

Outcomes Assessment

Student Learning Outcomes and Degree Program Objectives



CAL POLY

Construction Management

COLLEGE OF ARCHITECTURE
& ENVIRONMENTAL DESIGN

PLO# 9. Apply basic surveying techniques for construction layout and control.*

Assessment Measure Summary Results

Assessment Measure 1: Activity with Rubric		GOAL PARTIALLY MET
Type:	Direct Measure	
Course & Assignment:	CM 314 (Heavy Civil Construction Management); Assignment with Rubric; revised to final exam in CM 239 in Fall 2024 (data provided from CM 239 course)	
Goal:	80% of students achieve 70% or better	
Date(s) of OAM reviews:	June 2021 (for AY 2020-2021) June 2022 (for AY 2021-2022) June 2023 (for AY 2022-2023) June 2024 (for AY 2023-2024) June 2025 (for AY 2024-2025) June 2026 (for AY 2025-2026)	
Results:	87% of students achieved 70% or higher in AY 2020-2021 80% of students achieved 80% or higher in AY 2021-2022 78% of students achieved 80% or higher in AY 2022-2023 78% of students achieved 80% or higher in AY 2023-2024 72% of students achieved 80% or higher in AY 2024-2025 89% of students achieved 80% or higher in AY 2025-2026	
Revisions made to instrument:	June, 2024: Revised instrument to be embedded in CM 239 – Surveying, utilizing the final exam.	
Actions Taken and Results:	Student performance increased, but does not yet meet target. As a result of implementing a broader assessment tool and requiring CM 239 for all students, surveying skills are now measured more accurately and evaluation is consistent, with an increased focus on building construction layout.	
Recommendations for Improvement:	A broader assessment tool will better measure student surveying skills and provide more useful feedback. Requiring CM 239 for all students will ensure consistent evaluation and a stronger focus on building construction layout.	

Assessment Measure 2: Survey – Graduating Seniors		GOAL NOT 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: 52% of students rated abilities as good or above (n=53) June 2024: 64% of students rated abilities as good or above (n=58) June 2025: 44% of students rated abilities as good or above (n=9) June 2026: 60% of students rated abilities as good or above (n=20)	

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PLO 9: Surveying

Date of Report: July 2026

*Previously PLO Number 11. The number was adjusted when original PLOs 7 (documents), 9 (multi-disciplinary skills), and 13 (risk management) were removed from the original required PLO assessment measures.

As prescribed in Section 8.5.1 and 9.4.1 of ACCE Document 103, Standards and Criteria for the Accreditation of Construction Education Programs

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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: 83% of employers rated abilities as good or above (n=21) June 2024: 75% of employers rated abilities as good or above (n=12) June 2026: 90% 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	
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, Spring 2025, Fall 2025	
Results:	100% of students outperformed the national average on each exam (Fall 2021, Spring 2022, Fall 2022, Spring 2023, Fall 2023, Spring 2025, Fall 2025).	
Actions Taken:	None	
Recommendations for Improvement:	None	

Method of Assessment:

This assessment evaluates students' ability to apply basic surveying techniques for layout and control. The assessment measure uses the final exam with rubric.

Actions taken:

Direct Assessment Measure:

During the 2024-2025 academic year, we created a new assessment measure to evaluate student performance, utilizing the final exam for the newly created CM 239 – Construction Surveying course. Data are provided for all quarters the course was completed, evaluating student performance over time.

The previous assessment was revised to address outdated content and faculty changes. The new method, developed by the current lead faculty and course champion for CM 239, ensures alignment with current course objectives and assessment standards.

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PLO 9:Surveying

Date of Report: July 2026

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Discussion:

The assessment measure is currently under review by the outcomes assessment committee and will receive final approval from the course champion. For this six-year evaluation, the final exam serves as the assessment instrument. Moving forward, adopting a more comprehensive assessment tool will better measure students' ability to apply surveying techniques for construction layout and control, providing a clearer picture of their skills beyond the scope of a single exam.

Recommendations for Improvement:

Adopting a more comprehensive assessment tool will give a fuller understanding of students' surveying skills for construction layout and control. This change will allow for more targeted feedback and continuous improvement of both teaching methods and student learning.

Currently, most but not all CM students are assessed, as some take BRAE 239 – Surveying instead of CM 239. Making CM 239 a requirement for all CM students is recommended to ensure consistent assessment and a stronger focus on building construction layout and control, aligning with program goals.

Additional Data for Outcomes Assessment Measures:

Assessment Measure 1: Final Exam with Rubric

Quarter	Number of CM students who completed the assignment	Total number of CM students with 70 or better on the assignment	Percent of students with 70 or more
Fall 2020	35	27	77%
Winter 2021	45	41	91%
Spring 2021	58	52	90%
Fall 2021	63	44	70%
Winter 2022	39	33	85%
Spring 2022	39	36	92%
Fall 2022	60	51	85%
Winter 2023	36	24	67%
Spring 2023	38	30	79%
Fall 2023	39	34	87%
Winter 2024	30	20	67%
Spring 2024	39	30	77%
Fall 2024	35	26	74%
Winter 2025	35	15	43%
Spring 2025	40	39	98%
Fall 2025	37	29	78%
Winter 2026	60	57	95%

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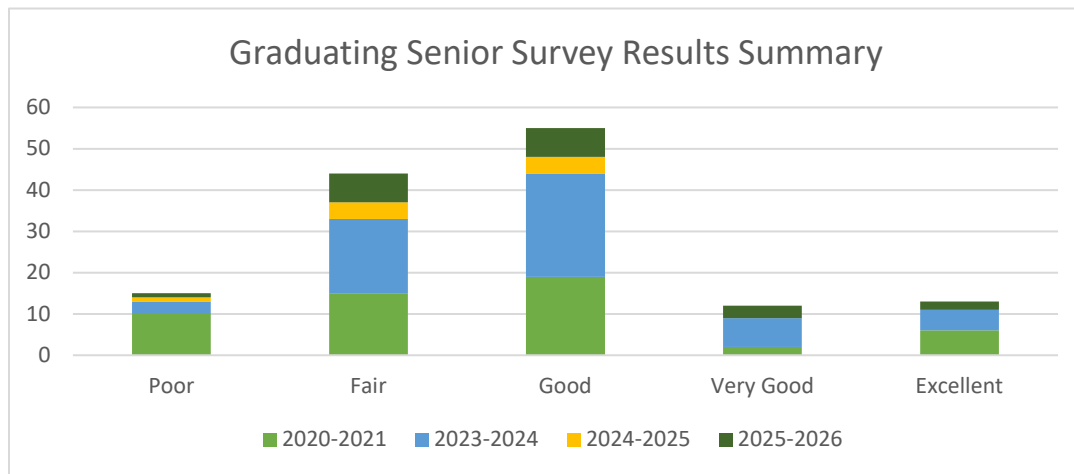
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Assessment Measure 2: Survey – Graduating Seniors

Rating	2020-2021	2023-2024	2024-2025	2025-2026
Poor	10	3	1	1
Fair	15	18	4	7
Good	19	25	4	7
Very Good	2	7	0	3
Excellent	6	5	0	2
Total Responses	52	58	9	20
Total - Good or Better	27	37	4	12
Percentage - Good or Better	52%	64%	44%	60%



Assessment Measure 3: Survey – Industry Employers

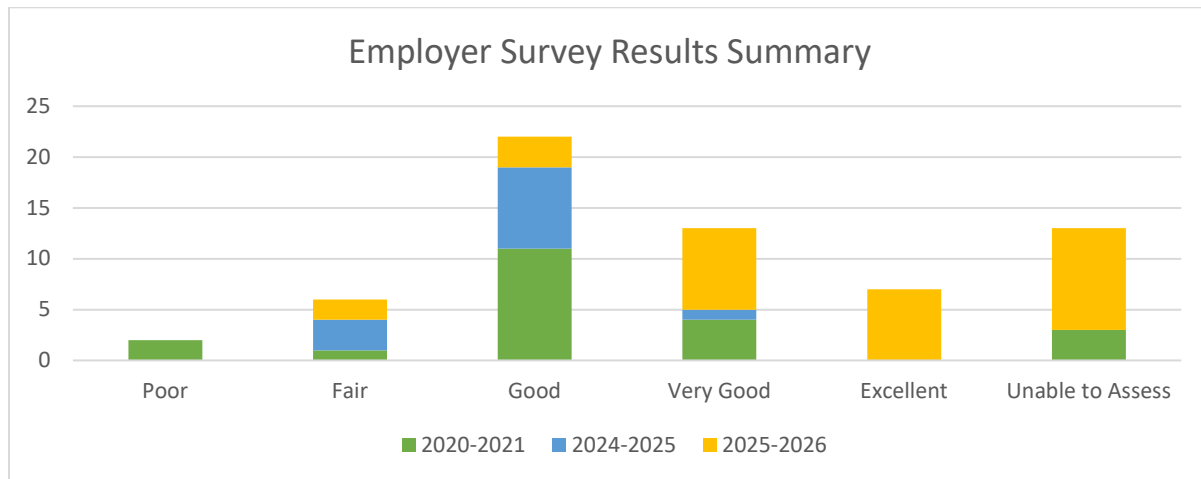
Rating	2020-2021	2024-2025	2025-2026
Poor	2	0	0
Fair	1	3	2
Good	11	8	3
Very Good	4	1	8
Excellent	0	0	7
Unable to Assess	3	0	10
Total Responses	21	12	30
Total - Good or Better	15	9	18
Percentage - Good or Better (excludes unable to assess responses)	83%	75%	90%

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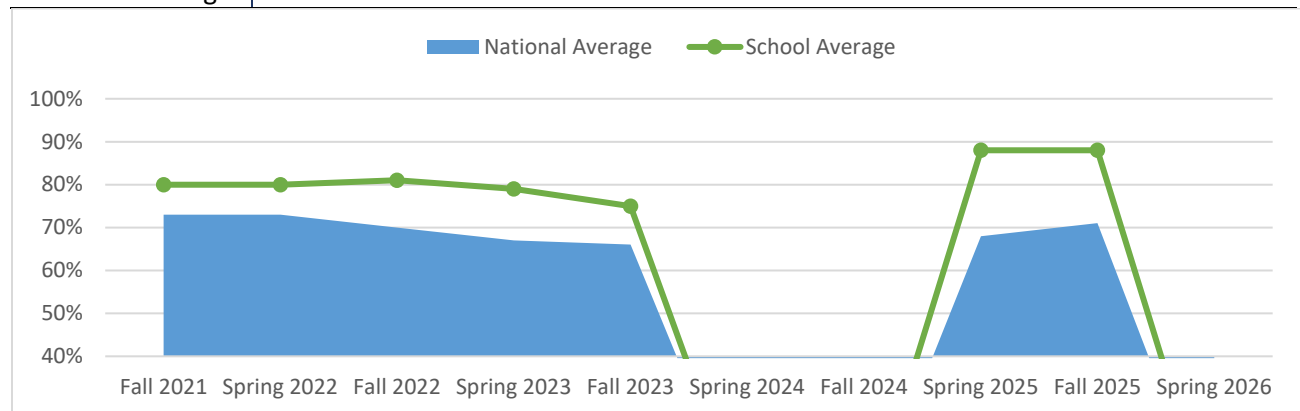


Assessment Measure 4: AIC Exam Results Summary:

Note: The AIC exam did not report PLO 9 results for Spring 2024, Fall 2024, and Spring 2026.

AIC Exam Results - PLO No.9

	Fall 2021	Spring 2022	Fall 2022	Spring 2023	Fall 2023	Spring 2024	Fall 2024	Spring 2025	Fall 2025	Spring 2026
School Average	80%	80%	81%	79%	75%	0%	0%	88%	88%	0%
National Average	73%	73%	70%	67%	66%	0%	0%	68%	71%	0%



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