* 14(3), 32-47. Gallagher, S. & Collantes, G. (2008). *Analysis of policies to reduce oil consumption and greenhouse-gas emissions from the U.S. transportation sector*. Cambridge, MA: John F. Kennedy School of Government, Harvard University.	

Date (Semester Week)	**Topic**	**Readings**	**Assignments Due**
Oct 31 (Week 3)	Carbon Emission from Transport: Problem Definition and Policy Alternatives (continued)	Urban Land Institute. (2009*). Moving cooler: An analysis of transportation strategies for reducing greenhouse gas emissions.* Washington, D.C.: ULI.	***Reading Memo #1 Due*** via upload to MTM 250 class site by 5:30 pm on SJSU Canvas by Monday, October 31st
Nov 7 (Week 4)	Ecological Impacts of Transportation Corridors Causes of Air Pollution for Ground Transportation Video clips on *Banff Wildlife Crossing, Highway Crossing Structures for Wildlife in Utah, Animal Bridges: Lifesaving Wildlife Crossings, and China's Toxic Smog Problem* Quiz #1 (take home) uploaded to Canvas	Gorham, R. (2002). *Air Pollution for Ground Transportation: An Assessment of Causes, Strategies, and Tactics, and Proposed Actins for the International Community.* Executive Summary, Chapter II, and Chapter III. Bennett, V., Smith, W., & Betts, M. (2011). Toward Understanding the Ecological Impacts of Transportation Corridors, pp. 1-17.	***Take Home Quiz #1 Due*** via upload to MTM 250 class site on SJSU Canvas by 5:30 pm on Monday, November 7th
Nov 14 (Week 5)	Transportation Emissions Reductions Strategies	Newman, P. & Kenworthy, J. (2006). Urban design to reduce automobile dependence. *Opolis 2*(1), 35-52. Litman, T. (2015). *Smart transportation emission reduction strategies*. Victoria, B.C.: Victoria Transport Policy Institute.	

Date (Semester Week)	**Topic**	**Readings**	**Assignments Due**
Nov 21 (Week 6)	Land Use, Urban Design, and Greenhouse Gas Emissions	Ewing. R, Bartholomew, K., Winkleman, J, Walters, J., & Chen, D. (2008). Growing *cooler.* Washington, D.C.: Urban Land Institute. Chapters 1,2,3,4 and 5.	***Reading Memo #2 Due*** via upload to MTM 250 class site on SJSU Canvas by 5:30 pm on Monday, November 21st
Nov 28 (Week 7)	Land Use, Urban Design, and Greenhouse Gas Emissions (continued) Quiz #2 (take home) uploaded to Canvas	*Growing cooler*, Chapters 6, 7, 8, 9, and 10.	
Dec 5 (Week 8)	Water Pollution and Storm Water Runoff	Nevue Ngan Associates & Sherwood Design Engineers. (2009). *San Mateo County sustainable green streets and parking lots design guidebook.* Nixon, H. & Saphores, J.D. (2007*). Impacts of motor Vehicle operation on water quality in the United States – Clean-up costs and policies.*	***Take Home Quiz #2 Due*** via upload to MTM 250 class site on SJSU Canvas by 5:30 pm on Monday, December 5th

Date (Semester Week)	**Topic**	**Readings**	**Assignments Due**
Dec 12 (Week 9)	Transportation and Public Health / Transportation and Environmental Justice Video lecture by Robert B. Bullard on *The Quest for Environmental Justice: Human Rights* Summing Up	Litman, T. (2016). *If health matters: Integrating public health objectives in transportation planning*. Victoria, B.C.: Victoria Transport Policy Institute. Brunekreef, B., & Holgate, S. (2002). Air Pollution and health. *The Lancet 360*, 1233-1242. Forkenbrock, D., & Sheeley, J. (2004). *NCHRP report 532: Effective methods for environmental justice assessment.* Washington, D.C.: Transportation Research Board, National Research Council. [Skim only.] Review of Course Readings.	**Reading Memo #3 Due** via upload to MTM 250 class site on SJSU Canvas by 5:30 pm on Monday, December 9th
December 19			**Term Paper Due** on Friday, December 19, 2015 by 7:30 pm via upload to MTM 250 site on SJSU Canvas

Bibliography

Bennett, V., Smith, W., & Betts, M. (2011). Toward Understanding the Ecological Impacts of Transportation Corridors, pp. 1-17

Brunekreef, B., & Holgate, S. (2002). Air Pollution and health. *The Lancet 360*, 1233-1242.

Ewing, R, Bartholomew, K., Winkleman, J, Walters, J., & Chen, D. (2008). *Growing cooler: The evidence of urban development and climate change.* Washington, D.C.: Urban Land Institute.

Falconer, R. & Newman, P. (2008). Transport policy for a fuel constrained future: An overview of options. *World Transport Policy & Practice 14*(3), 32-47

Forkenbrock, D., & Sheeley, J. (2004). *NCHRP report 532: Effective methods for environmental justice assessment.* Washington, D.C.: Transportation Research Board, National Research Council.

Gallagher, S. & Collantes, G. (2008). *Analysis of policies to reduce oil consumption and greenhouse-gas emissions from the U.S. transportation sector.* Cambridge, MA: John F. Kennedy School of Government, Harvard University.

Gorham, R. (2002). Air Pollution for Ground Transportation: An Assessment of Causes, Strategies, and Tactics, and Proposed Actins for the International Community. Executive Summary, Chapter II, and Chapter III.

Litman, T. (2015). *Smart transportation emission reduction strategies*. Victoria, B.C.: Victoria Transport Policy Institute.

Litman, T. (2016). *If health matters: Integrating public health objectives in transportation planning*. Victoria, B.C.: Victoria Transport Policy Institute.

Nevue Ngan Associates & Sherwood Design Engineers. (2009). *San Mateo County sustainable green streets and parking lots design guidebook.*

Newman, P. & Kenworthy, J. (2006). Urban design to reduce automobile dependence. *Opolis 2*(1), 35-52.

Nixon, H. & Saphores, J.D. (2007*). Impacts of motor Vehicle operation on water quality in the United States – Clean-up costs and policies.* Irvine, CA: University of California Irvine.

Urban Land Institute. (July 2009). Moving cooler: An analysis of transportation strategies for reducing greenhouse gas emissions. Washington, D.C.: ULI.