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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 (ILOs). Fresno State ILO’s are posted on the following webpage: <http://fresnostate.edu/academics/oie/assessment/fresno-state-assessment.html>

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 (Also known as Goals) and related SLO’s

Program Learning Outcomes or GOALS are the specific knowledge and skills that the department/program will develop or strengthen in students. These PLOs or Goals may be broader than SLOs but must be measurable and each PLO must have at least one SLO to which is directly linked/aligned.

1. ***PLO (Goal): Demonstrate problem-solving and decision-making in construction management.***
   1. SLO: Students will analyze case projects and make data-driven decisions in construction management.
2. ***PLO (Goal) Create effective and professional oral and written communications appropriate to the construction discipline.***
   1. SLO: Students will demonstrate proficiency in using construction-specific terminology in oral communications.
   2. SLO: Students will demonstrate proficiency in using construction-specific terminology in written communications.
3. ***PLO (Goal) Apply technologies, innovations, and processes to construction management.***
   1. SLO: Students will use emerging technologies, innovative practices, and effective processes to plan and manage projects.
4. ***PLO (Goal) Demonstrate understanding of leadership principles in business and construction management.***
   1. SLO: Students will apply leadership principles through the analysis of case studies and participation in real-life project simulations.
5. ***PLO (Goal) Evaluate professional decisions based on ethical principles in the construction industry.***
   1. SLO: Students will analyze the implications of ethical decision-making on project outcomes and stakeholder relationships.
6. ***PLO (Goal) Analyze advanced construction management practices.***
   1. SLO: Students will critically assess current trends and best practices in construction project management through research and case studies.
7. ***PLO (Goal) Apply basic research methods in construction management.***
   1. SLO: Students will demonstrate the application of research methods to solve a construction management problem.

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

A comprehensive mapping was conducted to allocate the PLO/SLO assessment effort to relevant courses. The complete mapping is summarized below in Table 1. The PLOs & SLOs 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).

Table 1. MSCM PLOs/SLOs and Course Mapping

| Courses | PLO 1/  SLO 1a | PLO 2/  SLO 2a, 2b | PLO 3/  SLO 3a | PLO 4/  SLO 4a | PLO 5/  SLO 5a | PLO 6/  SLO 6a | PLO 7/  SLO 7a |
| --- | --- | --- | --- | --- | --- | --- | --- |
| CM220 | M (DA) | D | I (DA) |  |  | D |  |
| CM230 | M |  | D | I (DA) |  | D (DA) |  |
| CM240 |  | D (DA) |  | D | D (DA) |  |  |
| CM210 |  | M |  |  |  |  | I (DA) |

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

Assessment of the SLOs 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.

Table 2. SLO’s Mapped to Assessment Measures and Evaluation Methods

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Assmt Measure | Eval. Method | SLO 1a | SLO 2a | SLO 2b | SLO 3a | SLO 4a | SLO 5a | SLO 6a | SLO 7a |
| CM220 Project | Rubric | X |  |  |  |  |  |  |  |
| CM240 Paper | Rubric |  | X |  |  |  |  |  |  |
| CM240 Presentation | Rubric |  |  | X |  |  |  |  |  |
| CM220 Project | Rubric |  |  |  | X |  |  |  |  |
| CM230 Case Study | Rubric |  |  |  |  | X |  |  |  |
| CM240 Quiz | Score |  |  |  |  |  | X |  |  |
| CM230 Project | Rubric |  |  |  |  |  |  | X |  |
| CM210 Paper | Rubric |  |  |  |  |  |  |  | X |
| Exit Survey | Score | X | X | X | X | X | X | X | X |

## 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 PLO assessment:

* 1. Direct Measures

1. Various course projects in CM220 and CM230

2. Case study in CM230

3. Paper in CM240 and CM210

4. Quiz in CM240

5. Presentation in CM240

* 1. Indirect Measures

1. MSCM graduate exit survey (summative) - to be administered 4 years after the launch of the program.

## Assessment Schedule/Timeline [g]

## Table 3. Assessment Schedule (2023-2031)

| AY | Measure | SLO 1a | SLO 2a | SLO 3a | SLO 4a | SLO 5a | SLO 6a | SLO 7a |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2023-2024 | Quiz (CM240),  Project (CM230),  Paper (CM210) |  |  |  |  | X | X | X |
| 2024-2025 | Project (CM220), Paper/Pres.(CM240),  Graduate Exit Survey | X | X |  |  |  |  |  |
| 2025-2026 | Project (CM220),  Case Study (CM 230),  Graduate Exit Survey |  |  | X | X |  |  |  |
| 2026-2027 | Quiz (CM240),  Project (CM230),  Paper (CM210),  Graduate Exit Survey |  |  |  |  | X | X | X |
| 2027-2028 | Project (CM220),  Paper/Pres. (CM240),  Graduate Exit Survey | X | X |  |  |  |  |  |
| 2028-2029 | Project (CM220),  Case Study (CM230),  Graduate Exit Survey |  |  | X | X |  |  |  |
| 2029-2030 | Quiz (CM240),  Project (CM230),  Paper (CM210),  Graduate Exit Survey |  |  |  |  | X | X | X |
| 2030-2031 | Project (CM220), Paper/Pres.(CM240),  Graduate Exit Survey | X | X |  |  |  |  |  |

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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:  Data are collected and analyzed according to the implementation schedule above. This information is then used to write a report, “Summary of Outcome Assessment Results,” for the academic year in which the data are collected. Shortly after the report is compiled, it is presented to and reviewed by the departmental faculty. The findings are discussed and an action plan may be decided upon, as appropriate. If it is decided that an action needs to be taken or a change needs to be made, responsibilities are assigned. The assessment coordinator will follow up on any actions or changes made in the following year and include them in the next annual report. |