

San José State University
Lucas Graduate School of Business
Master of Science in Transportation Management
MTM 201: Transportation Systems and Society
Fall A 2024

Course and Instructor Contact Information

Instructor:	Dr. Kevin Fang
Email:	fangk@sonoma.edu
Office Hours:	By appointment via Zoom. Fridays 2-4pm. Sign up at calendly.com/kmfang .
Class Day/Time:	Tuesdays, 5:30 – 9:30 pm, on July 23, July 30, August 6, August 13, August 20, August 27, September 3, September 10, September 17, and September 24
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 GWAR 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

Article readings will be posted as links (see Course Schedule below or Canvas) or files on the course Canvas site.

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.

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 weighted based on the following assignments:

Task	% of Course Grade	Learning Objectives Addressed	Due Date
Discussion and Skills Assignments	30%		
1) Streets of the World		1, 2, 3, 4	Tuesday, July 30 (by start of class)
2) Intro to the Turabian Citation Style		8	Friday, August 16 by 11:59pm
3) Travel Behavior Interviews		1, 3, 4, 5	Tuesday, August 20 (by start of class)
4) Finding Scholarly Literature		8	Friday, August 30 by 11:59pm
5) End of Semester Reflections		1, 2, 3, 4, 5, 6, 7	Tuesday, October 1 by 11:59pm
Presentation	10%	2, 3, 4, 5, 6, 7	Variable dates
Problems/Solutions Paper	20%	2, 3, 4, 5, 8	Friday, September 27 by 11:59pm
Exams	40%		
Test 1		1, 2, 3, 4, 5, 6, 7	Tuesday, August 27
Test 2		1, 2, 3, 4, 5, 6, 7	Tuesday, September 24

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 and Readings

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

Class 1 – July 23

Introductions

Transportation Basics

Key transportation trends

- US Department of Transportation - Bureau of Transportation Statistics, "Pocket Guide To Transportation," January 2014.
<https://data.bts.gov/stories/s/3wd5-w3z4> or <https://rosap.ntl.bts.gov/view/dot/73054>

Class 2 – July 30

Discussion: Streets of the world

Streets over time

Transportation-Land Use Connection

- 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 6

Introduction to Travel Behavior

Finding and Accessing Library Resources

Transportation Externalities: Natural environment

- 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)

Class 4 – August 13

Transportation Externalities: Safety

- David Zipper, "US Traffic Safety Is Getting Worse, While Other Countries Improve," CityLab, November 3, 2022. <https://www.bloomberg.com/news/features/2022-11-03/why-us-traffic-safety-fell-so-far-behind-other-countries>
- Andrew Hawkins, "Truck Bloat is killing us, new crash data reveals," *The Verge*, November 14, 2023, <https://www.theverge.com/2023/11/14/23960624/truck-suv-hood-height-pedestrian-death-report-ihs>.
- 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 20

Congestion

Discussion: Travel behavior interviews

Transportation Externalities: Road Building

- 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 27

Midterm Exam

Transit

- Jarrett Walker, “Does Elon Musk understand urban geometry?,” July 21, 2016, <https://humantransit.org/2016/07/elon-musk-doesnt-understand-geometry.html>.
- Robert Cervero, "Informal Transit. Learning from the Developing World," *Access*, 2021. <http.s://www.accessmagazine.org/spring-2001/informal-transit-learning-developing-world/>

Class 7 – September 3

Non-motorized transportation

- 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 10

Transportation Revolutions, part 1: Electric Vehicles

Class 9 – September 17

Transportation Revolutions, part 2: 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>
- Tripp Mickle, Cade Metz, and Yiwen Lu, “G.M.’s Cruise Moved Fast in the Driverless Race. It Got Ugly”, *The New York Times*, November 3, 2023.
- Vanessa Romo, "Judge says evidence shows Tesla and Elon Musk knew about flawed autopilot system," *NPR*, November 23, 2023. <https://www.npr.org/2023/11/23/1214966530/judge-says-evidence-shows-tesla-and-elon-musk-knew-about-flawed-autopilot-system>

Class 10 – September 24

Final Exam

Transportation and Labor Models

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/>