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](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/](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](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

Free e-textbook
We will utilize the following text:


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.


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:

<table>
<thead>
<tr>
<th>Task</th>
<th>% of Course Grade</th>
<th>Learning Objectives Addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term Paper – Initial Deliverables</td>
<td>8%</td>
<td>2, 3, 4, 5, 8</td>
</tr>
<tr>
<td>Term Paper – Full Paper</td>
<td>25%</td>
<td>2, 3, 4, 5, 8</td>
</tr>
<tr>
<td>Streets of the World Assignment</td>
<td>8%</td>
<td>1, 2, 3, 4, 8</td>
</tr>
<tr>
<td>Travel Behavior Interview Assignment</td>
<td>8%</td>
<td>1, 3, 4, 5</td>
</tr>
<tr>
<td>Case Study Presentations</td>
<td>8%</td>
<td>2, 3, 4, 5, 6, 7</td>
</tr>
<tr>
<td>End of course Reflections</td>
<td>5%</td>
<td>1, 2, 3, 4, 5, 6, 7</td>
</tr>
<tr>
<td>Final exam</td>
<td>38%</td>
<td>1, 2, 3, 4, 5, 6, 7</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Final grade determination</th>
<th>Percentage</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>93.33% and above</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>89.5% to 93.32%</td>
<td>A-</td>
<td></td>
</tr>
<tr>
<td>86.67% to 89.49%</td>
<td>B+</td>
<td></td>
</tr>
<tr>
<td>83.33% to 86.66%</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>79.5% to 83.32%</td>
<td>B-</td>
<td></td>
</tr>
<tr>
<td>76.67% to 79.49%</td>
<td>C+</td>
<td></td>
</tr>
<tr>
<td>73.33% to 76.66%</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>69.5% to 73.32%</td>
<td>C-</td>
<td></td>
</tr>
<tr>
<td>66.67% to 69.49%</td>
<td>D+</td>
<td></td>
</tr>
<tr>
<td>63.33% to 66.66%</td>
<td>D</td>
<td></td>
</tr>
<tr>
<td>59.5% to 63.32%</td>
<td>D-</td>
<td></td>
</tr>
<tr>
<td>Below 59.5%</td>
<td>F</td>
<td></td>
</tr>
</tbody>
</table>
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), 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 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,
- Reid Ewing and Robert Cervero. "Travel and the built environment: A meta-analysis." Journal of the

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
  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.
- Alissa Walker, “Oslo saw zero pedestrian and cyclist deaths in 2019. Here’s how the city did it,”
  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


**Class 6 – August 30**

**Transit**

- Tumlin (2012) – Sustainable Transportation Planning  
  Chapter 8: Transit


**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](https://blog.altaplanning.com/understanding-the-four-types-of-cyclists-112e1d2e9a1b)

**Class 8 – September 13**

**Transportation Revolutions: Electric Vehicles, Autonomous Vehicles**

Class 9 – September 20
Transportation Revolutions: Autonomous Vehicles (continued), 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