Academic Quality Improvement Plan (QIP)
Construction Management Program
Florida Gulf Coast University

1. **Purpose**

The QIP (Figure 1) will be the basis for continuous improvement of the undergraduate Construction Management (CM) four-year Bachelor of Science degree program. The QIP has three major components:

1. Program strategic plan
2. Program assessment plan
3. Program assessment implementation plan

Each component of the plan has several performance nodes that should be identified and monitored for the successful development and implementation of the QIP.
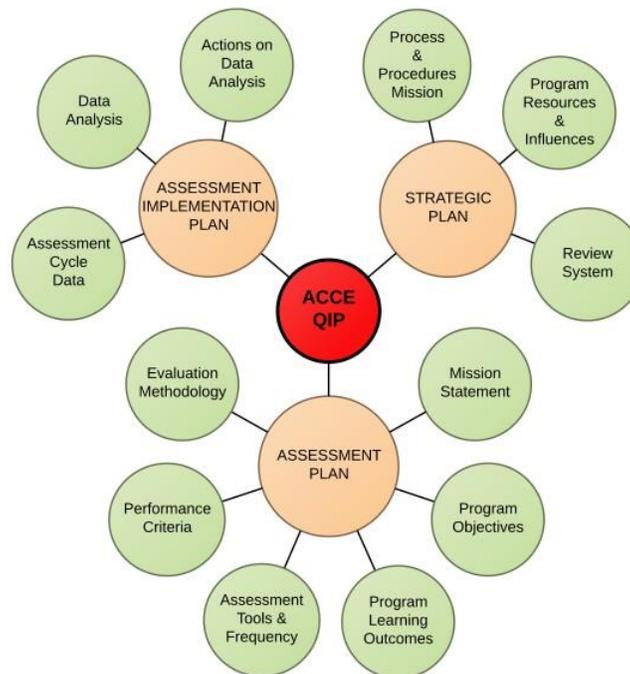

Figure 1: ACCE QIP Structure

2. **Program Strategic Plan**

The CM program strategic plan provides the basis for assessment of the program. This strategic plan outlines goals, objectives, measures, targets and initiatives to enable the CM program to fulfill its mission as well as the missions of the U.A. Whitaker College of Engineering (WCE) and Florida Gulf Coast University (FGCU). Building upon the "five pillars" in the FGCU 2017-2022 Strategic Plan, the objectives of the program strategic plan are outlined in four perspectives: *student success*, *academic excellence*, *engagement and outreach,* and *program capacity*. Figure 2 shows the strategy map of the CM program in 2021-2026. Table 1 provides a summary of the program objectives and associated measures, targets and initiatives.
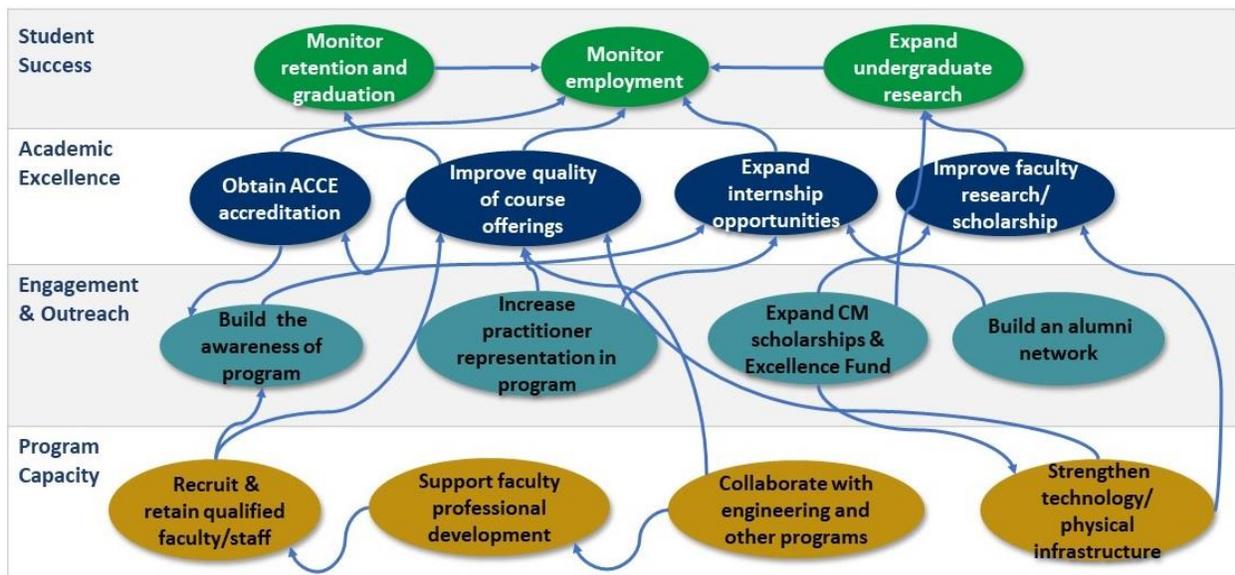

Figure 2: Strategy Map of the Construction Management Program: 2021-2026

Table 1. Program goals, objectives, measures, targets and initiatives

Program Objectives	Measures	Targets	Initiatives
Goal 1 – Student Success: Support students in timely and successfully joining the construction industry workforce.			
1. Monitor retention and graduation	• 4-year graduation rate • 6-year graduation rate	• Same WCE trend • Same WCE trend	• Robust advising and mentoring
2. Monitor employment	• Employment rate	• Same WCE trend	• Expand enrollment in BCN 4949
3. Expand undergraduate research	• % of students involved in faculty research	• Growth	• Participate in research programs such as WiSER Eagles
Goal 2 - Academic Excellence: Provide an educational environment in which students and faculty can excel academically and professionally.			
4. Obtain ACCE accreditation	• Approval of ACCE accreditation	• AY 2022-2023	• Self-evaluation study by 3/1/2022 • Assessment of SLOs by 6/1/2022

Table 1. (*continued*)

Program Objectives	Measures	Targets	Initiatives
5. Improve quality of course offerings	• % of courses rated 75% "useful" or above	• 90% of BCN courses	• Use Senior Exit Surveys in QIP • Robust course assessments
6. Expand internship opportunities	• Enrollment in BCN 4949	• 50% of students	• Work with CIAB for internship opportunities • Offer BCN 4949 in all three semesters
7. Improve faculty research/scholarship	• Number of scholarly activities (e.g., grant proposals, peer-reviewed publications)	• Growth	• Foster faculty research collaboration, including multidisciplinary research initiatives
Goal 3 – Engagement and Outreach: Engage constituents to foster the impact of the Construction Management program in Southwest Florida and beyond.			
8. Build the awareness of the program	• Membership of CM Student Organization	• 50% of CM students	• Participation in the regional/national student competition
9. Increase practitioner representation in the program	• Number of guest speakers, field trips, practitioner-instructors (adjuncts)	• 50% of BCN course offerings in 5 years	• Create/update a list of guest speakers, project sites to visit with the input of the CIAB
10. Expand CM scholarships and professional development funds	• Foundation scholarships for CM students and Construction Excellence Fund	• Maintained/ growth	• Work with CIAB/Foundation • Increase accountability in fund use
11. Build an alumni network	• % of alumni joined	• 90% of alumni joined the LinkedIn group	• Alumni surveys every 5 years
Goal 4 – Program Capacity: Reinforce the program capacity to better serve Construction Management students and faculty.			
12. Recruit and retain qualified faculty/staff	• Faculty credentials	• Recruit 2-3 full-time faculty members	• Follow program start-up to BOG and the WCE Strategic Hire
13. Support faculty professional development	• Professional development activities	• At least one major activity/faculty/ year	• Faculty applying for funding from Faculty Senate, Lucas Center, etc. • Program will support for the gap if budgets allow.
14. Collaborate with engineering and other programs	• Number of cross-listed courses, transferred courses, common courses, electives	• BCN 1930 with EGS 1006L	• Synergistic collaborations with engineering and other programs
15. Strengthen technology and physical infrastructure	• % of courses employed the most updated technology and labs	• 80% of courses	• Frequent update and effective use of technology and lab space/equipment

The CM faculty will conduct an annual review of the CM degree program, typically at the beginning of each academic year. The status of the degree program will be annually shared and discussed with the Construction Industry Advisory Board (CIAB). In both events, the internal status of the degree program resources and the external factors affecting the operation of the degree program shall be taken into consideration.

This strategic plan will be updated every five years through the collective efforts of the CM Faculty and Students, Program Director, Department Chair, and the CIAB.

3. <u>Program Assessment Plan</u>

The degree program assessment plan consists of the following six areas:
1. Mission Statement
2. Degree Program Objectives
3. Program Learning Outcomes
4. Assessment Tools and Frequency
5. Performance Criteria
6. Evaluation Methodology

3.1. **Program Mission**

To produce construction managers and leaders with strong technical competence and professional skills to meet the challenges of Southwest Florida and beyond.

The CM degree program offers a comprehensive program of education with scholarly and service activities, consistent with the mission of Florida Gulf Coast University and the U.A. Whitaker College of Engineering, to improve the quality of the construction industry and thus the built environment.

3.2. **Degree Program Objectives**

The Construction Management program has formulated the degree program objectives in the Strategic Plan section above (Table 1).

3.3. **Program Learning Outcomes**

The FGCU Academic Learning Compact (ALC) initiative "*supports the teaching-learning process by clearly identifying expected core student learning outcomes in the areas of content/discipline knowledge and skills, communication skills, and critical thinking skills; aligning curricula with expectations; and using assessment to guide continuous improvement.*" (https://www.fgcu.edu/acs/academiclearningcompacts). The program learning outcomes (PLOs) will be used to assess success of the Construction Management program in meeting the program's mission and objectives.

Content/Discipline Knowledge and Skills: Graduates will be able to:

- Create construction management documents for effective project delivery (PLO1).

- Apply knowledge, technology and technical and management skills to manage the construction process and sustainably construct facilities and physical structures (PLO2).

Communication Skills: Graduates will be able to:

- Create written and oral communications appropriate to the construction discipline (PLO3).

Critical Thinking Skills: Graduates will be able to:

- Analyze professional decisions based on ethical principles in the construction discipline (PLO4).
- Analyze construction documents, methods, materials, and equipment used to construct projects for management of construction processes (PLO5).

The CM program has adopted the ACCE twenty Student Learning Outcomes (SLOs) for Bachelor Programs as its means to evaluate the program. Each PLO is related to one or more of the 20 ACCE SLOs for the degree program (Table 2). Similarly, each SLO is related to one or more Course Learning Outcomes (CLOs) of BCN courses.

Table 2. ACCE Student Learning Outcomes and Program Learning Outcomes

SLO#	ACCE SLO	PLO1	PLO2	PLO3	PLO4	PLO5
1	Create written communications appropriate to the construction discipline.			x		
2	Create oral presentations appropriate to the construction discipline.			x		
3	Create a construction project safety plan.	x				
4	Create construction project cost estimates.	x				
5	Create construction project schedules.	x				
6	Analyze professional decisions based on ethical principles.				x	
7	Analyze construction documents for planning and management of construction processes.					x
8	Analyze methods, materials, and equipment used to construct projects.					x

Table 2. (*continued*)

SLO#	ACCE SLO	PLO1	PLO2	PLO3	PLO4	PLO5
9	Understand the role of the construction manager as a member of different multi-disciplinary project teams.		x			
10	Apply electronic-based technology to manage the construction process.		x			
11	Apply basic surveying techniques for construction layout and control.		x			
12	Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process.		x			
13	Understand construction risk management.		x			
14	Understand construction accounting and cost control.		x			
15	Understand construction quality assurance and control.		x			
16	Understand construction project control processes.		x			
17	Understand the legal implications of contract, common, and regulatory law to manage a construction project.		x			
18	Understand the basic principles of sustainable construction.		x			
19	Understand the basic principles of structural behavior.		x			
20	Understand the basic principles of mechanical, electrical and piping systems.		x			

3.4. Assessment Tools and Frequency

The CM program will use several assessment tools (explained below) to measure the degree program objectives and program learning outcomes.

Direct Assessments of Learning:

At a minimum, one (1) direct coursework assessment will be established to evaluate

student achievement for each of the Program/Student Learning Outcomes. These assessments will be delivered at the course level in which the learning outcome is identified to be addressed. Data will be collected each time the course is taught and analysis of the data for assessment will be on a three-year cycle.

Indirect Assessments:

Institute Course Evaluations:
Students take course evaluation surveys online called Student Perception of Instruction (SPoI), anonymously, for each course in the curriculum. Results are made available to the respective faculty shortly after the end of the semester. Depending upon the outcome, modifications may be warranted. Proposals for major changes, particularly those that may have an impact on other areas of the curriculum, are discussed at a meeting of the full CM faculty and Program Director.

Senior Exit Survey:
Senior CM students complete an on-line or paper-based exit survey and the results are used to evaluate the CM program on an annual basis. This survey allows the seniors to express their thoughts about the program. The results are shared and discussed with CM faculty. Changes or modifications to courses are influenced by information gathered through these surveys.

Alumni Surveys:
CM alumni surveys will be conducted every five years. The first alumni survey will be conducted in Spring 2026. Data will be collected, summarized and reviewed by the CM faculty, Program Director and Department Chair. The alumni surveys will be used to assess both the Degree Program Objectives and Program Learning Outcomes. The assessment data from all sources, including surveys, will be shared and discussed with the CIAB.

3.5. Performance Criteria

For each direct measure of SLO: 75% of students will achieve a 70% or better on the assessment that has been identified to demonstrate achievement of the particular SLO.

For each indirect measure of SLO from senior exit surveys: 75% of graduating students answer "good" and above on the scale of "unable to assess," "poor," "fair," "good," "very good," and "excellent."

For each indirect measure of SLOs and the Degree Program Objectives from alumni surveys: 75% of alumni answer "good" and above on the scale of "unable to assess," "poor," "fair," "good," "very good," and "excellent."

3.6. Evaluation Methodology

Direct assessments will be administered and evaluated at the course level by the faculty of record for the particular course in which the assessment is administered. If an SLO

metric does not meet the performance criteria, the faculty member will recommend an action to improve student performance. The faculty member may also recommend action to maintain student performance even if the performance criteria are met.

The Program Director will conduct the senior exit surveys and alumni surveys and will collect and compile survey data. All direct and indirect assessments of SLOs will be discussed by the CM faculty at annual review. Outcome assessment results will be correlated with mission, goals, program content, and outcomes to implement change where needed.

4. Program Assessment Implementation Plan

The assessment implementation plan is to ensure the CM degree program is making progress in achieving its mission, goals, objectives, and learning outcomes. The assessment results of outcomes will be taken into consideration in developing the degree program.

4.1. Comprehensive Assessment

The degree program shall conduct a comprehensive assessment of its goals and learning outcomes. Data collection and its frequency to measure achievement of the program goals and learning outcomes are described in the Program Assessment Plan section above. Depending on the types of direct and indirect assessments, the frequency of the data collection shall occur at least annually.

4.2. Assessment Cycle

A complete assessment cycle of all ACCE Student Learning Outcomes is every three years. The assessment results of each assessment cycle shall be documented in a systematic manner. The direct and indirect assessment tools will initially be used for all Student Learning Outcomes in academic year 2021-2022, the first class of graduates from the CM program, to establish a program baseline. The data will be compiled for each Student Learning Outcome, including the instrument(s) used to assess student performance, assessment rubrics, outcome assessment results and a sample of student work.

4.3. Evaluation of the Program Objectives and Learning Outcomes

The evaluation results of the program objectives and learning outcomes will be compared to the stated performance criteria. The comparison is to determine whether the program objectives and learning outcomes were achieved and to identify areas for improvement.

4.4. Review and Update of Assessment Implementation Plan

The assessment results of each cycle shall be systematically documented, reviewed, and discussed by the CM faculty. After each complete assessment cycle, the entire process

will be reviewed and updated with plans for improvement. The academic quality improvement plan will be reviewed and updated every five years with the input from the CM faculty, Program Director, Department Chair, students through the CM Student Organization and the CIAB.