

**M.E. Rinker, Sr. School of Construction Management
University of Florida**



**Quality Improvement Plan
(2021-2025)**

June 11, 2021

RESTRUCTURED FORMAT

Table of Contents

1. Introduction
2. Requirements
3. Educational Unit Strategic Plan
 - a. Reference M.E. Rinker, Sr. School of Building Construction Strategic Plan (May 15, 2021)
 - b. Reference ACCE 103B 2019.10.21, Section 9.1.2
4. Degree Program Assessment Plan
 - a. Reference M.E. Rinker, Sr. School of Building Construction Strategic Plan (May 15, 2021) – Section 7.0.
 - b. Reference ACCE 103B 2019.10.21, Section 9.1.3
5. Degree Program Assessment Implementation Plan
 - a. Reference M.E. Rinker, Sr. School of Building Construction Strategic Plan (May 15, 2021) – Section 7.0.
 - b. Reference ACCE 103B 2019.10.21, Section 9.1.4
6. Appendices

INTRODUCTION

Continuous improvement is the process of planning work, conducting work, reflection and, if needed, changing the work to a higher value state in a predicted cadence. This report reflects how the Rinker School has adapted this process in the form a Quality Improvement Plan (QIP). The American Council for Education (ACCE) prescriptively outlines the necessary elements of a plan under Section 9 “Academic Quality Planning Process and Outcome Assessment” of the ACCE Document 103B (October 21, 2019).

As defined by the ACCE, outcome assessments should be a systematic process of gathering and interpreting information to verify, and potentially improve, that program is meeting its self-defined goals. The process should support and lead to program enhancement over time.

REQUIREMENTS

Requirements of the program are put in place to ensure consistent application of processes within the Rinker School. This enclosed program fulfills the minimum requirements set forth by the ACCE. Components of the program include references to the Rinker School Strategic Plan, references to the Rinker School Program Assessment Plan, also included in the Strategic Plan, and the Assessment Implementation plan that is more clearly defined in this document.

Per ACCE Reference documents, Learning Outcomes: The set of knowledge, skills, and abilities to be attained by students upon completion of an event. Further clarifications are as follows:

- Course Learning Outcomes (CLOs): Learning Outcomes identified for a single course
- Program Learning Outcomes (PLOs): Learning Outcomes identified for graduation as defined by the degree program. PLOs may differ from institution to institution as they may represent the individual character of the program and may place emphasis on specialized topical areas.
- Student Learning Outcomes (SLOs): Learning Outcomes identified for graduation from an accredited degree program as defined by ACCE, herein. The SLOs establish the minimum level of learning and the body of knowledge to be addressed by the degree program.
-

Educational Unit Strategic Plan

This section references the Rinker School Strategic Plan 2021 – 2025 (adopted May 15, 2021) and Section 9 of the ACCE Document 103B (adopted October 21, 2019).

Comprehensive Strategic Plan –

The Rinker School Strategic Plan encompasses the following –

- Vision and mission statements
- Teaching, mentoring, and learning
- Research, discovery, and innovation
- Outreach, collaboration, and engagement
- Facilities, human resources, and fiscal management
- Annual assessment and continuous improvement

Internal Status and External factors that influence the program

Each section of the Rinker School Strategic Plan addresses the following –

- Five year goals
 - This section describes the goal alignment over a five year period
- Core strategies
 - This section provides the mechanisms for evaluation, means of action, and measures for evaluating progress
- Key Performance Indicators (KPI's) are readily available and reviewed data points used to guide the school's actions, both internal status as well as external influences. KPI sources, champions, and actions are included in an annual review to ensure a closed loop process that allows for continuous improvement.

Inclusive and Periodically Updated

The Strategic Plan is a living document that provides a roadmap that will be reviewed annually at the School's Fall Semester retreat and updated as needed to enable the School to accomplish its mission and attain its vision. This Strategic Plan is intended to serve as a communications tool for all stakeholders and interested parties detailing our focus on supporting the University of Florida's ascent into the Top 5 Public Universities.

DEGREE PROGRAM ASSESSMENT PLAN

This section references the Rinker School Strategic Plan 2021 – 2025 (adopted May 15, 2021) and Section 9 of the ACCE Document 103B (adopted October 21, 2019).

The Rinker School provides annual surveys of graduates, employers, industry advisory board, and capstone projects as evidence of its effectiveness in preparing construction practitioners.

Mission Statement of the Degree Program

The vision of the M.E. Rinker Sr., School of Construction Management is to be the preeminent institution for construction education and research. Through a culture of zero tolerance for discrimination, intimidation, or inequity, the Rinker School will be the most highly sought-after construction management education program by faculty, staff, students, and industry partners. The intent is that the “Rinker School,” is immediately synonymous with excellence in construction education, research, and collaboration with and service to the industry.

The vision for the School is simple in concept but difficult to attain. There are many excellent construction programs in the U.S. and around the world, so the vision establishes high levels of achievement for the Rinker School. To be considered in the very top tier among many fine institutions will require the Rinker School’s dedication, resources, teamwork, and perseverance.

The vision will be made tangible not only through the performance of faculty, staff, and students but also reflected in the Rinker School’s hiring, programs, and strategic alliances / collaboration with related disciplines from college and university levels; peer institutions; end-users and industry. This vision requires strong fiscal management principles and a proper succession plan for leadership transitions to mid-career and up-and-coming faculty leaders.

MISSION STATEMENT

The mission of the M.E. Rinker, Sr. School of Construction Management is to be the center of excellence for construction education and research. The Rinker School will pursue this by:

1. Promoting professional and ethical behavior in education and practice,
2. Advancing the industry by creating new knowledge through research and scholarly activities,
3. Educating individuals in the principles, knowledge and skills required to be successful in their professional careers,
4. Providing service and transferring knowledge to the citizens of Florida, the construction industry, professional societies, the nation, and the world, and
5. Narrowing the gap between Industry- Research- Classroom continuum through applied research activities and instructional relevance.

The Rinker School will achieve this mission by fostering a core culture of value and quality.

Degree Program Objectives

See Strategic Plan Table 1: Five Year Goals, Strategies, Key Performance Indicators, and Data Champion for All Degree Programs.

Program Learning Outcomes

The Program Learning Outcomes (PLO) for the degree program are:

- PLO 1. Apply knowledge of engineering, materials, methods, equipment, and processes to safely construct buildings and structures.
- PLO 2. Survey and quantify building components to estimate project costs, analyze progress, and control expenditures.
- PLO 3. Create an effective planning, scheduling and control system by identifying, evaluating and organizing the diverse elements of a construction project.
- PLO 4. Set up and manage project administration and management systems to efficiently document and monitor the construction process.
- PLO 5. Communicate technical and financial data effectively in speech and in writing to all stakeholders in the construction process.

The PLO formulation, evaluation, and review processes were developed as part of the University of Florida's accreditation under the Southern Association of Colleges and Schools (SACS). The PLOs relate to the University's higher-level learning outcomes. The PLOs were formulated with appropriate participation of parties including university administration, faculty, staff, students, and industry. The University's SACS PLO evaluation cycle mirrors the educational unit's assessment cycle.

Each of the 20 ACCE Student Learning Outcomes (SLOs) for the degree program are related to a PLO. Each SLO has one or more related course-level Course Learning Outcomes (CLOs).

Assessment Tools

The assessment tool used to gather, maintain, and ensure gathering compliance data for learning outcomes is a web-based database. The database is accessible to the faculty responsible for entering the assessment grades. The database includes the benchmarks set for evaluating each criterion.

Performance Criteria

The performance measures for the degree program learning outcomes and student learning outcomes are listed below along with the associated assessment. The assessment data are collected, and tracked using the database tool.

PLO 1. Apply knowledge of engineering, materials, methods, equipment, and processes to safely construct buildings and structures.

The assessment will be measured by Tests 2, 3, 4 in BCN 4510C-Mechanical Systems and Assignment 6 in BCN 4787C-Construction Capstone Project

PLO 2. Survey and quantify building components to estimate project costs, analyze progress, and control expenditures.

The assessment will be measured by Assignment 7 in BCN 4787C - Construction Capstone Project

PLO 3. Create an effective planning, scheduling and control system by identifying, evaluating and organizing the diverse elements of a construction project.

The assessment will be measured by Assignment 8 in BCN 4787C-Construction Capstone Project

PLO 4. Set up and manage project administration and management systems to efficiently document and monitor the construction process.

The assessment will be measured by Assignments 9, 10, 11, 12 in BCN 4787C - Construction Capstone Project

PLO 5. Communicate technical and financial data effectively in speech and in writing to all stakeholders in the construction process.

The assessment will be measured by Presentation 1, 2, & 3 in BCN 4787C - Construction Capstone Project

SLO 1. Create written communications appropriate to the construction discipline.
BCN 4787 Capstone Writing Assignment; Alumni/Employer Survey
DA-SLO1-Write-BCN4709C

SLO 2. Create oral presentations appropriate to the construction discipline.
BCN 4787 Project Presentation; Alumni/Employer Survey
DA-SLO2-Oral-BCN4787C

SLO 3. Create a construction project safety plan.

- BCN 3730 Safety Project; Alumni/Employer Survey
DA-SLO3-Safety-BCN 3730
- SLO 4. Create construction project cost estimates.
BCN 4612 Bid Simulation; Alumni/Employer Survey
DA-SLO4-Estimating-BCN4612C
- SLO 5. Create construction project schedules.
BCN 4720 Final Project; Alumni/Employer Survey
DA.SLO5-Scheduling-BCN4720
- SLO 6. Analyze professional decisions based on ethical principles.
BCN 4709 Ethics Assignment; Alumni/Employer Survey
DA-SLO6-Ethics-BCN4709
- SLO 7. Analyze construction documents for planning and management of construction processes. BCN 4720 Final Project; Alumni/Employer Survey
DA.SLO7-Documents-BCN4720
- SLO 8. Analyze methods, materials, and equipment used to construct projects.
BCN 4423; Alumni/Employer Survey
DA.SLO8 -Methods-BCN4423C
- SLO 9. Apply construction management skills a member of a multi-disciplinary team.
BCN 4787 Final Project; Alumni/Employer Survey
DA-SLO9-Team-BCN4787C
- SLO 10. Apply electronic-based technology to manage the construction process.
BCN 4787 Final Project; Alumni/Employer Survey
DA-SLO10-IT-BCN4787C
- SLO 11. Apply basic surveying techniques for construction layout and control.
BCN 3281 Final Report; Alumni/Employer Survey
DA-SLO11-Survey-BCN3281C
- SLO 12. Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process.
BCN 4709 Delivery Methods Assignment; Alumni/Employer Survey
DA-SLO1-Delivery-BCN4709
- SLO 13. Understand construction risk management.
BCN 4709 Risk Assignment; Alumni/Employer Survey
DA-SLO13-Risk-BCN4709

- SLO 14. Understand construction accounting and cost control.
BCN 4753 Assignment; Alumni/Employer Survey
DA-SLO14-Accounting-BCN4753
- SLO 15. Understand construction quality assurance and control.
BCN 4709 QC/QA Assignment; Alumni/Employer Survey
DA.SLO15.GAGCBCN4709
- SLO 16. Understand construction project control processes.
BCN 4709 Assignment; Alumni/Employer Survey
DA.SLO16.Control.BCN4709
- SLO 17. Understand the legal implications of contract, common, and regulatory law to manage a construction project.
BCN 3700 Final Exam; Alumni/Employer Survey
DA.SLO17.Contracts.BCN3700
- SLO 18. Understand the basic principles of sustainable construction.
BCN 4787 Assignment; Alumni/Employer Survey
DA-SLO18.Sustainability.BCN4787C
- SLO 19. Understand the basic principles of structural behavior.
BCN 4423; Alumni/Employer Survey
DA.SLO19_Structure.BCN4423C
- SLO 20. Understand the basic principles of mechanical, electrical and piping systems
BCN 3521 Final Exam, BCN 4510 Submittal Lab; Alumni/Employer Survey
DA.SLO 20.MEP.BCN4510C
DA-SLO20.MEP.BCN3521C.Lab 6 Chiller Tour
DA-SLO20.MEP.BCN3521C.Lab 7 ductwork
DA-SLO20.MEP.BCN3521C

Evaluation Methodology

Evaluation methodology is three fold. The first is the use of the webbased portal that allows for collection and reporting of required data. This portal allows for visual verification that the data collection plan is ongoing. At the same time it allows for individual faculty to reflect upon the assessment tool for the course learning outcomes. This collection information is tracked and presented at undergraduate committee meetings throughout the year. Compliance emails are sent at the end of the semester. The second is the industry review sessions. These are set up by course for which the SLO assignments are covered in detail along with course overviews. Lastly, the faculty review the compliance database for completeness and performance and industry notes regarding SLO's and course overviews at the start of every fall semester. Section

7.0 Annual Assessment and Continuous Improvement of the Strategic Plan outlines the review cycle. Table below shows cadence and SLO DA review detail.

Table – Quality Improvement Plan Process Cadence

Process	Assessment Tool	Function	Cadence	Action/BIC
Plan (Match Assessments to SLO's)	SLO Database	Ensure assessments are accurate	Twice a year	Identify problems / Plan revisions – Individual faculty
Do (Collect SLO data)	SLO Database	Ensure data is entered accurately by all faculty	Twice a year	Review inputs / reflect / Individual faculty / Undergrad Committee
Check (Obtain feedback)	Industry Course Reviews	Validate assessments	Each course / every other year	Gather feedback from industry
Check (Verify assessments satisfy SLO's)	Undergraduate Faculty Reviews	Validate assessments / share pedagogy	Every two years	Gather feedback from faculty / review entire process
Act (Realign SLO's, assessments, and courses as needed)	SLO Matrix / Map	Improve process	Key changes made after industry review and faculty course reviews	Align assignments/ syllabus / SLO database

DEGREE PROGRAM ASSESSMENT IMPLEMENTATION PLAN

Annual Data Collection to Ensure Comprehensive Assessment

The Rinker School SLO database is set to upload PLO/SLO/CLO data for each undergraduate course by semester. Faculty are requested to be compliant with fall data by within two weeks of the start of the spring semester and compliant with spring data no later than prior to the start of the fall semester. SLO compliance is monitored through undergraduate meetings and any faculty reflections are addressed throughout the academic year.

Assessment of ACCE SLO's (not to exceed three years)

The assessment of the individual SLO's is done in a collaborative setting of industry and faculty. During course reviews with IAB members and school directors faculty present the SLO's covered in their courses and receive feedback regarding application and rigor. Starting with Group 3 in 2016-17 faculty within each class cohort presented their course work in addition the SLO assessments.

Evaluation of Degree Program Objectives and Program Learning Compared to Criteria

The SLO database allows faculty to set, and subsequently adjust, percent grade passing and percent of students passing for each learning outcome. Faculty may reflect upon this as the fall and spring progress. Database compliance is discussed during fall faculty meetings. And finally the performance and relevancy of each SLO is presented during course reviews.

SLO Evaluation based on 2015 Quality Improvement Plan Outline

Year	Industry Course Review Schedule	Courses	Faculty	Date of Review	
2015-16	Group 2	SLO 4	BCN 3611C	Liu	2/15/2016
			BCN 4612C	Cook	2/15/2016
			BCN 4787C	Franz	2/15/2016
		SLO 5	BCN 4720	Russell	2/15/2016
			BCN 4787C	Franz	2/15/2016
2016-17	Group 3	SLO 1	ENC 3254	Wehle	1/31/2017
			BCN 3223C	Muszynski	1/31/2017
			BCN 3700	Cook	1/31/2017
			BCN 4720	Russell	1/31/2017
			BCN 4787C	Franz	1/31/2017
		SLO 2	ENC 3254	Wehle	1/31/2017
			BCN 3027C	Franz	1/31/2017
			BCN 4720	Russell	1/31/2017
			BCN 4787C	Franz	1/31/2017
		SLO 6	BCN 3027C	Franz	2/20/2018
			BCN 3730	Wehle	2/20/2018
		SLO 9	BCN 4612C	Cook	1/31/2017
			BCN 4787C	Franz	1/31/2017
		SLO 10	BCN 1251C	Ries	2/20/2018
			BCN 3255C	Gheisari	1/31/2017
			BCN 4709C	Sullivan	1/31/2017
			BCN 4787C	Franz	1/31/2017
		SLO 12	BCN 3027C	Franz	2/20/2018
			BCN 4709C	Sullivan	1/31/2017
			BCN 3027C	Franz	2/20/2018
		SLO 13	BCN 4709C	Sullivan	1/31/2017
			BCN 3700	Cook	1/31/2017
		SLO 14	BCN 4720	Russell	1/31/2017
		SLO 15	BCN 4709C	Sullivan	1/31/2017
SLO 16	BCN 3027C	Franz	2/20/2018		
SLO 17	BCN 3027C	Franz	2/20/2018		

*Minutes with specific changes are located on the K drive:

<K:\BCN\Share\Alumni and Industry\Industry Course Review>

Revised SLO Evaluation Plan based on Course Reviews

Year	Industry Course SLO DA Review Schedule	Courses	Faculty	Date of Review	
2017-18	SLO 3 - DA	J1	BCN 3730	Wehle	2/20/2018
		J1	BCN 3224C	Sullivan	2/20/2018
		J1	BCN 3431C	Shanker	2/20/2018
		J1	BCN 3255C	Gheisari	2/20/2018
		J1	BCN 3027C	Franz	2/20/2018
2018-19		J2	BCN 3611	Liu	2/13/2019
	SLO 20 - DA	J2	BCN 3521	Walters	2/13/2019
		J2	BCN 3223	Muszynski	2/13/2019
	SLO 17 - DA	J2	BCN 3700	Cook	2/27/2019
		J2	BCN 1582	Sharston	2/13/2019
2019-20	SLO 20 - DA	S1	BCN 4510	Russell	10/29/2020
	SLO 4 - DA	S1	BCN 4612	Cox/Minch	10/29/2020
	SLO 5 - DA, SLO 7 - DA	S1	BCN 4720	Russell	10/29/2020
	SLO 8 - DA, SLO 19 - DA	S1	BCN 4423	Pesantes	10/29/2020
2019-20	SLO 1, 2, 9, 10, 18 - DA	S2	BCN 4787	Franz	11/5/2020
	SLO 14 - DA	S2	BCN 4753	Walters	11/5/2020
	SLO 6, 12, 13, 15, 16 - DA	S2	BCN 4709	Sullivan	11/5/2020
	SLO 11 - DA	S2	BCN 3281	Costin	11/5/2020
All 20 SLOs covered over the four semesters - SLO DA reviews on a two year cycle.					
2021-22	SLO 3 - DA	J1	BCN 3730	Wehle	Fall 2021
		J1	BCN 3224C	Sullivan	Fall 2021
		J1	BCN 3431C	Shanker	Fall 2021
		J1	BCN 3255C	Gheisari	Fall 2021
		J1	BCN 3027C	Franz	Fall 2021
2021-22		J2	BCN 3611	Liu	Spring 2022
	SLO 20 - DA	J2	BCN 3521	Walters	Spring 2022
		J2	BCN 3223	Muszynski	Spring 2022
	SLO 17 - DA	J2	BCN 3700	Pesantes	Spring 2022
		J2	BCN 1582	Sharston	Spring 2022

See Appendix 3.1.6.6 for SLO Course Review forecast through 2027.

After Each Completed Cycle the Process is Reviewed and Updated

The process is under continuous review to improve and communicate results. Two examples of this are as follows –

- Initial SLO reviews were set-up by Direct Assessment reviews with industry. This process lacked a sense of context relative to course it resided in as well as the student experience. As such the process was changed to a cohort review for which the SLO's were presented in the context of both the course and student progression through the program.
- Industry review cycles had only been done in the spring semester. As a result of moving to cohorts the program needed to an industry/faculty review each semester. As a result there are now both fall and spring reviews narrowing the SLO review cycle from three years to two years starting with fall 2020.

XXX

