

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

Course and Instructor Contact Information

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|-------------------------|---|
| Instructor: | Dr. Kevin Fang |
| Office Location: | Contact instructor |
| Email: | fangk@sonoma.edu |
| Office Hours: | By appointment |
| Class Day/Time: | Wednesdays, 5:30 – 9:30 pm, on August 5, August 12, August 19, August 26, September 2, September 9, September 16, September 23, September 30, and October 7 |
| Classroom: | Online (Zoom) or specified video-conferencing locations (For locations, contact MSTM Coordinator Michelle Waldron) See Canvas for class login information |
| 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/9Izht9IWJmH0wAvQDq?icsToken=98tyKuCtrT4jEtKdsB6BRowMA4_4Xfzwplxfqgd3sRioWglJahevH9VoH7pQB_nG

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 short sketch of the paper and two drafts. After the sketch and first draft, 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 about 3,000 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 and Travel Behavior Interviews

Early in the semester will be two small assignments where students will do some pre-class search to setup in-class discussions. In the first assignment, students will look at examples of streets around the world and over time and explore the role of streets in society. In the second assignment, students will conduct two informal interviews to explore individual decision-making in transportation.

Transportation News Presentations

Students will bring in interesting examples from transportation current events in the form of short presentations. Several of these will occur each week in the second half of the course.

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.

Grading Information

The course assignments will be weighted as follows:

| Task | % of Course Grade | Learning Objectives Addressed |
|--------------------------------------|-------------------|-------------------------------|
| Term Paper – Sketch/Peer Review | 3% | 2, 3, 4, 5, 8 |
| Term Paper – First Draft | 6% | 2, 3, 4, 5, 8 |
| Term Paper – Second Draft | 35% | 2, 3, 4, 5, 8 |
| Streets of the World Assignment | 6% | 1, 2, 3, 4, 8 |
| Travel Behavior Interview Assignment | 6% | 1, 3, 4, 5 |
| Transportation News Presentations | 9% | 2, 3, 4, 5, 6, 7 |
| Final exam | 35% | 1, 2, 3, 4, 5, 6, 7 |

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 |
| 73.33% 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 be 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) (<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](http://www.sjsu.edu/gup/syllabusinfo/) 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 World assignment

Wednesday, August 12 (by the start of class)

Travel Behavior assignment

Wednesday, August 26 (by the start of class)

Transportation News Presentations

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

Term Paper

Sketch (1-2 pages): Wednesday, September 2 (by the start of class)

First draft: Sunday, September 13 (by 11:59pm)

Second draft: Friday, October 9 (by 11:59pm)

Final Exam

Wednesday, October 7 (during class)

Class 1 – Wednesday, August 5

Introductions

Transportation Basics

Key societal trends

Readings

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

Class 2 – Wednesday, August 12

GWAR Assignment, Part 1: Introduction to the assignment

Transportation-Land Use Connection

Discussion: Streets of the world

- 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 – Wednesday, August 19

Travel Behavior and Trends

GWAR Assignment, Part 2: Finding and Accessing Library Resources

Transportation Externalities: Natural environment

- 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 – Wednesday, August 26

GWAR Assignment, Part 3: Citations

Transportation Externalities: Safety

Discussion: Travel behavior interviews

- 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 – Wednesday, September 2

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

Class 6 – Wednesday, September 9

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 – Wednesday, September 16

Active Transportation

- 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 – Wednesday, September 23

Transportation Revolutions, Electric Vehicle

More on Transit

Class 9 – Wednesday, September 30

Transportation Revolutions, Part 2: Ridehailing and Autonomous Vehicles

- 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

Class 10 – Wednesday, October 7

Final Exam

TBA

Course wrap-up discussion