San José State University
Lucas Graduate School of Business
Master of Science in Transportation Management
MTM 201: Transportation Systems and Society
Spring-B 2020

Course and Instructor Contact Information

Instructor:	Dr. Kevin Fang
Office Location:	Contact instructor
Telephone:	707-664-3144 (Office phone)
Email:	kevin.fang@sjsu.edu
Office Hours:	Tuesdays, 3:30-5pm
Class Day/Time:	Thursdays, 5:30 – 9:30 pm, on March 19, March 26, April 2, April 9, April 16, April 23, April 30, May 7, May 14, and May 21
Classroom:	Online (Zoom) or specified video-conferencing locations (For locations, contact MSTM Coordinator Michelle Waldron) Zoom meeting link: https://sjsu.zoom.us/j/535783030
Course website:	Canvas (http://sjsu.instructure.com)

Course Format

Students must have regular access to email and the internet in order to communicate with the instructor, submit assignments, and engage in other class activities.

Students attend class sessions by going in person to one of the MTM program videoconferencing sites *or* by joining online using Zoom, SJSU's online meeting application. Details on each option are as follows:

MTM Class Videoconferencing Sites:

Videoconference sites are located at the Lucas Business Complex (Santa Clara, CA), Caltrans district offices, and other participating agencies. For information about these options, contact the MSTM Program Coordinator, Michelle Waldron, at michelle.waldron@sjsu.edu.

Online Access via Zoom:

You can join class using SJSU Zoom from any location, as long as you:

- Are in a quiet room without distractions (e.g., no family members or colleagues walking through or asking questions)
- Have stable internet access

- Use a video camera and good quality microphone so that you are seen as well as heard
- Follow good "meeting etiquette" principles (one such list: https://blog.gotomeeting.com/7-rules-virtual-meeting-etiquette-every-professional-know/)

To access class sessions by Zoom, click on the following link from your computer or tablet: https://sjsu.zoom.us/j/535783030

Plan to join at least ten minutes before 5:30 pm, to make sure you are ready when class begins. (The very first time you join from a computer or device, allow extra time for set-up.)

The university has many useful tutorials on how to use Zoom here: http://www.sjsu.edu/ecampus/teaching-tools/zoom/index.html

Course Description

Core transportation knowledge and systems thinking. Characteristics of travel modes and infrastructural elements that produce transportation systems; public, private, and nonprofit actors involved in transportation; transportation systems as levers toward achieving economic vitality, social equity, environmental sustainability, and community goals; and key challenges transportation system managers will face in the coming decade. Note: this course satisfies the GWAR for the MSTM program.

Lucas College and Graduate School of Business Program Learning Goals

(*Note:* Not all program learning goals are covered in every course)

Goal 1: **Business Knowledge:** Understand basic business principles and demonstrate discipline-specific competencies as applied to local and global environments.

Goal 2: **Communication:** Communicate ideas clearly, logically, and persuasively in oral and written format, using technology appropriately.

Goal 3: **Ethical Awareness:** Recognize, analyze, and articulate solutions to ethical issues that arise in business.

Goal 4: **Leadership, Teams and Diversity:** Comprehend the challenges and opportunities of leading and working in diverse teams and environments.

Goal 5: **Critical Thinking:** Comprehend, analyze, and critically evaluate complex and unstructured qualitative and quantitative business problems, using appropriate tools and technology.

Goal 6: **Innovation:** Recognize, analyze, and articulate strategies for promoting creativity and innovation.

MSTM Program Learning Goals:

(*Note:* Not all program learning goals are covered in every course)

Goal 1: **Transportation Systems and Society:** Develop a systems-savvy and global perspective on solving transportation management challenges

Goal 2: **Transportation Policy:** Develop solutions to transportation management challenges that integrate knowledge of the transportation policy environment

Goal 3: **Leadership:** Identify and analyze leadership styles and traits

Goal 4: **Communications:** Communicate effectively with a diverse workforce and citizenry

Goal 5: **Analytical skills:** Identify and evaluate transportation management issues using appropriate data and methods

Course Learning Outcomes

Upon successful completion of this course, students will be able to:

1. Describe the primary modes of transportation and their functions, current levels of use, and likely levels of use in the future
2. Explain how "the transportation system" functions as interacting systems of infrastructure, services, and travel modes
3. Explain how transportation system performance is influenced by natural and man-made environments
4. Explain how transportation systems serve as tools to achieve fundamental social goals such as equity, economic vitality, and environmental health
5. Describe the roles of the many actors in the "transportation ecosystem," including public agencies from the local to federal and international levels, private sectors firms providing transportation services and infrastructure, and individual travelers and shippers
6. Describe the key challenges facing transportation managers in the coming decade, including automated/connected, shared, and electric vehicles, and management strategies to respond to this new world
7. Describe the importance of innovation in technology and in organizational management practices in the transportation sector
8. Use library and online resources to identify relevant professional and scholarly literature on transportation topics

Required Texts/Readings

Free e-textbook

We will utilize the following text:

Jeffrey Tumlin. *Sustainable Transportation Planning: Tools for Creating Vibrant, Healthy, and Resilient Communities*. Hoboken, NJ: John Wiley and Sons, 2012.

This is available as a free e-book through the SJSU library website. If you'd like to purchase a hard copy of the text, used copies start at around $30.

Writing Handbook

Students must purchase one required text:

Kate L. Turabian. *A Manual for Writers of Research Papers, Theses, and Dissertations.* 9th ed. Chicago: University of Chicago Press, 2018.

New copies can be purchased for about $15.

Article Readings

Additional readings will be posted as links (see Course Schedule below or Canvas) or posted to the Files section of the course Canvas site.

Library Liaison

The Library Liaison for the Lucas Graduate School of Business is Christa Bailey (christa.bailey@sjsu.edu).

Course Requirements and Assignments

This course is taught as a seminar. Students are expected to engage with the course material and participate in class discussions. Please be respectful of your classmates during class and be aware of what is captured by your camera and microphone. Students course grades will be based on the sum of the following assignments:

Term Paper

The major assignment for the class is a term paper on a transportation management issue. Students will explore what scholarly research tells us about a transportation problem and potential solutions to that problem. Students will complete this assignment in three steps: a partial initial draft, an initial draft, and a final report. After the initial drafts, students will receive feedback from the instructor or their peers. Detailed instructions for each portion of the assignment will be shared on Canvas and discussed in class.

Term Papers should be between 3,000 and 4,000 words, exclusive of the bibliography and any appendices.

MTM 201 is a 3-unit course that satisfies the Graduation Writing Assessment Requirement (GWAR). To satisfy the GWAR requirement, students must receive at least a “C” grade on the final draft of the term paper. Students who receive a grade below “C” for this part of the course will not meet the GWAR requirement, even if their overall grade for the course is higher. Please check with the instructor or MSTM Program Director if you are unclear about these requirements.

Streets of the Future Assignment

At the beginning of the semester, students will explore the role of streets in society. What purposes, travel or otherwise, do streets serve, and how has that varied across time and space? Students will answer several short answer questions and do some light research for this assignment.

Transportation News Presentations

Students will bring in interesting examples from transportation current events in the form of 5-minute presentations. The date of these presentations will be variable as a small number of students will give a presentation most of the weeks of the semester.

Final Exam

Students will complete a final exam on the last day of class which will evaluate student’s comprehension of the material covered over the whole session. More details on the format of the exam will be discussed in class later in the session.

Course Learning Objectives Assignment

As part of the institutional assessment for this course and the MTM program, students will be asked to complete a brief questionnaire about what they know about various learning objectives for this course. This assessment is purely for diagnostic purposes and will be graded on a pass/not pass basis.

Grading Information

The course assignments will be weighted as follows:

Task	% of Course Grade	Learning Objectives Addressed
Term Paper – Peer Review	4%	2, 3, 4, 5, 8
Term Paper – First Draft	8%	2, 3, 4, 5, 8
Term Paper – Final Draft	35%	2, 3, 4, 5, 8
Writing About Transportation Data Assignment	15%	1, 2, 3, 4, 8
Transportation News Presentations	10%	4, 5, 6, 7
Final exam	25%	1, 2, 3, 4, 5, 6, 7
Course Learning Objectives Assessment	3%	1, 2, 3, 4, 5

Determination of Grades

Letter grades for the course will assigned based on the cumulative total of points earned on assignments and the final exam according to the following table:

Final grade determination

Percentage	Grade
93.33% and above	A
93.33% to 89.5%	A-
89.5% to 86.67%	B+
86.67% to 83.33%	B
83.33% to 79.5%	B-
79.5% to 76.66%	C+
76.66% to 73.33%	C
733.33% to 69.5%	C-
69.5% to 66.66%	D+
66.66% to 63.33%	D
63.33% to 59.5%	D-
below 59.5%	**F**

Late papers

Late papers will are accepted with a 10% deduction once late, plus an additional 5% deduction per additional business day an assignment is late, with a maximum deduction of 40%.

University Policies

Per University Policy S16-9 (http://www.sjsu.edu/senate/docs/S16-9.pdf), information relevant to all courses, such as academic integrity, accommodations, dropping and adding, consent for recording of class, etc. is available on Office of Graduate and Undergraduate Programs' Syllabus Information web page at http://www.sjsu.edu/gup/syllabusinfo/." Make sure to visit this page, review, and be familiar with these university policies and resources.

Course Schedule

Note: This schedule is subject to change with fair notice. Changes will be noted in class and via email.

Assignment Due Dates

Streets of the Future
Thursday, March 26 (discussion in class of Parts 1 and 2, upload photos for Question 1 by class time)
Thursday, April 9 (discussion in class of Part 3, submit written assignment to Canvas by 11:59pm)

Term Paper
Partial Initial Draft: Thursday, April 16 (by the start of class)
Initial Draft (for instructor review): Sunday, April 26 (by 11:59pm)
Final Draft: Tuesday, May 19 (by 11:59pm)

Final Exam
In class during our final meeting – Thursday, May 21

Course Learning Objectives Assessment
Tuesday, May 26 (by 11:59pm)

Transportation News Presentations
Multiple dates. Presentation slots each class between Week 5 and Week 10.

Class 1 – Thursday, March 19

Introductions
Transportation Basics
Key societal trends

Readings

- Tumlin (2012) – Sustainable Transportation Planning
  Chapter 1: Introduction
  Chapter 2: Sustainable Transportation (Pages 7-14)

Class 2 – Thursday, March 26

GWAR Assignment, Part 1: Introduction to the assignment, formulating questions
Transportation-Land Use Connection

- Tumlin (2012) – Sustainable Transportation Planning
  Chapter 5: Streets
- Bryan Morris, "From Horse Power to Horsepower," *Access Magazine*, Spring 2007, https://www.accessmagazine.org/wp-content/uploads/sites/7/2016/07/Access-30-02-Horse-Power.pdf
- Reid Ewing and Robert Cervero. "Travel and the built environment: A meta-analysis." Journal of the American planning association 76, no. 3 (2010): 265-294.

Class 3 – Thursday, April 2

GWAR Assignment, Part 2: Finding and Accessing Library Resources
Travel Trends
Transportation Externalities: Environmental Impacts

- Tumlin (2012) – Sustainable Transportation Planning
  Chapter 2: Sustainable Transportation (Pages 15-22)
  Chapter 3: Transportation and Public Health
- Giovanni Circella, Kate Tiedeman, Susan Handy, Farzad Alemi, and Patrica Mokhtarian. "What Affects U.S. Passenger Travel? Current Trends and Future Perspectives." Davis, CA: National Center for Sustainable Transportation, 2016. https://escholarship.org/uc/item/2w16b8bf (Pages 1-28)

For reference

- US Department of Transportation - Bureau of Transportation Statistics, "Pocket Guide To Transportation," January 2019. https://www.bts.gov/sites/bts.dot.gov/files/docs/browse-statistical-products-and-data/pocket-guide-transportation/224731/pocket-guide-2019.pdf or https://s3-us-west-2.amazonaws.com/dot-concept-menus/menu/dropdown.html

Class 4 – Thursday, April 9

GWAR Assignment, Part 3: Citations
Transportation Externalities: Safety

- Emma Fitzsimmons, "More Pedestrians and Cyclists are Dying in N.Y.C. Drivers are Often to Blame. March 15, 2020.
- Alissa Walker, "Oslo saw zero pedestrian and cyclist deaths in 2019. Here's how the city did it," *Curbed*, January 3, 2020. https://www.curbed.com/2020/1/3/21048066/oslo-vision-zero-pedestrian-cyclist-deaths

Class 5 – Thursday, April 16

GWAR Assignment, Part 4: Peer Review Activity
Congestion
Transportation Externalities: Road Building

- Tumlin (2012) – Sustainable Transportation Planning
  Chapter 9: Motor Vehicles
  Chapter 10: Parking
- Transportation For America, "The Congestion Con," 2020. http://t4america.org/wp-content/uploads/2020/03/Congestion-Report-2020-FINAL.pdf
- Susan Handy and Marlon Boarnet, "Impact of Highway Capacity and Induced Travel on Passenger Vehicle Use and Greenhouse Gas Emissions." Sacramento, CA: California Air Resources Board, 2014. https://ww3.arb.ca.gov/cc/sb375/policies/hwycapacity/highway_capacity_brief.pdf
- David Phillips, "Hiring Managers Biased Against People Who Live Farther Away," *Harvard Business Review*, December 10, 2018, https://hbr.org/2018/12/research-hiring-managers-are-biased-against-people-with-longer-commutes.

Class 6 – Thursday, April 23

Transit

- Tumlin (2012) – Sustainable Transportation Planning
  Chapter 8: Transit
- Jarrett Walker, "Does Elon Musk understand urban geometry?," July 21, 2016, https://humantransit.org/2016/07/elon-musk-doesnt-understand-geometry.html.

Class 7 – Thursday, April 30

Active Transportation, Part 1
Transportation Revolutions, Part 1: Electric Vehicles

- Tumlin (2012) – Sustainable Transportation Planning
  Chapter 6: Pedestrians
  Chapter 7: Bicyclists
- Alta Planning and Design, "Understanding the "Four Types of Cyclists," August 10, 2017, https://blog.altaplanning.com/understanding-the-four-types-of-cyclists-112e1d2e9a1b

Class 8 – Thursday, May 7

Active/Non-motorized Transportation, Part 2
Transportation Finance, Part 1

- Michael Manville, "Longer View: The Fairness of Congestion Pricing," *Transfers Magazine*, Spring 2019. https://transfersmagazine.org/longer-view-the-fairness-of-congestion-pricing/

Class 9 – Thursday, May 14

Transportation Finance, Part 2
Cargo Transportation

Class 10 – Thursday, May 21

Final Exam
Transportation Revolutions, Part 2: Ridehailing and Autonomous Vehicles
Course wrap-up discussion

- Regina Clewlow, "Disruptive Transportation: The Adoption, Utilization, and Impacts of Ride-Hailing in the United States," *Transfers Magazine*, Spring 2019, https://transfersmagazine.org/disruptive-transportation-ride-hailing/.
- Bloomberg Philanthropies/Aspen Institute. "Taming the Autonomous Vehicle: A Primer for Cities." 2017. https://www.bbhub.io/dotorg/sites/2/2017/05/TamingtheAutonomousVehicleSpreadsPDF.pdf
- Tumlin (2012) – Sustainable Transportation Planning
  Chapter 4: The City of the Future