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| **California State University, Fresno**  **Lyles College of Engineering**  **Department of Construction Management**  **Master of Science in Construction Management**  **Program Coordinator: Yupeng Luo** |
| **Student Outcomes Assessment Plan (SOAP)** |
| Mission Statement |
| The mission of the Department of Construction Management is to “***develop professionals, build leaders, and sustain learners for the architecture, engineering and construction (AEC) industry***”. The vision of the Department of Construction Management is to “***build prominent engaged leaders in the regional, national, and international construction industries***”. |

## Institutional Learning Outcomes, Program Learning Outcomes/Goals, and SLO’s

* 1. Institutional Learning Outcomes.

Students who graduate from California State University, Fresno will demonstrate the importance of discovery, diversity, and distinction by the following:

1. Developing a foundational, broad, and integrative knowledge of the humanities, the arts, the sciences, and social sciences, and their integration with their major field of study.

2. Acquiring specialized knowledge as identified by program learning outcomes in their major field.

3. Improving intellectual skills including critical thinking, effective oral and written communication, information literacy, and quantitative reasoning.

4. Applying knowledge by integrating theory, practice, and problem-solving to address real-world issues using both individual and team approaches.

5. Exemplifying equity, ethics, and engagement.

* 1. Program Learning Outcomes (PLOs) / Student Learning Outcomes (SLOs)

The following are the seven PLOs/SLOs for the MSCM program.

1. Demonstrate problem-solving and decision-making in construction management.
2. Create effective and professional oral and written communications appropriate to the construction discipline.
3. Apply technologies, innovations, and processes to construction management.
4. Demonstrate understanding of principles of leadership in business and construction management.
5. Evaluate professional decisions based on ethical principles in the construction industry.
6. Analyze advanced construction management practices.
7. Apply basic research methods in construction management.

## Curriculum Map [d]: Courses in which SLO’s are addressed and evaluated

A comprehensive mapping was conducted to allocate the PLOs assessment effort to relevant courses. The complete mapping is summarized below in Table 1. The PLOs will be assessed at different levels in these courses, which include: I = Introduced, D = Developed, and M = Mastered. Courses that are used to assess the allocated PLOs directly will be labeled with Direct Assessment (DA). Assessment of outcomes will be carried out systematically every two years.

Table 1. MSCM PLOs and Course Mapping

|  | PLO | PLO | PLO | PLO | PLO | PLO | PLO |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Course | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| CM220 | M (DA) | D | I (DA) |  |  |  |  |
| CM230 |  |  | D | I (DA) |  | D (DA) |  |
| CM240 |  | D (DA) |  | D | D (DA) |  |  |
| CE210/  CM210 |  | M |  |  |  |  | I (DA) |

By allocating the PLOs to specific courses, it is possible to establish the mapping between these PLOs with specific course Student Learning Outcomes (SLOs). This strategy will help reduce instructors’ assessment workload, and ensure consistency between course level and program level assessment efforts.

## SLO’s Mapped to Assessment Measures and Methods [e]

Assessment of the PLOs is achieved through formative instruments to measure students’ progress while going through the program, and with summative instruments to measure the students’ level of achievement at the end of the program. Assessment methods are also divided into direct measures and indirect measures. Direct measures are defined here as first-hand objective assessments of student learning. Direct measure instruments are typically implemented by a course instructor. Indirect measures are defined here as subjective assessments of student learning that are typically reported by the student or a third-party.

Table 2 shows a sample course assessment matrix. The primary mechanism for assessing the PLOs is to assess the courses labeled as Direct Assessment with the mapped SLOs with a two-year review cycle.

Table 2. Course Assessment Matrix

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| SLOs # | PLOs # | Assessment Measures (2 minimum) | | Minimum Standards | Assessment Targets |
| Direct Measures  (DM, 1 minimum.) | Indirect Measures (IM) |
|  |  |  |  |  |  |
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## Assessment Measures: Description of Assignment and Method (rubric, criteria, etc.) used to evaluate the assignment [f]

The CM department will use the following direct and indirect measures for PLOs assessment:

* 1. Direct Measures

1. Course assignments (formative)

2. Course quizzes (formative)

3. Course projects (formative)

* 1. Indirect Measures

1. Course specific surveys and peer evaluations (formative)

2. MSCM graduate exit survey (summative) - to be administered 2 years after the launch of the program.

3. MSCM alumni survey (summative) – to be administered 4 years after the launch of the program.

4. Employer survey (summative) – to be administered 4 years after the launch of the program.

## Assessment Schedule/Timeline [g]

Table 3. Assessment Schedule (on a 3-yr cycle)

| Academic Year | Measure | PLO 1 | PLO 2 | PLO 3 | PLO 4 | PLO 5 | PLO 6 | PLO 7 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2021-2022 | Project  Paper Presentation | CM220 | CM240 |  |  |  |  |  |
| 2022-2023 | Project  Exit Survey |  |  | CM220  Exit Survey | CM230  Exit Survey |  |  |  |
| 2023-2024 | Essay  Project  Paper  Exit Survey |  |  |  |  | CM240  Exit Survey | CM230  Exit Survey | CE210/CM210  (in development) |

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| Closing the Loop [h,j,k] |
| **Fresno State Closing the Loop process is described immediately below.** |
| A major assessment report, which focuses on assessment activities carried out the previous academic year, is submitted in September of each academic year and evaluated by the Learning Assessment Team and Director of Assessment at Fresno State. |
| Program/Department Closing the Loop process:  The MSCM program was launched in the fall of 2020 with a small cohort (5 students). The assessment activities will start in Fall 2021 as suggested in Table 3. The first assessment report will be submitted in September, 2022. |