

San José State University
Lucas Graduate School of Business
Master of Science in Transportation Management
BUS 297D: Project Management in Transportation
Fall-B 2019

Course and Instructor Contact Information

Instructor:	Nigel Blampied
Office Location:	Contact instructor
Telephone:	(510) 479-7070
Email:	nigel.blampied@sjsu.edu
Office Hours:	By appointment. Please find a free time on my SJSU Google calendar at least 48 hours ahead, and send an invitation.
Class Day/Time:	Wednesdays, 5:30 - 9:30 pm (Pacific), October 9 - December 18, 2019, excluding November 27.
Classroom:	Online or specified video-conferencing locations (For locations, contact MSTM Coordinator Michelle Waldron)
Grading rules:	Normal grade rules apply
Units:	3
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 by going in person to one of the MTM program videoconferencing sites *or* by joining online using Zoom, SJSU's online meeting application. Details on each option are as follows:

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 Program Coordinator, Michelle Waldron, at michelle.waldron@sjsu.edu.

Online Access via Zoom:

You can join the 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/623374385>

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>

MSTM Program Goals:

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

Goal One: Management of Transportation Organizations: Develop a systems-savvy and global perspective on solving transportation management challenges

Goal Two: Transportation Policy: Develop solutions to transportation management challenges that integrate knowledge of the transportation policy environment

Goal Three: Leadership: Develop potential for leadership in transportation organizations

Goal Four: Communication Skills: Communicate effectively with a diverse workforce and citizenry

Goal Five: Analytical Skills: Identify and evaluate transportation management issues using appropriate methodological approaches

Course Learning Outcomes

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

1. Explain the distinction between project management, program management, and portfolio management.
2. Describe the five standard project management process groups and the ten standard project management knowledge areas and how they are used in projects.
3. Perform basic project scheduling and estimating.
4. Describe the five standard program management performance domains and how they are used in project programs.
5. Describe the six standard portfolio management performance domains and how they are used in project portfolios.
6. Translate the project development terms used in transportation agencies into standard project management terms, and vice versa.
7. Identify how transportation projects are similar to and different from projects defined in the American National and International Standards.

8. Use library and online resources to expand upon the standards and develop an understanding of the state of the art of selected knowledge areas and performance domains in transportation organizations.
9. Evaluate the application of selected knowledge areas and performance domains in a transportation organization.

Required Texts/Readings

Readings for this course are available online through library.sjsu.edu using your SJSU log-on or on the Internet. You might also qualify for student membership in the Project Management Institute, for \$32, which would allow you to download .pdf copies of the PMI documents below.

Required reading

ANSI/PMI 08-002-2013. *The Standard for Program Management – Third Edition*. Project Management Institute, Newtown Square, PA. ISBN: 978-1-935589-68-6

ANSI/PMI 08-003-2013. *The Standard for Portfolio Management – Third Edition*. Project Management Institute, Newtown Square, PA. ISBN: 978-1-935589-69-3

ANSI/PMI 99-001-2017. *The Standard for Project Management*. Published as Part 2 of PMI 2017a below. Project Management Institute, Newtown Square, PA. ISBN: 978-1-62825-184-5

PMI (2006). *Practice Standard for Work Breakdown Structures – Second Edition*. Project Management Institute, Newtown Square, PA. ISBN: 978-1-933890-13-5

PMI (2011a). *Practice Standard for Project Estimating*. Project Management Institute, Newtown Square, PA. ISBN: 978-1-935589-12-9

PMI (2011b). *Practice Standard for Scheduling – Second Edition*. Project Management Institute, Newtown Square, PA. ISBN: 978-1-935589-24-2

PMI (2017a). *A Guide to the Project Management Body of Knowledge (PMBOK® Guide), Sixth Edition*. Project Management Institute, Newtown Square, PA. ISBN: 978-1-62825-184-5

PMI (2019b). *The Standard for Risk Management in Portfolios, Programs, and Projects*. Project Management Institute, Newtown Square, PA. ISBN: 978-1-62825-565-2

Student-selected reading

Academic papers selected by students for their term projects through systematic searches of databases such as Scopus and Proquest Dissertations and Theses.

Optional supplemental reading

Anderson, S., Molenaar, K., and Schexnayder, C. (2007). *Guidance for Cost Estimation and Management for Highway Projects During Planning, Programming, and Preconstruction*, National Cooperative Highways Research Program Report 574, Transportation Research Board, Washington, DC. Available at <http://www.trb.org/Publications/Blurbs/158464.aspx>

Anderson, S., Molenaar, K., and Schexnayder, C. (2009). *Procedures Guide for Right-of-Way Cost Estimation and Cost Management*, National Cooperative Highways Research Program Report 625, Transportation Research Board, Washington, DC. Available at <http://www.trb.org/Main/Blurbs/162271.aspx>

ANSI/PMI 08-004-2013. *Organizational Project Management Maturity Model – Third Edition*. Project Management Institute, Newtown Square, PA. ISBN: 978-1-935589-70-9

ISO 21500:2012 *Guidance on project management*, International Organization for Standardization, Geneva. ISBN 978-9-267107-59-2

- ISO 21503:2017 *Project, programme and portfolio management -- Guidance on programme management*. International Organization for Standardization, Geneva.
- ISO 21504:2015 *Project, programme and portfolio management -- Guidance on portfolio management*. International Organization for Standardization, Geneva.
- ISO 21505:2017 *Project, programme and portfolio management -- Guidance on governance*. International Organization for Standardization, Geneva.
- ISO 21508:2018 *Earned value management in project and programme management*. International Organization for Standardization, Geneva.
- ISO 21511:2018 *Work breakdown structures for project and programme management*. International Organization for Standardization, Geneva.
- ISO/TR 21506:2018 *Project, programme and portfolio management – Vocabulary*. International Organization for Standardization, Geneva.
- Marshall, K. R., and Rousey, S. (2009). *Guidance for Transportation Project Management*. Transportation Research Board, Washington, DC. <https://doi.org/10.17226/23028>.
- PMI (2006). *Government Extension to the PMBOK® Guide – Third Edition*. Project Management Institute, Newtown Square, PA. ISBN: 978-1-930699-91-5
- PMI (2011c). *Practice Standard for Earned Value Management – Second Edition*. Project Management Institute, Newtown Square, PA. ISBN: 978-1-935589-35-8
- PMI (2013a). *Managing Change in Organizations: A Practice Guide*. Project Management Institute, Newtown Square, PA. ISBN: 978-1-62825-015-2
- PMI (2013b). *Software Extension to the PMBOK® Guide – Fifth Edition*. Project Management Institute, Newtown Square, PA. ISBN: 978-1-62825-013-8
- PMI (2014a). *Implementing Organizational Project Management: A Practice Guide*. Project Management Institute, Newtown Square, PA. ISBN: 978-1-62825-035-0
- PMI (2014b). *Navigating Complexity: A Practice Guide*. Project Management Institute, Newtown Square, PA. ISBN: 978-1-62825-036-7
- PMI (2015). *Business Analysis for Practitioners: A Practice Guide*. Project Management Institute, Newtown Square, PA. ISBN: 978-1-62825-069-5
- PMI (2016a). *Construction Extension to the PMBOK® Guide*. Project Management Institute, Newtown Square, PA. ISBN: 978-1-62825-090-9
- PMI (2016b). *Governance of Portfolios, Programs, and Projects: A Practice Guide*. Project Management Institute, Newtown Square, PA. ISBN: 978-1-62825-088-6
- PMI (2016c). *Requirements Management: A Practice Guide*. Project Management Institute, Newtown Square, PA. ISBN: 978-1-62825-089-3
- PMI (2017b). *Agile Practice Guide*. Published with PMI 2017a above. Project Management Institute, Newtown Square, PA. ISBN: 978-1-62825-199-9
- PMI (2017c). *PMI Guide to Business Analysis*. Project Management Institute, Newtown Square, PA. ISBN: 978-1-62825-198-2
- PMI (2017d). *Project Manager Competency Development Framework – Third Edition*. Project Management Institute, Newtown Square, PA. ISBN: 978-1-62825-091-6
- PMI (2018). *The Standard for Organizational Project Management*. Project Management Institute, Newtown Square, PA. ISBN: 978-1-62825-200-2

- Shane, J.S., Gransberg, D.D., and Strong, K.C. (2014). *Project Management Strategies for Complex Projects, Report S2-R10-RW-1*. Transportation Research Board, Washington, DC. Available from <https://www.nap.edu/catalog/22755/guide-to-project-management-strategies-for-complex-projects>
- Shane, J.S., Strong, K.C., and Gransberg, D.D. (2013). *Guide to Project Management Strategies for Complex Projects, Report S2-R10-RW-2*. Transportation Research Board, Washington, DC. Available from <http://www.trb.org/Publications/Blurbs/167482.aspx>
- Trauner Consulting Services (2007). *Innovative Procurement Practices: Alternative Procurement and Contracting Methods, contract No. 53A0104, Task 3.2 and 3.3*. Prepared for California Department of Transportation, May 9, 2007. Sacramento, CA.
- US Department of Defense (2003). *Extension to A Guide to the Project Management Body of Knowledge (PMBOK® Guide) – First Edition, version 1.0*. Defense Acquisition University Press, Fort Belvoir, VA. Available from <https://permanent.access.gpo.gov/lps44091/DoDExtPMBOK--June+03.pdf>

Citation Style and File Name Convention

It is important to properly cite any references you use in your assignments. For this class, use the American Society of Civil Engineers citation style, which is a version of the Author-Date Style described in Kate Turabian's *A Manual for Writers of Research Papers, Theses, and Dissertations*, 9th edition. See <https://ascelibrary.org/doi/pdf/10.1061/9780784479018>.

Please use this file-naming convention on your submittals: YYYY-MM-DD_Lastnameauthor_Title.docx. For instance, reading reflections by Kim Smith due on October 16, 2019 would be: 2019-10-16_Smith_Reading reflections.docx.

Library Liaison

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

Course Requirements and Assignments

These course requirements and assignments conform to the details found from University Syllabus Policy S16-9 at <http://www.sjsu.edu/senate/docs/S16-9.pdf>.

Research Assignment: Students will prepare a paper on a selected project, program, or portfolio management process group, knowledge area, or performance domain in an organization of their choice. The final paper should be between 5,000 and 7,500 words, 12 point, 1.5 spaced, and should:

1. Begin with an executive summary.
2. Describe the current practice in the organization.
3. Review at least ten sources that address the selected process group, knowledge area, or performance domain. These should include sources from the required and optional supplemental reading lists above, plus at least five academic papers.
4. Evaluate the organization's practices in the light of the reviewed sources.
5. Propose steps that the organization could take to improve its practices.
6. Explain the anticipated results that the organization can expect from improving its practices.

. The assignment is broken into the following steps, each due before class begins on that day:

1. Submit the topic for approval, together with an intended list of sources and a description of the method used to select the sources (October 23).
2. Submit a draft paper (November 20).
3. Submit the final paper (December 18).

Students must schedule 30-minute meetings with the instructor to get feedback on the draft paper. Scheduling should be done using the SJSU Google calendar. Find a free time on my calendar at least 48 hours ahead, and send an invitation.

4. **In-Class Presentation:** Students will deliver a summary of the paper (using a PowerPoint presentation) on December 18, in an oral presentation of no more than ten (10) minutes, followed by a question/answer session.

Reading Reflections/In-Class Participation: Students will also be assigned chapters in the reading list. Students will write brief reviews of each week's readings, with each review being between 300 and 500 words, 12 point, 1.5 spaced. Reviews should provide:

1. A summary of the readings.
2. The student's analysis of, and reaction to, the reading.

Each student will also provide two questions for discussion, to be entered separately in a discussion page that will be set up in Canvas.

Course Description

Reviews the generally recognized good practices for the management of projects, programs, and portfolios, as laid out by the Project Management Institute (PMI) and the International Organization for Standardization (ISO). Considers whether and how those practices apply in transportation. Compares project management practices in the US transportation industry to practices in other industries, such as software engineering, and to practices in other countries. Students will examine in depth the use of a selected practice in an organization of their choice.

Grading Information

The course assignments will be weighted as follows:

Task (P/F = "Pass/Fail" grading)	% of Course Grade	Learning Outcomes Addressed
Initial survey (P/F)	3%	1, 2
Discussion questions (2% per week, P/F)	16% (18% with extra credit)	1 - 7
Reading reflections (5% per week)	30% (40% with extra credit)	1 - 7
Research paper topic (P/F)	1%	7 - 9
Draft research paper (P/F)	10%	7 - 9
Final research paper	30%	7 - 9
Final powerpoint	10%	7 - 9

Determination of Grades

- All assignments except the final research paper and final powerpoint will be graded pass/fail.
- Students may omit one set of weekly questions and two weekly reading reflections and still achieve 100% credit. Extra credit will be given for completing more than the minimum number of weekly questions and weekly reading reflections.
- Late assignments will not be accepted for full credit unless students have a compelling reason, for example illness or family emergency. A grade reduction of 1% of the course grade will be applied to reading reflections and the draft research paper for every day or part-day that the assignment is late. A grade reduction of 3% of the course grade will be applied to the final research paper for every day or

part-day that the paper is late. No credit will be given for late surveys, discussion questions, research paper topics, or final powerpoints. All assignments may be submitted early.

Percentage	Grade
94% and above	A
93% to 90%	A-
89% to 87%	B+
86% to 84%	B
83% to 80%	B-
79% to 77%	C+
76% to 73%	C
72% to 70%	C-
69% to 67%	D+
66% to 63%	D
62% to 60%	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](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.

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

As a portion of each class period will be devoted to discussion of the readings, the reading reflections and discussion questions for the assigned readings must be posted to Canvas by 8AM on class meeting days.

Note: This schedule is subject to change with at least one week notice via email. The instructor will confirm at the end of each class the topic and assignments for the next class. Topics may be re-arranged to focus first on the students' greatest interests and facilitate early preparation of the draft paper.

Guest Lecturers: This class may have a guest lecturer for the first portion (approximately 60 minutes) of each class who will discuss the topic for that class.

Date	Class Topics, Activities, Readings, & Assignments
Wednesday, October 9	<p>Pre-reading: Chapter 1, PMI (2017a). <i>A Guide to the Project Management Body of Knowledge (PMBOK® Guide), Sixth Edition</i>. Project Management Institute, Newtown Square, PA. ISBN: 978-1-62825-184-5</p> <p>Chapter 1, ANSI/PMI 99-001-2017. <i>The Standard for Project Management</i>. Published as Part 2 of PMI (2017a).</p> <p>Assignments:</p> <ol style="list-style-type: none"> 1. Respond to a survey on Canvas before 8 am on the day of the class. 2. Submit two discussion questions before 8 am on the day of the class, on the week's discussion page in Canvas. 3. "Like" the questions that you would most like to discuss. The discussion page is set to sort by the number of likes. <p>Topics: Why use standards? What is a project? What is a transportation project? What is the difference between project management, program management, and portfolio management? What are industry sectors?</p> <p>Class activities:</p> <ul style="list-style-type: none"> • Self introductions: Name. Employment and academic background. Why you are taking this course. • Review syllabus, expectations, assignments, final project and presentations: Weekly assignments (see Canvas). Final project. Presentations. • Review the standards development process and why this class uses standards. • Discuss project management certification. • Consider the standard definitions of a project. • Discuss projects as production systems. • Define a "transportation project." • Review the distinction between project management, program management, and portfolio management. • Discuss questions on the readings. • Discuss industry sectors.
Wednesday, October 16	<p>Pre-reading: Chapters 2 and 5, PMI (2017a). <i>A Guide to the Project Management Body of Knowledge (PMBOK® Guide), Sixth Edition</i>. Project Management Institute, Newtown Square, PA. ISBN: 978-1-62825-184-5</p>

Date	Class Topics, Activities, Readings, & Assignments
	<p>PMI (2006). <i>Practice Standard for Work Breakdown Structures – Second Edition</i>. Project Management Institute, Newtown Square, PA. ISBN: 978-1-933890-13-5</p> <p>Assignments:</p> <ol style="list-style-type: none"> 1. Submit reading reflection. 2. Submit two discussion questions before 8 am on the day of the class, on the week’s discussion page in Canvas. 3. “Like” the questions that you would most like to discuss. The discussion page is set to sort by the number of likes. <p>Topics: Project scope and lifecycle. Project vs. product scope. Project charter. Five standard project management process groups. Work breakdown structures.</p> <p>Class activities: TBA</p>
Wednesday, October 23	<p>Pre-reading: Chapter 7, PMI (2017a). <i>A Guide to the Project Management Body of Knowledge (PMBOK® Guide), Sixth Edition</i>. Project Management Institute, Newtown Square, PA. ISBN: 978-1-62825-184-5</p> <p>PMI (2011a). <i>Practice Standard for Project Estimating</i>. Project Management Institute, Newtown Square, PA. ISBN: 978-1-935589-12-9</p> <p>Assignments:</p> <ol style="list-style-type: none"> 1. Submit reading reflection. 2. Submit two discussion questions before 8 am on the day of the class, on the week’s discussion page in Canvas. 3. “Like” the questions that you would most like to discuss. The discussion page is set to sort by the number of likes. 4. Submit research paper topic for approval, together with an intended list of sources and the method used to select the sources. <p>Topics: Cost and estimating.</p> <p>Class activities: TBA</p>
Wednesday, October 30	<p>Pre-reading: Chapter 6, PMI (2017a). <i>A Guide to the Project Management Body of Knowledge (PMBOK® Guide), Sixth Edition</i>. Project Management Institute, Newtown Square, PA. ISBN: 978-1-62825-184-5</p> <p>PMI (2011b). <i>Practice Standard for Scheduling – Second Edition</i>. Project Management Institute, Newtown Square, PA. ISBN: 978-1-935589-24-2</p> <p>Assignments:</p> <ol style="list-style-type: none"> 1. Submit reading reflection. 2. Submit two discussion questions before 8 am on the day of the class, on the week’s discussion page in Canvas. 3. “Like” the questions that you would most like to discuss. The discussion page is set to sort by the number of likes. <p>Topics:</p>

Date	Class Topics, Activities, Readings, & Assignments
	<p>Schedule. Activities. Network diagrams. Critical path method. Gantt charts. Resource levelling. Resource crashing. Line of balance. Predictive vs. adaptive scheduling, including Lean and Agile.</p> <p>Class activities: TBA</p>
<p>Wednesday, November 6</p>	<p>Pre-reading: Chapters 9 and 12, PMI (2017a). <i>A Guide to the Project Management Body of Knowledge (PMBOK® Guide), Sixth Edition</i>. Project Management Institute, Newtown Square, PA. ISBN: 978-1-62825-184-5</p> <p>Assignments:</p> <ol style="list-style-type: none"> 1. Submit reading reflection. 2. Submit two discussion questions before 8 am on the day of the class, on the week's discussion page in Canvas. 3. "Like" the questions that you would most like to discuss. The discussion page is set to sort by the number of likes. <p>Topics: Human resources. Project organization. Reliable promises. Procurement. Contracting methods. Artificial intelligence and projects.</p> <p>Class activities: TBA</p>
<p>Wednesday, November 13</p>	<p>Pre-reading: Chapters 8 and 10, PMI (2017a). <i>A Guide to the Project Management Body of Knowledge (PMBOK® Guide), Sixth Edition</i>. Project Management Institute, Newtown Square, PA. ISBN: 978-1-62825-184-5</p> <p>Assignments:</p> <ol style="list-style-type: none"> 1. Submit reading reflection. 2. Submit two discussion questions before 8 am on the day of the class, on the week's discussion page in Canvas. 3. "Like" the questions that you would most like to discuss. The discussion page is set to sort by the number of likes. <p>Topics: Quality. Built-in quality. ISO 9000. Communication.</p> <p>Class activities: TBA</p>
<p>Wednesday, November 20</p>	<p>Pre-reading: Chapters 4 and 11, PMI (2017a). <i>A Guide to the Project Management Body of Knowledge (PMBOK® Guide), Sixth Edition</i>. Project Management Institute, Newtown Square, PA. ISBN: 978-1-62825-184-5</p> <p>Assignments:</p> <ol style="list-style-type: none"> 1. Submit reading reflection. 2. Submit two discussion questions before 8 am on the day of the class, on the week's discussion page Canvas. 3. "Like" the questions that you would most like to discuss. The discussion page is set to sort by the number of likes. 4. Submit draft research paper. <p>Topics: Risk. Integration.</p>

Date	Class Topics, Activities, Readings, & Assignments
	<p>Class activities: 6:00 pm guest speaker: Laurie Berman, retired Caltrans Statewide Director and former Project Manager in Caltrans District 11, San Diego. Other activities TBA</p>
Wednesday, December 4	<p>Pre-reading: Chapter 13, PMI (2017a). <i>A Guide to the Project Management Body of Knowledge (PMBOK® Guide), Sixth Edition</i>. Project Management Institute, Newtown Square, PA. ISBN: 978-1-62825-184-5 ANSI/PMI 08-002-2013. <i>The Standard for Program Management – Third Edition</i>. Project Management Institute, Newtown Square, PA. ISBN: 978-1-935589-68-6</p> <p>Assignments:</p> <ol style="list-style-type: none"> 1. Submit reading reflection. 2. Submit two discussion questions before 8 am on the day of the class, on the week’s discussion page in Canvas. 3. “Like” the questions that you would most like to discuss. The discussion page is set to sort by the number of likes. <p>Topics: Program Management</p> <p>Class activities: Stakeholder management. Program management. Management of Projects.</p>
Wednesday, December 11	<p>Pre-reading: ANSI/PMI 08-003-2013. <i>The Standard for Portfolio Management – Third Edition</i>. Project Management Institute, Newtown Square, PA. ISBN: 978-1-935589-69-3</p> <p>Assignments:</p> <ol style="list-style-type: none"> 1. Submit reading reflection. 2. Submit two discussion questions before 8 am on the day of the class, on the week’s discussion page in Canvas. 3. “Like” the questions that you would most like to discuss. The discussion page is set to sort by the number of likes. <p>Topics: Portfolio management.</p> <p>Class activities: TBA</p>
Wednesday, December 18	<p>Pre-reading: None.</p> <p>Assignments:</p> <ol style="list-style-type: none"> 1. Submit final research paper. 2. Submit final powerpoint. <p>Class activities: Presentations.</p>