

Quality Improvement Plan

Construction Management Program
Del E. Webb School of Construction
School of Sustainable Development and the Built Environment
Ira A. Fulton Schools of Engineering
Arizona State University
2023 Major Revisions

Table of Contents

| | |
|--|---|
| 1.0 Program Vision | 2 |
| 2.0 Program Mission Statement | 2 |
| 3.0 Strategic Plan | 3 |
| 3.1 Goals to Achieve Program Mission | 3 |
| 3.2 Review of Resources and External Factors | 4 |
| 3.3 Updating of the Strategic Plan | 4 |
| 4.0 Program Assessment Implementation Plan | 5 |
| 4.1 Program Mission Statement | 5 |
| 4.2 Degree Program Objectives | 5 |
| 4.3 Degree Program Student Learning Outcomes | 6 |
| 4.4 Assessment Tools | 6 |
| 4.5 Performance Criteria | 7 |
| 4.6 Evaluation Methodology | 7 |
| 4.7 Review of the Assessment Implementation Plan | 7 |
| 4.8 Updating of the Assessment Plan | 7 |

1.0 Program Vision

The Del E. Webb School of Construction improves the quality of life through the global built environment.

2.0 Program Mission Statement

The CM degree program mission is to take a construction industry leadership role in education and research by preparing students, enabling faculty, and facilitating industry to advance the collaborative construction process and achieve sustainability in the built environment.

3.0 Strategic Plan

The purpose of this strategic plan is to outline the systematic and sustained efforts needed to enable the degree program to fulfil its mission.

3.1 Goals to Achieve Program Mission

The following goals are intended to guide the direction of the Del E. Webb School of Construction (DEWSC) in meeting its mission. DEWSC will aim to:

- A. Be nationally recognized by the construction industry as a preferred source for new college graduate hires.
 - a. Recruit and retain outstanding and diverse faculty and faculty associates to provide a curriculum and inclusive learning experience that is exceptional in both theoretical and applied knowledge.
Metric: real placement rate of students within 6 months of graduation (% , trends, moving 3-year average).
 - b. Support professional development of faculty members in both technical skill and teaching effectiveness.
Metric: Number of workshops offered (technical and teaching).
 - c. Host lectures and other interactions by industry leaders for students to learn from industry partners.
Metric: Number of lectures offered and satisfaction rate.
- B. Have a globally impactful research program
 - a. Research program produces outcomes that are applicable and responsive to current and future industry needs.
Metric: Published papers, funding, proposal count.
 - b. Have an active and robust Eminent Scholar program.
Metric: Eminent scholar activities.
 - c. Increase the amount of industry sponsored research
Metric: Amount of industry sponsored projects, industry involvement in research.
- C. Have a diverse, engaged, and growing student body and alumni
 - a. Encourage and incentivize students to participate in construction related student organizations and competitions to expand their experiential learning.
Metric: Membership of student organizations (% of total DEWSC, trends).
 - b. Grow total enrollment by 25% every 5 years.
Metric: Enrollment (Total, trends).
 - c. Create and deliver a fully online BS program using currently accepted methodology and pedagogy.
Metric: Start date of online BS program.
 - d. Have high engagement from alumni each year via participation, donations,

sponsorships, and other activities.

Metric: Engagement from alumni (% with goal of 25%).

3.2 Review of Resources and External Factors

The status of the degree program shall be reviewed annually by the faculty during the first DEWSC faculty meeting of each academic year called “Assurance of Learning Workshop.” Available resources and support, as well as external factors affecting the program shall be considered.

The status of the degree program shall be reviewed annually by of the Industrial Advisory Council. Available resources and support, as well as external factors affecting the program shall be considered.

3.3 Updating of the Strategic Plan

The strategic plan shall be reviewed and updated every five years. Input from faculty and the industrial advisory board will be considered during the review and updating of the strategic plan.

4.0 Program Assessment Implementation Plan

The intent of the assessment plan is to create the framework to provide evidence of the program's effectiveness in preparing student practitioners.

4.1 Program Mission Statement

As stated in Section 2.0, the mission statement is:

The CM degree program mission is to take a construction industry leadership role in education and research by preparing students, enabling faculty, and facilitating industry to advance the collaborative construction process and achieve sustainability in the built environment.

4.2 Degree Program Objectives

In order to meet its mission and goals as outlined in the strategic plan, the construction management program will produce graduates that shall be able to:

- 1. Create written communications appropriate to the construction discipline.*
- 2. Create oral presentations appropriate to the construction discipline.*
- 3. Create a construction project safety plan.*
- 4. Create construction project cost estimates.*
- 5. Create construction project schedules.*
- 6. Analyze professional decisions based on ethical principles.*
- 7. Analyze methods, materials, and equipment used to construct projects.*
- 8. Apply electronic-based technology to manage the construction process.*
- 9. Apply basic surveying techniques for construction layout and control.*
- 10. Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process.*
- 11. Understand construction accounting and cost control.*
- 12. Understand construction quality assurance and control.*
- 13. Understand construction project control processes.*
- 14. Understand the legal implications of contract, common, and regulatory law to manage a construction project.*
- 15. Understand the basic principles of sustainable construction.*
- 16. Understand the basic principles of structural behavior.*
- 17. Understand the basic principles of HVAC, electrical, and plumbing systems.*

Since these are the same as the Student Learning Outcomes that are assessed, the assessment of the SLOs functions as the assessment of the Program Objectives.

4.3 Degree Program Student Learning Outcomes

The program learning outcomes are the same as the American Council for Construction Education (ACCE) Student Learning Outcomes.

Upon graduation from the DEWSC construction management program, a graduate shall be able to:

- 1. Create written communications appropriate to the construction discipline.*
- 2. Create oral presentations appropriate to the construction discipline.*
- 3. Create a construction project safety plan.*
- 4. Create construction project cost estimates.*
- 5. Create construction project schedules.*
- 6. Analyze professional decisions based on ethical principles.*
- 7. Analyze methods, materials, and equipment used to construct projects.*
- 8. Apply electronic-based technology to manage the construction process.*
- 9. Apply basic surveying techniques for construction layout and control.*
- 10. Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process.*
- 11. Understand construction accounting and cost control.*
- 12. Understand construction quality assurance and control.*
- 13. Understand construction project control processes.*
- 14. Understand the legal implications of contract, common, and regulatory law to manage a construction project.*
- 15. Understand the basic principles of sustainable construction.*
- 16. Understand the basic principles of structural behavior.*
- 17. Understand the basic principles of HVAC, electrical, and plumbing systems.*

4.4 Assessment Tools

Each SLO from section 4.3 will be evaluated with at least one direct and one indirect assessment tool each year. Data will be collected each semester, combined by academic year and analyzed on an academic year basis. It is anticipated that as the program continues to assess, some of these direct assessment tools may change as instructors and curriculum changes; however, an effort is made to keep these the same from year to year.

The direct assessment tool will be a whole or part of an assignment or examination that is part of a course grade. All direct assessment tools are a measure of the performance of an individual student and not a group.

The indirect measure is a student exit survey, given to graduating seniors. Each SLO will be measured on a 1 – 7 scale. The exit survey is provided electronically to students, who must provide proof of completion in order to receive their graduation Del E. Webb School of Construction hard hat. Since this procedure was instituted during 2020, we

have had 100% completion of senior exit surveys.

4.5 Performance Criteria

The minimum performance criteria for each direct assessment tool shall be 70% of the students attaining a 70% score on the assessment tool.

The minimum performance criteria for each indirect assessment shall be a 5.0 on a 1 to 7 scale.

4.6 Evaluation Methodology

Individual faculty will collect the data for the direct assessment measures they are assigned. In May of each academic year, they will provide this data (from both semesters) to the Programs Chair and the Undergraduate Coordinator.

The Undergraduate Coordinator will analyze the direct assessment data. The undergraduate coordinator will also collect and analyze the indirect senior exit surveys. The compiled direct and indirect assessment analysis will be sent to the faculty.

During the first faculty meeting of the year, called “Assurance of Learning Workshop”, each faculty member assigned to a direct assessment measure will lead the discussion to recommend a change to improve student performance, or if the performance criteria is met, the faculty member will recommend ways to ensure continued compliance. All faculty will participate in the discussion and can provide input. These recommendations will be compiled by the undergraduate coordinator and approved at the first Fall semester faculty meeting and Fall Industry Advisory Council meeting held after the Assurance of Learning Workshop results are compiled.

The undergraduate coordinator will assemble these changes implemented by the faculty and post to the program web page and any other location to meet accreditation public documentation standards. A summary of changes and actions taken will be kept for at least 6 years.

4.7 Review of the Assessment Implementation Plan

The assessment plan shall be reviewed annually by the faculty during the first Fall semester faculty meeting. Appropriateness of the objectives, outcomes, assessment tools, performance criteria, and evaluation methodology shall all be examined by the faculty.

4.8 Updating of the Assessment Plan

The assessment plan shall be reviewed and updated every five years. Input from faculty, and the industrial advisory board will be considered during the review and updating of the assessment plan, especially regarding the formulation of the Student Learning Outcomes (SLOs).