

San José State University
Lucas Graduate School of Business
Master of Science in Transportation Management
MTM 201: Transportation Systems and Society
Fall A 2022

Course and Instructor Contact Information

Instructor:	Dr. Kevin Fang
Email:	fangk@sonoma.edu
Office Hours:	By appointment
Class Day/Time:	Tuesdays, 5:30 – 9:30 pm, on July 26, August 2, August 9, August 16, August 23, August 30, September 6, September 13, September 20, and September 27
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 online using Zoom, SJSU's online meeting application.

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/>)

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 GVAR for the MSTM program.

MSTM Program Learning Goals:

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

- Goal 1: Transportation Systems and Society:** Craft management decisions that integrate knowledge of multi-modal transportation, social, and, environmental systems
- Goal 2: Innovation:** Develop innovative solutions to transportation management challenges
- Goal 3: Leadership:** Develop high-impact leadership styles and competencies (traits, skills, behaviors)
- 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 Tumin. *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

We will also utilize the following writing handbook that will be of use throughout the program.

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 series on transportation management issues. Students will explore what scholarly research tells us about a societal transportation problem and a transportation solution/strategy. Students will complete this assignment via two deliverables. Detailed instructions for each portion of the assignment will be shared on Canvas and discussed in class.

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 term paper deliverables. 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 set up 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.

Case Study Presentations

Students will explore interesting examples on topics covered in the course in the form of short presentations (topic prompts will be provided). Several students will present each week in the second half of the course.

Final Exam

Students will complete a final exam which will evaluate their comprehension of the material covered over the whole session. The test will take place during a portion of the last day of class.

End of semester reflections

At the end of the semester, students will briefly answer a few questions on their major takeaways and conclusions on the course content.

Grading Information

The course assignments will be weighted as follows:

Task	% of Course Grade	Learning Objectives Addressed
Term Paper – Initial Deliverables	8%	2, 3, 4, 5, 8
Term Paper – Full Paper	25%	2, 3, 4, 5, 8
Streets of the World Assignment	8%	1, 2, 3, 4, 8
Travel Behavior Interview Assignment	8%	1, 3, 4, 5
Case Study Presentations	8%	2, 3, 4, 5, 6, 7
End of course Reflections	5%	1, 2, 3, 4, 5, 6, 7
Final exam	38%	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
89.5% to 93.32%	A-
86.67% to 89.49%	B+
83.33% to 86.66%	B
79.5% to 83.32%	B-
76.67% to 79.49%	C+
73.33% to 76.66%	C
69.5% to 73.32%	C-
66.67% to 69.49%	D+
63.33% to 66.66%	D
59.5% to 63.32%	D-
Below 59.5%	F

Late papers

Late papers 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) (<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 on Canvas.

Assignment Due Dates

Streets of the World assignment

Tuesday, August 2 (by the start of class)

Travel Behavior assignment

Tuesday, August 23 (by the start of class)

Case Study Presentations

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

Term Paper

Deliverable 1: Friday, September 9 (by 11:59pm)

Deliverable 2: Friday, September 23 (by 11:59pm)

Final Exam

Tuesday, September 27 (during class)

End of semester reflections assignment

Friday, September 30 (by 11:59pm)

Class 1 – July 26

Introductions

Transportation Basics

Key transportation trends

Readings

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

Class 2 – August 2

Discussion: Streets of the world

Streets over time

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 – August 9

Introduction to Travel Behavior

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 – August 16

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 – August 23

Congestion

Discussion: Travel behavior interviews

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 – August 30

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 – September 6

Non-motorized 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 – September 13

Transportation Revolutions: Electric Vehicles, Autonomous Vehicles

- Bloomberg Philanthropies/Aspen Institute. “Taming the Autonomous Vehicle: A Primer for Cities.” 2017. <https://www.bbhub.io/dotorg/sites/2/2017/05/TamingtheAutonomousVehicleSpreadsPDF.pdf>

Class 9 – September 20

Transportation Revolutions: Autonomous Vehicles (continued), Ride-Hailing

- 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/>.
- Tumlin (2012) – Sustainable Transportation Planning
Chapter 4: The City of the Future

Class 10 – September 27

Final Exam

Transportation and Labor Models

Course wrap-up discussion