

**San José State University**  
**Lucas Graduate School of Business**  
**Master of Science in Transportation Management**  
**Contemporary Issues in Transportation Management**  
**MTM 236**  
**Spring-B 2018**

**Course and Instructor Contact Information**

<b>Instructor:</b>	Andrea Broaddus
<b>Office Location:</b>	Contact instructor
<b>Telephone:</b>	510-314-1065
<b>Email:</b>	Andrea.Broaddus@gmail.com
<b>Office Hours:</b>	By appointment
<b>Class Day/Time:</b>	Monday, 5:30 – 9:30 pm
<b>Classroom:</b>	Room 15-240 (video-conferencing room), Caltrans, 111 Grand Ave, Oakland (For other video-conferencing locations, contact Ms. Viviann Ferea at viviann.ferea@sjsu.edu)
<b>Course website:</b>	Canvas ( <a href="http://sjsu.instructure.com">http://sjsu.instructure.com</a> )

**Course Format**

Students attend class sessions via live video conferencing at the site most convenient to them, with sites at the Mineta Transportation Institute, Caltrans District headquarters, and other participating agencies. 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. We will take breaks as needed during each class.

**Course Materials**

Course materials such as syllabus, handouts, notes, assignment instructions, etc. can be found on the [Canvas Learning Management System course login website](http://sjsu.instructure.com) at <http://sjsu.instructure.com>. Students are responsible for regularly checking with the messaging system through [MySJSU](http://my.sjsu.edu) at <http://my.sjsu.edu> (or other communication system as indicated by the instructor) to learn of any updates.

**Course Description**

In this course we will consider management challenges posed by today's rapidly changing transportation technologies. Students will explore changes in travel behavior and system operations expected as a result of five

current technological trends: electrification, vehicle automation, connected vehicles and infrastructure, car sharing and ride sharing, and mobility as a service. How can transportation agencies identify and prepare for changing infrastructure, financing, and labor needs? How can these technologies contribute toward environmental, equity, and economic efficiency policy goals? The course emphasizes the impact of contemporary, political, and popular views on decision-making in transportation, and how collaborative efforts are made within the framework of government and business environments, and may include significant content via guest speakers/professionals in transportation industry and government.

## **MSTM Program Goals:**

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

### **Goal One: Management of Transportation Organizations**

Develop a system-level and global perspective on the management of transportation organizations.

### **Goal Two: Transportation Policy**

Develop an awareness of the transportation policy environment, including fiscal mechanisms, legislative structures, and intergovernmental coordination.

### **Goal Three: Leadership**

Develop potential for leadership in transportation organizations.

### **Goal Four: Communication Skills**

Develop written and oral communication skills and techniques.

### **Goal Five: Analytical Skills**

Develop ability to analyze management issues and situations using appropriate conceptual approaches.

### **Goal Six: Information Technology**

Develop basic understanding of commonly used information technology applications used by the transportation industry.

## **Course Learning Outcomes**

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

1. Describe the characteristics and drivers of five technological trends which are impacting the transportation system: electrification, automation, connected vehicles and infrastructure, car and ride sharing, and mobility as a service.
2. Describe the human factors, changes in travel behavior and systems operations which are expected as a result of these technology trends.
3. Describe potential policy approaches to manage the impacts of new technologies, including potential positive and negative impacts on infrastructure needs, labor needs, and system performance.
4. Develop strategies for transportation agencies to prepare for changing infrastructure, financing and labor needs, including strategies for engaging the private sector and the public in addressing system management challenges.
5. Write a policy memo for decision-makers which lays out a management challenge posed by technological change, potential policy approaches, anticipated impacts, and makes a recommendation.

## Required Texts/Readings

All assigned readings will be provided on the course Canvas site. Due to the rapidly changing nature of contemporary transportation issues, formal studies are quickly outdated. Therefore, in addition to the required course readings, students are encouraged to regularly follow the news on course topics.

## Course Requirements and Assignments

There are four requirements for completion of the course: (1) Class participation during class and online, (2) Weekly reflections and comments on the course website in response to assigned readings and the news, (3) Serving as lead discussant for online and in-class reflections on assigned readings, (4) Two short papers in the form of policy memos. All written assignments are to be submitted by uploading them to Canvas; please do not email them to the instructor.

### 1. Class participation

Students who attend all classes and contribute at least two comments to the class discussion will receive 100 points for this requirement. For lack of participation in discussion, 10 points will be deducted.

### 2. Weekly reflections and comments

Using the Discussion section of the course website, students will post a short weekly reflection in response to the assigned readings and the news. These can be short (1-2 paragraphs), and should focus on identifying key takeaway points and implications for the transportation system. Students are encouraged to include links to relevant news articles in their comments, and to pose questions inspired by the reading. You will not be able to see the responses of your peers until you have submitted your post. Once you have submitted your reflection, read and respond to at least two peer posts. *This assignment is due 48 hours before class* (Saturday at 5:30). Both your reflections and comments must be submitted by that time for full credit. Since others are dependent on your reflections to do their comments, and you upon theirs, it is advised that you upload your reflections earlier in the week, and then come back later to do your comments. Students who meet this requirement each week (after the first week) will receive 100 points for it. For each week missed, 10 points will be deducted. Reflections and/or comments submitted late will receive 5 points.

### 3. Lead Discussant

On the first day of class, each student will choose a week to serve as lead discussant in class. Class discussions are intended to consider management challenges from several points of view and identify unknowns and potential courses of action, rather than to 'solve a problem'. The role of the discussant is to stimulate class discussions on an important topic and to the degree possible, provide different and critical perspectives. As lead discussant, you are responsible for introducing the topic, developing discussion questions and leading class discussion to draw out different points of view. This involves reading, reflecting, and developing a set of discussion questions about the assigned reading for the week. You may add supplemental readings that you identify on your own, with permission of the instructor. Discussants are encouraged to review materials with a critical eye, where appropriate addressing assumptions, methods, interpretations, and policy/planning inferences of the work as well as the broader applicability of the findings. Depending how many students are in the class, there may be more than one discussant per session.

This assignment is due in two stages as follows:

- 1) One week prior to the date that you will serve as lead discussant: develop a discussion plan with a short statement of key take-away points that you think are important and a list of questions which will allow them to surface. Include any supplemental readings you wish to share

in your write-up (as links or citations). Upload your discussion plan to the course website by the start of class one week before the date that you will serve as discussant.

2) The date you will serve as discussant: Arrive prepared to kick off the discussion on your topic using your list of key points. Be sure to read the online discussion of weekly reflections and comments. You may choose to develop a few introductory slides to present, but this is not required. If you choose to do so, upload the slides to Canvas before the start of class on your date.

Students who complete both parts of this requirement on time will receive 100 points. A discussion plan submitted late will be deducted 25 points. An exception will be made for the student who goes first, in preparation for the second week of class.

#### **4. Policy memos**

Two short papers (3-5 pages), in the form of policy memos, will serve as the final evaluation for this course in lieu of a final exam. The memos will brief a senior transportation official of your choice (real or fictional is ok) on a technology-related management challenge, and conclude with a recommended course of action. We will discuss how to write policy memos in class, and you will be given guidelines and examples. You may choose one of the five major technological trends covered in this class, or identify another (with permission of the instructor), to delve into more deeply. You may choose to take a broad approach, laying out issues and potential actions related to the technology trend, or may take an approach responding to a particular policy proposal. Either way, your memo should address potential major impacts of the technology that the audience for your memo will need to address, such as infrastructure needs and system financing, skills needs and transport labor force, and system performance and policy goals. You should also identify uncertainties and where there is a need for further research or information. The first policy memo is due on April 23 and the second on May 21. They are due at the beginning of class and should be submitted by uploading to the course website. Late submissions will result in a deduction of 25 points.

### **Grading Information**

The four course requirements will be weighted in the final grade as follows:

<b>Task</b>	<b>% of Course Grade</b>
Class Participation	10%
Weekly Reflections	30%
Lead Discussant	20%
Policy Memo 1	20%
Policy Memo 2	20%
Total	100%

#### **Determination of Grades**

Grades for each assignment, and for the course, will be assigned based upon the scores on the scale below. There are a potential of 500 points to be earned by meeting the five course requirements, which are weighted according to the policy above. A student may calculate their final grade by summing up the total points earned

for each requirement, multiplying it by the weight, and summing the results. For example:  
 $(100 \cdot .10) + (95 \cdot .30) + (100 \cdot .20) + (85 \cdot .20) + (90 \cdot .20) = 94$ , which equates to an A.

<b>Percentage</b>	<b>Grade</b>
94% and above	A
93% - 90%	A-
89% - 87%	B+
86% - 84%	B
83% - 80%	B-
79% - 77%	C+
76% - 73%	C
72% - 70%	C-
69% - 67%	D+
66% - 63%	D
62% - 60%	D-
<b>below 60%</b>	<b>F</b>

## **Classroom Protocol for the Lucas College Graduate School of Business**

<http://www.sjsu.edu/cob/Students/policies/index.html>

## **University Policies**

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs' [Syllabus Information web page](#) at <http://www.sjsu.edu/gup/syllabusinfo/>

## **Lucas College and Graduate School of Business Mission**

We are the institution of opportunity in Silicon Valley, educating future leaders through experiential learning and character development in a global business community and by conducting research that contributes to business theory, practice and education.

# MTM 236 / Contemporary Issues in Transportation Management, Spring 2018-A

## Course Schedule

*Note:* This schedule is subject to change with fair notice. Students will be informed of any changes via an email announcement on the course website.

<b>Class Session</b>	<b>Date</b>	<b>Class Topics</b>	<b>Readings</b>
1	March 19	Review the syllabus. Overview technology trend topics. Writing policy memos. Sign up for lead discussant dates*	Thrall, A. (2006), "How to Write a Policy Memo" Behn, R. (2012). "The Craft of Memo Writing" Sample policy memos
2	March 26	Vehicle electrification	About the technology: <a href="https://www.arb.ca.gov/msprog/zevprog/factsheets/technology_guide.pdf">https://www.arb.ca.gov/msprog/zevprog/factsheets/technology_guide.pdf</a>  Policy proposals: <a href="https://www.arb.ca.gov/msprog/zevprog/factsheets/general_zev_2_2012.pdf">https://www.arb.ca.gov/msprog/zevprog/factsheets/general_zev_2_2012.pdf</a> <a href="http://www.cpuc.ca.gov/zev/#Infrastructure">http://www.cpuc.ca.gov/zev/#Infrastructure</a>  Further resources: <a href="https://www.arb.ca.gov/msprog/zevprog/zevprog.htm">https://www.arb.ca.gov/msprog/zevprog/zevprog.htm</a> <a href="https://www.arb.ca.gov/msprog/acc/mtr/acc_mtr_summaryreport.pdf">https://www.arb.ca.gov/msprog/acc/mtr/acc_mtr_summaryreport.pdf</a>
3	April 2	Connected vehicles and smart infrastructure	About the technology: <a href="https://www.its.dot.gov/cv_basics/index.htm">https://www.its.dot.gov/cv_basics/index.htm</a>  Policy proposals: <a href="https://www.nhtsa.gov/technology-innovation/vehicle-vehicle-communication">https://www.nhtsa.gov/technology-innovation/vehicle-vehicle-communication</a> <a href="http://www.trb.org/Main/Blurbs/176508.aspx">http://www.trb.org/Main/Blurbs/176508.aspx</a>  Further resources: <a href="https://www.pcb.its.dot.gov/eprimer/module13.aspx">https://www.pcb.its.dot.gov/eprimer/module13.aspx</a>
4	April 9	Autonomous vehicles	About the technology: <a href="http://css.umich.edu/factsheets/autonomous-vehicles-factsheet">http://css.umich.edu/factsheets/autonomous-vehicles-factsheet</a>  Policy proposals: <a href="https://www.nhtsa.gov/technology-innovation/automated-vehicles-safety">https://www.nhtsa.gov/technology-innovation/automated-vehicles-safety</a>  Further resources:

<b>Class Session</b>	<b>Date</b>	<b>Class Topics</b>	<b>Readings</b>
			<a href="http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_cav_brochure.pdf">http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_cav_brochure.pdf</a> <a href="http://www.caee.utexas.edu/prof/kockelman/public_html/ENORReport_BCAofAVs.pdf">http://www.caee.utexas.edu/prof/kockelman/public_html/ENORReport_BCAofAVs.pdf</a>
5	April 16	Mobility as a service – on-demand ridesourcing/ Transport Network Companies	<p>About the technology:  <a href="http://innovativemobility.org/wp-content/uploads/2015/11/SharedMobility_WhitePaper_FINAL.pdf">http://innovativemobility.org/wp-content/uploads/2015/11/SharedMobility_WhitePaper_FINAL.pdf</a></p> <p>Policy proposals:  <a href="http://www.cpuc.ca.gov/tncinfo/">http://www.cpuc.ca.gov/tncinfo/</a>  <a href="http://www.trb.org/TCRP/Blurbs/174653.aspx">http://www.trb.org/TCRP/Blurbs/174653.aspx</a></p> <p>Further resources:  <a href="http://www.dot.ca.gov/hq/tpp/offices/osp/future-of-mobility.pdf">http://www.dot.ca.gov/hq/tpp/offices/osp/future-of-mobility.pdf</a>  <a href="http://sharedusemobilitycenter.org/research/what-can-transit-agencies-learn-from-tncs-late-night-popularity/">http://sharedusemobilitycenter.org/research/what-can-transit-agencies-learn-from-tncs-late-night-popularity/</a></p>
6	April 23  Policy Memo 1 Due	Shared mobility – car sharing and bike sharing	<p>About the technology:  <a href="http://innovativemobility.org/wp-content/uploads/2015/11/SharedMobility_WhitePaper_FINAL.pdf">http://innovativemobility.org/wp-content/uploads/2015/11/SharedMobility_WhitePaper_FINAL.pdf</a></p> <p>Policy proposals:  <a href="http://innovativemobility.org/wp-content/uploads/2015/07/Carsharing-Parking-Policy-Review-of-North-American-Practices-and-San-francisco-California-Bar-Area-Case-Study.pdf">http://innovativemobility.org/wp-content/uploads/2015/07/Carsharing-Parking-Policy-Review-of-North-American-Practices-and-San-francisco-California-Bar-Area-Case-Study.pdf</a></p> <p>Further resources:  <a href="https://ops.fhwa.dot.gov/publications/fhwahop16022/fhwahop16022.pdf">https://ops.fhwa.dot.gov/publications/fhwahop16022/fhwahop16022.pdf</a></p>
7	April 30	E-commerce and freight	<p>About the technology:  <a href="http://www.citylab-project.eu/brochure/D2_1_brochure.pdf">http://www.citylab-project.eu/brochure/D2_1_brochure.pdf</a></p> <p>Policy proposals:  <a href="https://www.nap.edu/download/22159">https://www.nap.edu/download/22159</a></p> <p>Further resources:  <a href="http://onlinepubs.trb.org/onlinepubs/trnews/trnews306.pdf">http://onlinepubs.trb.org/onlinepubs/trnews/trnews306.pdf</a> (cover article only)</p>

<b>Class Session</b>	<b>Date</b>	<b>Class Topics</b>	<b>Readings</b>
			<a href="http://www.trb.org/FreightTransportation/Blurbs/175965.aspx">http://www.trb.org/FreightTransportation/Blurbs/175965.aspx</a>
8	May 7	Impacts on infrastructure needs and system financing	<a href="https://www.itsa.org/technology-scan-assessments/">https://www.itsa.org/technology-scan-assessments/</a> <a href="https://3rev.ucdavis.edu/policybriefs/">https://3rev.ucdavis.edu/policybriefs/</a> <a href="https://www.urbanismnext.com/resources/">https://www.urbanismnext.com/resources/</a>
9	May 14	Impacts on skills needs and transport labor force	<a href="http://www.esa.doc.gov/reports/employment-impact-autonomous-vehicles">http://www.esa.doc.gov/reports/employment-impact-autonomous-vehicles</a> <a href="https://www.enotrans.org/wp-content/uploads/2017/04/AV_FINAL.pdf?x43122">https://www.enotrans.org/wp-content/uploads/2017/04/AV_FINAL.pdf?x43122</a>
10	May 21 Policy Memo 2 Due	Impacts on system performance and policy goals	TBD

\*Please note that your discussion plan is due ONE WEEK PRIOR to the date that you will serve as lead discussant, as stated in the “Course Requirements and Assignments” section above.