

**San José State University**  
**Lucas Graduate School of Business**  
**Master of Science in Transportation Management**  
**MTM 202: Introduction to Transportation Funding & Finance**  
**Spring-A 2019**

**Course and Instructor Contact Information**

|                         |   |
|-------------------------|---|
| <b>Instructor:</b>      | Will Kempton & Norma Ortega   |
| <b>Office Location:</b> | Contact Instructors   |
| <b>Telephone:</b>       | Will Kempton (714) 272-5270<br>Norma Ortega (916) 803-6239  |
| <b>Email:</b>           | Will – <a href="mailto:Willkempton1947@yahoo.com">Willkempton1947@yahoo.com</a><br>Norma – <a href="mailto:norm7al@yahoo.com">norm7al@yahoo.com</a> |
| <b>Office Hours:</b>    | By appointment  |
| <b>Class Day/Time:</b>  | Thursdays, 5:30 – 9:30pm, January 10 – March 14]  |
| <b>Classroom:</b>       | Specified video-conferencing locations<br>(For locations, contact the MSTM Coordinator, Michelle Waldon)  |
| <b>Course website:</b>  | Canvas ( <a href="http://sjsu.instructure.com">http://sjsu.instructure.com</a> )  |

**Course Format**

Students regular access to email and the internet in order to communicate with the instructors, 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:

**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 Coordinator, Michelle Waldron, at [michelle.waldron@sjsu.edu](mailto: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/456302325>

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>

### **Faculty Web Page and MYSJSU Messaging**

Course materials such as syllabus, handouts, notes, assignment instructions, etc. can be found on my faculty web page at <http://www.sjsu.edu/people/WillKempton> or <http://www.sjsu.edu/people/NormaOrtega> and/or on [Canvas Learning Management System course login website](http://www.sjsu.edu/ecampus/teaching-tools/zoom/index.html) at <http://sjsu.instructure.com>. You are responsible for regularly checking with the messaging system through [MySJSU](http://my.sjsu.edu) at <http://my.sjsu.edu> (or communication system as indicated by the instructor) to learn of any updates.

### **Course Description**

This course provides a basic overview of federal, state, and local transportation funding and financing for all modes. The curriculum will examine the development of transportation funding sources, review the magnitude of program needs, examine the flow of transportation dollars, analyze the workings of transportation financing, and explore the potential of innovative financing mechanisms. The knowledge will then be applied in the preparation of financial strategy for a real world transportation project.

### **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**

Over a ten week period, students completing this class will gain a basic knowledge of transportation funding at the federal, state, and local levels, Course objectives include learning the fundamental concepts, history and evolution of transportation finance in the United States and California; understanding the sources, mechanisms and applications associated with highway, transit and rail funding; exploring the development and implementation of innovative funding approaches; and examining the workings of financial transportation programs and projects. Students will demonstrate this knowledge and progress will be measured through a class assignment involving the development of a financial strategy to fund a real life transportation project.

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

LO1: Identify the basic transportation funding sources, how this funding flows, and how it is applied for all major transportation modes.

LO2: Apply the knowledge gained to assess and determine funding opportunities and strategies for transportation projects in a real world situation.

LO3: Assess, through the assigned financial strategy project, the scope of transportation needs compared to available funding and identify option for closing the gap between these parameters, as well as the challenges to achieving that closure.

## **Required Texts/Readings**

### **Textbook**

Too Big to Fail: American's Failing Infrastructure and the Way Forward – Barry B. LePatner, Foster Publishing, New York. ISBN-10: 0984497803. Available at Amazon and other retailers for about \$26.00.

Other readings are listed on the attached schedule.

## **Library Liaison**

The Library Liaison for the Lucas Graduate School of Business is Christa Bailey ([christa.bailey@sjsu.edu](mailto:christa.bailey@sjsu.edu)).

## **Course Requirements and Assignments**

This class is intended to be interactive. Students will be given the opportunity to ask questions, offer opinions, present and/or question ideas, and to interact with the instructors and fellow students.

Class participation - Read “Too Big to Fall” and prepare a two to three page summary of your observations on this reading. Make a 5-minute presentation on your observations in class. Three students will present their observations in Sessions 3, 4, 5, 7, and 8. Assignments will be made in Session 1. 25% of the overall grade.

Assignment 1: Prepare two or three page summary of federal, state, local and private sources of funds for assigned transportation project (see assignment details that will be handed out separately). Discuss particular challenges of securing these funds, including availability, completion, and timing. *This assignment represents 12.5% of the grade and is due February 7, 2019.*

Assignment 2: Prepare two to three page pro/con analysis of vehicle miles traveled approach to transportation funding versus a continuation of the current fuel tax-based system of financing the transportation program. This assignment will be discussed in class and represents 12.5% of the grade. *Due February 21, 2019.*

Assignment 3: Prepare a financial strategy for funding an assigned transportation project. The student project is 50% of the grade. The project will be identified by the instructors and the assigned projects and format will be discussed at the opening session. *Assignment due March 14, 2019*

## **Grading Information**

### **Determination of Grades**

Late work will be assessed a penalty of 10% of the percentage of the assignment to the overall grade for every day late. There will be no credit for missed assignments. For Assignment 3, late work will not be accepted beyond March 15<sup>th</sup>, as final grades need to be submitted.

Students will have an opportunity during Session 6 to discuss individual progress and to map out any remedial strategies to ensure successful completion of the class.

## Grade calculation

| Task   | % of Course Grade | Course Learning Objective(s) Addressed |
|--|-------------------|--|
| Class participation:<br>Presentation on Too Big to<br>Fall | 25%               | LO1,LO2, LO3                           |
| Assignment 1   | 12.5%             | LO1, LO2,LO3                           |
| Assignment 2   | 12.5%             | LO1, LO2, LO3                          |
| Assignment 3: Preparation of<br>Financial Strategy,        | 50%               | LO1, LO2, LO3                          |

## Determination of Grades

| Percentage    | Grade |
|---------------|-------|
| 97% and above | A+    |
| 93% to 96%    | A     |
| 90% to 92%    | A-    |
| 87% to 89%    | B+    |
| 83% to 86%    | B     |
| 80% to 82%    | B-    |
| 77% to 79%    | C+    |
| 73% to 76%    | C     |
| 70% to 72%    | C-    |
| 67% to 69%    | D+    |
| 63% to 66%    | D     |
| 60% to 62%    | D-    |
| Below 60%     | F     |

## 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.

## Course Schedule

*Note:* This schedule is subject to change with fair notice. Changes will be announced in class and posted on the Faculty Web Page.

| Date   | Class Activities, Readings, & Assignments   |
|--------|---|
| Jan 10 | <p><b>Session 1: First Day of Class – Welcome, Course Outline &amp; Project Review</b></p> <ul style="list-style-type: none"> <li>• Discussion of Class Structure and Assignments</li> <li>• Brief Review of Transportation System Structure</li> <li>• Overview of Transportation Funding – what it is and where does it come from</li> <li>• Discussion of Class Project: Preparing a Financial Strategy for a Major Transportation Project</li> </ul> <p><b>Reading</b><br/>           “Overview of Transportation Funding”, Legislative Analyst Office, 2013 at:<br/> <a href="http://www.lao.ca.gov/handouts/transportation/2013/TransFunding031313pdf">http://www.lao.ca.gov/handouts/transportation/2013/TransFunding031313pdf</a></p> <p>“Transportation Funding in California” Caltrans, 2017 at:<br/> <a href="http://ww.dot.ca.gov/hq/tpp/offices/eab/fundchrtfiles/TransportationFundinginCalifornia2017.pdf">http://ww.dot.ca.gov/hq/tpp/offices/eab/fundchrtfiles/TransportationFundinginCalifornia2017.pdf</a></p> <p><b>Optional Reading</b><br/>           “California’s Tax System: A Primer” at:<br/> <a href="http://www.lao.ca.gov/2007/taxprimer/taxprimer040907.pdf">http://www.lao.ca.gov/2007/taxprimer/taxprimer040907.pdf</a></p> <p>Link to other available LAO publications are located at:<br/> <a href="http://www.lao.ca.gov/Publications">http://www.lao.ca.gov/Publications</a></p> |
| Jan 17 | <p><b>Session 2: Federal Transportation Funding 1</b></p> <ul style="list-style-type: none"> <li>• Authorization Appropriation, Obligations</li> <li>• Highway Transportation Funding</li> <li>• Sources and Eligibility: Highway and Transit</li> <li>• Transit Funding</li> <li>• “Flexible Funding”</li> <li>• How Federal Funding is Managed in California</li> <li>• Guest Lecturer</li> </ul> <p>Reading:<br/>           Financing Federal Highways<br/> <a href="http://www.fhwa.dot.gov/reports/financingfederalaid/financing.highways.pdf">www.fhwa.dot.gov/reports/financingfederalaid/financing.highways.pdf</a><br/>           Read the following sections: Introductions, Authorization Act, Federal Aid Financing Procedures, Appropriations, Limitations on Obligations, the Highway Trust Fund</p>  |

| Date   | Class Activities, Readings, & Assignments  |
|--------|--|
|        | <p>The Fixing America’s Surface Transportation Act (FAST of 2015 Act) Authorization Act at: <a href="http://www.fhwa.dot.gov">http://www.fhwa.dot.gov</a></p> <p>Read the following Fact Sheets:</p> <ul style="list-style-type: none"> <li>• Apportionments</li> <li>• Federal Share</li> <li>• Highway Trust Fund and Taxes</li> <li>• Surface Transportation Block Grant Program</li> <li>• Surface Transportation System Alternatives Program</li> <li>• Performance Management</li> <li>• Transportation Infrastructure and Innovation Act</li> </ul> <p>The Build America Transportation Investment Center (BATIC): An AASHTO Center for Excellence website at: <a href="http://www.financingtransportation.org">http://www.financingtransportation.org</a></p> <p>Read the following sections:</p> <ul style="list-style-type: none"> <li>• Federal Funding</li> <li>• Proposed Funding Sources</li> <li>• Federal Credit Assistance</li> <li>• Bonding and Debt Instruments</li> <li>• Mechanisms to Leverage Federal Aid</li> </ul> |
| Jan 24 | <p><b>Session 3: Federal Transportation Funding 2</b></p> <ul style="list-style-type: none"> <li>• Funding and Politics: From TEA 21 to the FAST ACT: What it means for CA</li> <li>• American Recovery and Reinvestment Act: A Recap</li> <li>• The Next Authorization Bill: The Future of Federal Transportation Funding</li> </ul> <p><b>Reading:</b></p> <p>The Fixing America’s Surface Transportation Act (FAST Act) of 2015 Act Authorization Act at: <a href="http://www.fhwa.dot.gov">http://www.fhwa.dot.gov</a></p> <p>American Recovery and Reinvestment Act (ARRA) of 2009. Download and review the FHWA ARRA Overview at: <a href="http://www.fhwa.dot.gov/economicrecovery">http://www.fhwa.dot.gov/economicrecovery</a></p> <p>Review the Transit Information at: <a href="http://fta.dot.gov">http://fta.dot.gov</a></p> <p><b>Reauthorization Reading:</b></p>   |



| Date   | Class Activities, Readings, & Assignments  |
|--------|--|
|        | Download and read” Executive Summary of the National Surface Transportation Policy and Revenue Commission, January 2008 at:<br><a href="http://mtc.ca.gov/news/info/nstprsc.htm">http://mtc.ca.gov/news/info/nstprsc.htm</a>   |
| Jan 31 | <p><b>Session 4: State Transportation Funding</b></p> <p>Reading:<br/>           2018 Annual Report to the California Legislature at <a href="http://catc.ca.gov">catc.ca.gov</a></p> <p>Senate Bill (SB1)- Road Repair and Accountability Act of 2017 at <a href="http://RebuildingCalifornia.gov">Rebuilding California.gov</a></p> <p>SB1 program fact sheets at <a href="http://catc.ca.gov">catc.ca.gov</a></p> <p>Adopted 2018 STIP and Aeronautics Fund Estimate, August 2017 at <a href="http://catc.ca.gov">catc.ca.gov</a></p> <p>The following LAO transportation reports found in publications at <a href="http://www.lao.gov">http://www.lao.gov</a></p> <ul style="list-style-type: none"> <li>• Overview of the 2017 Transportation Funding Package</li> <li>• 2018-18 Budget: Transportation Proposals</li> <li>• Resources and Transportation Overview</li> <li>• California’s Transportation System</li> </ul> |
| Feb 7  | <p><b>Session 5: Changing State Environment &amp; Local Transportation Funds: A Large Landscape</b></p> <p>State Budget in Crisis and Sustainability Requirements</p> <ul style="list-style-type: none"> <li>• Shifting State Role <a href="http://www.scagrtp.net/gallery?t=chart">http://www.scagrtp.net/gallery?t=chart</a> (Figure 3.6)</li> <li>• Transportation Needs Assessment</li> <li>• Guest Lecturer</li> </ul> <p>The Local Picture</p> <ul style="list-style-type: none"> <li>• Subventions vs. Self-Help</li> <li>• Funding for Transit</li> <li>• Funding for Local Streets and Roads</li> </ul> <p><b>Assignment 1 Due:</b> <i>Prepare a list of federal and state eligible sources of funds for your assigned project, based on Sessions 2, 3, and 4. Discuss particular challenges of securing these funds, including availability and timing. 12.5 percent of grade.</i></p> <p><b>Reading:</b></p>          |

| Date   | Class Activities, Readings, & Assignments   |
|--------|---|
|        | <p><b>Local Funding Charts</b><br/> “Transportation Funding in California,” Caltrans 2017 at <a href="http://www.dot.ca.gov/hq/tpp/eab/fundchrt">http://www.dot.ca.gov/hq/tpp/eab/fundchrt</a> files/Transportation Funding in California 2017 pdf</p> <p><b>Local Option Sales Taxes: Analysis and Articles</b><br/> “California” section from “Local Option Transportation Taxes in the United States (Part 2: “State by State Findings) Todd Goldman, Sam Corbett, Martin Wachs, UCB-ITS-RR2001-4 at: <a href="http://www.uctc.net/papers/560.pdf">http://www.uctc.net/papers/560.pdf</a></p> <p>“Local Option Transportation Taxes: Devolution as Revolution” at: <a href="http://www.uctc.net/access/22/Access%2022%20-%202002%20-%20Local%20Option%20Transportation%20Taxes.pdf">http://www.uctc.net/access/22/Access%2022%20-%202002%20-%20Local%20Option%20Transportation%20Taxes.pdf</a></p> <p>Review CTC Needs Assessment at: <a href="http://www.catc.ca.gov/reports/2011NeedsAssessmentupdated.pdg">http://www.catc.ca.gov/reports/2011NeedsAssessmentupdated.pdg</a></p>  |
| Feb 14 | <p><b>Session 6: Class Progress Discussions</b></p> <p>Instructors will contact students during this four-hour block to discuss individual progress and answer any questions and concerns about the class.</p>  |
| Feb 21 | <p><b>Session 7: Local Transportation Funds 2: Recent Transportation Initiatives</b></p> <p><b>Project Presentations:</b> The Do’s and Dont’s making financial and funding information understandable to policy makers and other human beings.</p> <p><b>Reading:</b><br/> Financing Transportation Infrastructure in California at: <a href="http://www.rand.org/pubs/testimonies/2009/RAND_CT322.pdf">http://www.rand.org/pubs/testimonies/2009/RAND CT322.pdf</a></p> <p>“From Home Rule to Fiscal Rule: Taking a Measure of Local Government Finance in California” at: <a href="http://www.ppic.org/main/publication.asp?i=85">http://www.ppic.org/main/publication.asp?i=85</a></p> <p>Read sections: Introduction, Documenting the Facts, Counties and Their Conundrum, and the Initiative Process and the Public Interest.</p> <p>Project Budgeting with Public Funds – what you need to know:</p> <ul style="list-style-type: none"> <li>• Prerequisites: The Planning and Environmental Process</li> <li>• Capital vs. Operating Budgets</li> <li>• Project Costing: Escalation and Deflation</li> <li>• Packaging your Funding Options: Scheduling, Formula vs. Discretionary Funding Decisions</li> </ul> |

| Date  | Class Activities, Readings, & Assignments   |
|-------|---|
|       | <ul style="list-style-type: none"> <li>• “Timely Use of Funds” and other Expenditure requirements</li> <li>• Guest Lecturer</li> </ul> <p>Research Brief Rand Transportation, Space and Technology “Moving Toward Vehicle Miles of Travel Fees to Replace Fuel Taxes” at <a href="http://www.rand.org">www.rand.org</a></p> <p><b>Assignment 2 Due:</b> <i>Prepare a 2-3 page pro/con analysis of vehicle miles traveled approach to transportation funding versus a continuation of the current fuel tax-based system of financing the program. The assignment will be discussed in class. 12.5 percent of grade.</i></p>  |
| Feb28 | <p><b>Session 8: “Time is Money” Bonding and other Financing Mechanisms</b></p> <p><b>Reading:</b><br/> Financing Transportation in California: Strategies for Change, ITS, University of California Berkeley at:<br/> <a href="http://www.escholarship.org/uc/item/7fh2v7zd?query+financing%20transportation%20in%20California">http://www.escholarship.org/uc/item/7fh2v7zd?query+financing%20transportation%20in%20California</a> Read Chapter 5</p> <p>Also read, Final Project Status Roundtable: Key questions in Project Preparation</p>   |
| Mar 7 | <p><b>Session 9: High Speed Rail Funding and Public Private Partnerships</b></p> <p>High Speed Rail</p> <ul style="list-style-type: none"> <li>• Review of staging plan and funding approach</li> <li>• Is HSR a reasonable investment for California?</li> <li>• Guest Lecturer</li> </ul> <p>Public Private Partnerships</p> <ul style="list-style-type: none"> <li>• A premier on PPP funding</li> <li>• A review of financing plan for Presidio Parkway</li> <li>• Will PPPs work in California?</li> <li>• Guest Lecturer</li> </ul> <p><b>Reading:</b><br/> High Speed Rail 2018 Business Plan at <a href="http://www.hsr.ca.gov">http://www.hsr.ca.gov</a></p> <p>LAO Publication “ Review of HSR Draft 2018 Business plan at <a href="http://lao.ca.gov">lao.ca.gov</a></p> <p>Financial Analysis of Transportation-related Public Private Partnerships – Office of Inspector General, Federal Highway Administration Report November 2011: CR147 at: <a href="http://www.oig.dot.gov/node/5599">http://www.oig.dot.gov/node/5599</a></p> |

| Date   | Class Activities, Readings, & Assignments  |
|--------|--|
|        |  |
| Mar 14 | <p><b>Session 10: Review of Class Highlights and “Take Aways”</b></p> <p><b>Assignment 3: Final Project Due – 50% of grade</b></p> <p><i>Final project financial strategies are by email to the instructor no later than 5:30 pm PST. Project elements are detailed in Final Project descriptions in the Project Profiles, including the following:</i></p> <ul style="list-style-type: none"> <li>• <i>Project schedule, including planning, environment, design and construction</i></li> <li>• <i>Capital budget and fund sources, to match project schedule</i></li> <li>• <i>Operating/maintenance budget and funding sources, for at least a 10-year period</i></li> <li>• <i>Advocacy plan for securing discretionary funding</i></li> <li>• <i>Extra credit: Financing considerations to accelerate construction timeline</i></li> </ul> |