

Outcomes Assessment

Student Learning Outcomes and Degree Program Objectives



CAL POLY

Construction Management

COLLEGE OF ARCHITECTURE
& ENVIRONMENTAL DESIGN

PLO# 1. Create written communication appropriate to the construction discipline.

Assessment Measure Summary Results

Assessment Measure 1: Senior Project Abstract Review with Rubric		GOAL NOT MET
Type:	Direct Measure	
Course & Assignment:	CM 462 (Senior Project); Senior Project Abstract	
Goal:	75% of students achieve 80% or better	
Date(s) of OAM reviews:	October 2021 (for 2020) December 2024 (for 2023); March 2025 (for 2024); June 2026 (for 2025)	
Results:	October 2021: 56% of students achieved 80% or better (n=43) December 2024: 43% of students achieved 80% or better (n=30) March 2025: 62% of students achieved 80% or better (n=26) June 2026: 67% of students achieved 80% or better (n=24)	
Revisions made to instrument:	None; developed and validated an additional measure AY2025-2026 for possible incorporation with semester conversion.	
Actions Taken and Results:	Additional faculty members incorporated into review as best practice: Distributed rubric to faculty and students in abstract discussion meetings in 2024. Results showed improved rankings, but still not meeting goal in 2025 and 2026 reviews.	
Recommendations for improvement:	Assessment measure is in wrong location; revise to include assessment in another course starting in AY 2026-27	

Assessment Measure 2: Survey – Graduating Seniors		GOAL MET
Type:	Indirect Measure	
Goal:	80% of students rate their ability as good and above.	
Dates of OAM reviews:	June 2021 (for AY 2020-2021); June 2024 (for AY 2023-2024); June 2025 (for AY 2024-2025); June 2026 (for AY 2025-26)	
Results:	June 2021: 92% of students rated abilities as good or above (n=52) June 2024: 93% of students rated abilities as good or above (n=57) June 2025: 100% of students rated abilities as good or above (n=9) June 2026: 95% of students rated abilities as good or above (n=20)	
Actions Taken:	Student-led senior projects collected qualitative data using focus groups to get additional insights (June 2024 and June 2025).	
Recommendations for Improvement:	Work with ASCM student club to increase response rates.	

Assessment Measure 3: Survey – Industry Employer		GOAL MET
Type:	Indirect Measure	
Goal:	50% of employers rate students' abilities as good and above.	
Dates of OAM reviews:	June 2021 (for AY 2020-21); June 2024 (for AY 2023-2024); June 2026 (for AY 2025-2026)	
Results:	June 2021: 100% of employers rated abilities as good or above (n=21)	

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	June 2024: 85% of employers rated abilities as good or above (n=25) June 2026: 100% of employers rated abilities as good or above (n=30)
Actions Taken:	Advertising survey at annual CMAC meeting to increase response rate
Recommendations for improvement:	Survey lacks consistent responses; work with CMAC Committee to determine ways to increase response rates.

Assessment Measure 4: AIC Exam		GOAL MET
Type:	Indirect Measure (through Fall 2023)	
Goal:	The department's performance is better than the national average.	
Dates of OAM review:	Fall 2021, Spring 2022, Fall 2022, Spring 2023, Fall 2023	
Results:	100% of students outperformed the national average on each exam (Fall 2021, Spring 2022, Fall 2022, Spring 2023, Fall 2023).	
Actions Taken:	None	
Recommendations for Improvement:	After Fall 2023, the AIC exam no longer reports results for this measure; discontinue use of AIC exam as assessment measure for PLO 1	

Method of Assessment:

This assessment evaluates students' senior project abstracts using a standardized rubric created and validated by faculty.

Each year, a representative sample of approximately 30% of all senior project abstracts are randomly selected and reviewed by up to three faculty members. Reviews are conducted one year after the abstracts are published (for example, in 2026, abstracts published to Digital Commons in 2025 are reviewed). We chose to sample annually rather than every three years to create a more manageable workload while still getting a strong sample size. Over the course of four years, there were 299 abstracts submitted to digital commons. By taking between 30 and 45 percent of the total number of submissions annually, we reach a reasonable sample size of 123 abstracts over four years, or approximately 41%.

Actions taken:

Direct Assessment Measure:

The direct assessment measure for student performance is the abstract written for the senior project paper, which constitutes one of the final courses in the curriculum and is worth one unit of credit. Despite various initiatives aimed at enhancing this measure, students continue to struggle to meet the expected standards. Faculty and students have received the assessment rubric, and additional emphasis has been placed on crafting effective abstracts in the prerequisite course.

A closer examination of the data shows that students averaged 80% or higher in three of the four assessed years. In 2025, after sharing the rubric and discussing results in department meetings, the average score improved. That year, 85% of students scored 70% or above, followed by 83% in 2026.

A potential factor contributing to lower scores may be that students do not fully engage with the class, particularly given that they often receive job offers prior to completion and the minimal impact this one-unit class has on their overall GPA.

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To address these challenges, a pilot review of a new assessment instrument and rubric was conducted during the 2025-2026 academic year. This review explored incorporating a literature review component into the assessment process. The newly developed rubric was evaluated by a collaborative team of faculty and staff, with sample papers being scored to ensure consistent evaluation standards. Implementing this as a measurement tool could prove effective, especially if all instructors involved in the CM 4460 Senior Project class, starting in the academic year 2026-2027, adhere to a unified curriculum.

Discussion:

The recent review of senior project abstracts indicates that students are not meeting the department's expectations for written communication. However, there is a noticeable discrepancy when these direct assessment results are compared to indirect assessments, such as industry employer and student surveys. This suggests that the senior project abstract may not accurately reflect students' competencies in producing written communication relevant to the construction discipline.

To address this issue, it may be beneficial to consider alternative assessment methods. Engaging students in the creation of RFIs (Requests for Information), submittals, emails, or internal memos could provide a more relevant measurement of their writing skills. This approach may also accommodate the limited experience some students and faculty have with scholarly writing, particularly in crafting abstracts. By realigning assessment strategies with practical applications, the department can better evaluate and enhance students' written communication abilities in a way that reflects the expectations of the construction industry.

Recommendations for Improvement:

Starting in Fall 2026, we will transition to a semester-based curriculum. The course that includes this assessment measure will be offered by multiple faculty members, focusing on three distinct types of senior projects: research, project, and entrepreneurial. Given the diversity in these classes, the new assessment instrument designed for analyzing literature reviews may not be the most effective tool for our needs.

After carefully reviewing the curriculum map, a more appropriate placement for this assessment could be in CM 4463 – Management of the Firm. This will be discussed and voted on at the Fall 2026 retreat.

Additional Data for Outcomes Assessment Measures:

Assessment Measure 1: Senior Project Abstract Review

Review Year	Averages								No. of Abstracts in Digital Commons	No. of Abstracts Reviewed	Percentage of overall submissions	no. with 80% or better	percent with 80% or better
	Clarity (1 to 4)	Purpose & Summary (1 to 4)	Prof. Writing (1 to 4)	Grammar (1 to 4)	Format (1 to 4)	Keywords (1 to 4)	Total Score	Score Percent					
2021	3.13	3.09	3.25	3.36	2.95	3.50	19.28	80%	96	43	45%	24	56%
2024	2.53	2.80	3.17	3.50	2.67	3.38	15.51	65%	90	30	33%	13	43%
2025	3.21	3.21	3.23	3.12	3.15	3.42	19.35	81%	84	26	31%	16	62%
2026	3.06	3.33	3.29	3.25	2.86	3.58	19.38	81%	79	24	30%	16	67%

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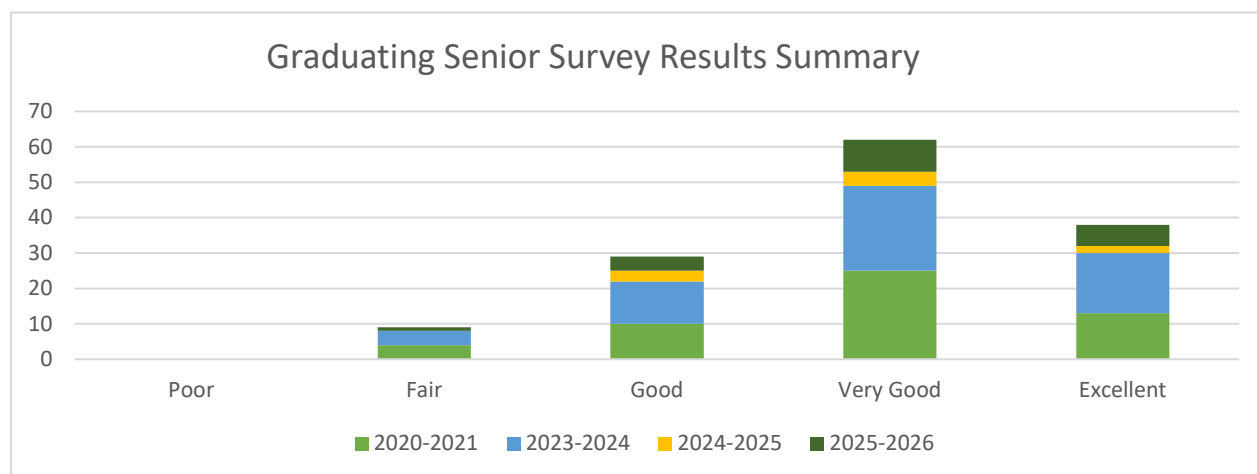
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Assessment Measure 2: Survey – Graduating Seniors

Rating	2020-2021	2023-2024	2024-2025	2025-2026
Poor	0	0	0	0
Fair	4	4	0	1
Good	10	12	3	4
Very Good	25	24	4	9
Excellent	13	17	2	6
Total Responses	52	57	9	20
Total - Good or Better	48	53	9	19
Percentage - Good or Better	92%	93%	100%	95%



Assessment Measure 3: Survey – Industry Employers

Rating	2020-2021	2024-2025	2025-2026
Poor	0	0	0
Fair	0	3	0
Good	4	3	5
Very Good	11	9	8
Excellent	6	5	17
Unable to Assess	0	5	0
Total Responses	21	25	30
Total - Good or Better	21	17	30
Percentage - Good or Better (excludes unable to assess responses)	100%	85%	100%

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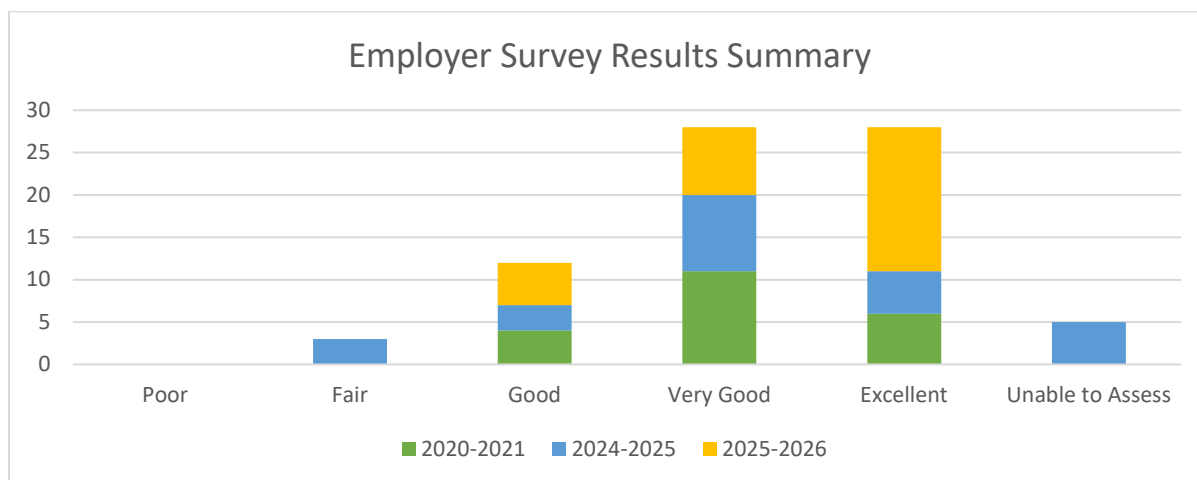
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Assessment Measure 4: AIC Exam Results Summary:

Note: The AIC exam stopped reporting PLO1 results after Fall 2023.

AIC Exam Results - PLO No.1

	Fall 2021	Spring 2022	Fall 2022	Spring 2023	Fall 2023	Spring 2024	Fall 2024	Spring 2025	Fall 2025	Spring 2026
School Average	76%	80%	85%	83%	85%	0%	0%	0%	0%	0%
National Average	67%	75%	76%	77%	77%	0%	0%	0%	0%	0%

