

MSTM Assurance of Learning Summary



AACSB Fifth Year
Continuous Improvement Review
AY2015-2020

MSTM AoL Summary

The MSTM program is a program targeting working professionals in all areas of the transportation sector. The program is delivered remotely at designated Caltrans district offices across the State and via Zoom. The program benefits academically and from a branding perspective from a partnership with the Mineta Transportation Institute (MTI). Moreover, MTI supports the program by awarding on an annual basis an average of \$50,000 in fellowships to qualifying students. Established in 1996, the program also offers three graduate certificates (cluster of four 3-unit courses) in the areas of High Speed and Intercity Rail Management, Transportation Management and Transportation Security Management.

During the accreditation cycle, the program underwent a significant change from an administrative perspective. Originally managed within MTI, the MSTM program is now fully integrated within the LGSB. The program director and faculty are appointed by the LGSB and we hired a program coordinator instead of relying on external MTI staff. Thanks to a significant revision of the application, admission, and advising procedures since Fall 2017, the program has doubled its enrollment. The curriculum has been revised to emphasize research and writing skills as well as new technologies in transportation. In Fall 2018, the program started offering a new series of two capstone courses entailing a first course where students design and collect data for an extensive research project (MTM 283), and a second course where they analyze the data and compile the final report (MTM 290). This new curricular design enhances students' research and writing skills. In Fall 2019, the program began offering a new elective course focusing on new technology in the transportation sector (MTM 236 - Managing Technology Innovations in Transportation) analytics. Finally, the program also developed a new elective course in project management, a critical skill for students.

The program renewed its efforts in enhancing the students' writing skills by hiring, in Fall 2018, a writing consultant embedded in the capstone courses. Moreover, the faculty teaching the capstones integrated in their courses the software Criterion, an AI platform providing feedback on writing skills. Finally, the program invested in the career development of students by hiring, in Fall 2019, a new career coach who provides one-on-one coaching and works with the faculty teaching the leadership core course to administer and analyze 360-evaluation tools.

During this cycle the MSTM program made great assessment strides, both in tool development and student performance following curricular changes. For six of the PLOs the students met or nearly met in both measurements the performance targets. For the other three PLOs, the students exceeded the target in one measurement.

Transportation Systems and Society: The PLO assessment proved that students have both a systems-savvy and global perspective on transportation management challenges. In fact, they exceeded in both measurements, for each learning objective, the performance targets.

Transportation Policy: Students could analyze legislative and administrative structures guiding transportation decisions (2a), but had some trouble identifying appropriate roles for government and private sector actors (2b) or the effects of tax and fee proposals on both transportation objectives and broader policy goals (2c). In an effort to enhance the performance, faculty included more outside speakers to present various perspectives, and better-tailor course materials to students' tax and financial backgrounds.

Leadership: For both leadership assessment methods, a 360-evaluation tool and a leadership-development plan write-up was administered, students met and exceeded the performance targets.

Written and Oral Communication: Students also met oral communication goals through capstone presentations. With the written communication PLO, student did not meet the performance target in the first measurement. Then, the instructor revised writing and analysis rubrics and discussed them in class to better explain expectations. Furthermore, a system of drafting, self-evaluation, and instructor feedback aimed to increase students' abilities and performance. The faculty also started embedding in the course the writing consultant. The second round measures showed these efforts succeeded.

Analytical Skills: The students did not meet the target in the first measurement but succeeded in the second measurement. The curricular changes focusing on the presentation and discussion of the grading rubric, together with a self-evaluation step in the capstone project, were associated with an increase in performance.

Table A below illustrates the assessment target, performance and tools employed in the MSTM program.

Table A - MSTM AoL Summary Table - Target and Result data refers to the % of expected or actual students who scored in the acceptable and exceptional category

MSTM PLO	Target	1 st Measurement		2 nd Measurement		Assessment Tool	Enhancements
		Semester	Result	Semester	Result		
1.a - Transportation Systems and Society – System Savvy	85%	FA19	93%	SP20	100%	Short-Answer Questionnaire	Integration of in-class discussion on the role of different transportation stakeholders. Curricular micro-insertion to highlight different perspectives of similar stakeholders.
1.b - Transportation Systems and Society – Global Solutions	85%	FA19	96%	SP20	89%	Short-Answer Questionnaire	Additional Class readings with international cases. Addition of in-class lecture and review of international cases.
2.a – Transportation Policy – Taxes and Fees	85%	FA19	86%	SP20	94%	Short-Answer Questionnaire	Curricular micro-insertions focusing on the concept of price elasticity and the equity or environmental implications of finance options.
2.b – Transportation Policy – Legislative Structures	80%	FA18	78%	FA19	85%	Mid-term Exam Questions	Addition of guest lecturer on legislative and government dimension of transportation policies. Assessment tool modification to require all students answer all questions related to PLO2b.
2.c – Transportation Policy – Government Entities	80%	FA18	83%	FA19	72%	Mid-term Exam Questions	Addition of guest lecturer on legislative and government dimension of transportation policies. Assessment tool modification to include questions about intergovernmental relations.
3 - Leadership	80%	SP19	100%	SP20	100%	360-evaluation(self-assessment) and Professional Leadership Development Plan	Curricular micro-insertion about assessing leadership behavior. Career Coach providing one-on-one coaching and monitoring of professional leadership development plans.
4.a – Written Communication	80%	SP17	65%	SP20	89%	Capstone Report	Revision, distribution, and in-class discussion of writing rubric. Use of Criterion by students to evaluate report draft. Writing consultant embedded in Capstone course providing feedback and one-on-one coaching sessions.
4.b – Oral Communication	80%	SP19	87%	SP20	80%	Memo Presentation	Presentation and discussion of rubric.
5 – Analytical Skills	80%	SP17	70%	SP20	89%	Capstone Report	Presentation and discussion of rubric. Student self-evaluation of the first draft according to rubric