# Academic Quality Improvement Plan

## B.S. Degree: Construction Management

## California Baptist University

Last Revised on August 28, 2024

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# Academic Quality Improvement Plan

**B.S. Degree: Construction Management**

**California Baptist University**

The academic Quality Improvement Plan (QIP) for the Construction Management (CM) program is comprised of three integrated elements: (a) Strategic Plan, (b) Assessment Implementation Plan, and (c) Determination of Achievement. The plan is designed to comply with California Baptist University (CBU) requirements and the American Council for Construction Education Document 103 Standards and Criteria for Accreditation of Postsecondary Construction Education Degree Program, specifically Section 9 Academic Quality Planning Process and Outcome Assessment (See Appendix I). The QIP is posted on the CM program's webpage at https://calbaptist.edu/academics/programs/bachelor-of-science-construction-management/public-information. The annual performance results are published in the same webpage.

## 1. CM Mission

*The CM program prepares men and women for management and supervisory professions in the world of construction, offers enriched technical training with people skills in Christian context and biblical worldview.*

## 2. CM Program Strategic Plan Overview

The CM Program Strategic Plan is aligned with the Mission of the California Baptist University (CBU). The CBU Mission Core 4 are

- **Academically Prepared**: able to use critical thinking skills to demonstrate literacy: listening, speaking, writing, reading, viewing, and visual representing and demonstrate competence in mathematical, scientific, and technological skills;
- **Biblically Rooted**: able to demonstrate spiritual literacy, including Biblical Christian faith and practice, Baptist perspectives, and the Christian's role in fulfilling the Great Commission;
- **Globally Minded**: able to respect diverse religious, cultural, philosophical, and aesthetic experiences and perspectives;
- **Equipped to Serve**: able to transfer academic studies to a profession and the workplace and implement a personal and social ethic that results in informed participation in multiple levels of community.

The CM Program strategic plan is also aligned to CBU's Priorities and the College of Engineering's Goals which is shown in the next section of this document. The four Program goals for the CM

program that comprise the Strategic Plan are the foundation of the CM Program's annual Plan of Work (PoW), a management document designed to assure that the resources are in place and effectively deployed for the successful operation of the CM Program. The Program Goals provide direction for operational actions to maintain adequate resources and a contemporary curriculum aligned with industry needs. The goals that comprise the Strategic Plan are reviewed annually by faculty as part of the Plan of Work process and shared with the Industry Advisory Board (IAB) for feedback.

At the beginning of each academic year, activities for attaining the Program Goals are identified and assigned to faculty. The implementation status of the PoW is subsequentially reviewed CM faculty meetings. As such, the Strategic Plan as operationalized through the PoW, is constantly reviewed to assess the internal and external factors that influence the operation of the Program. Further, the Strategic Plan, PoW and Annual PoW Report are shared with the IAB and other constituents to maintain a broad understanding of the directions and needs of the construction industry.

An assessment of the Strategic Plan is developed by the CM program director in conjunction with the CM faculty annually at the beginning of the academic year. The assessment includes the Plan of Work (PoW) for the coming year as well as a summary Goal Report on Work completed during the previous academic year. Results for the assessment are disseminated to the CM faculty and the IAB for further action aimed at program improvement.

## 3. CM Program Strategic Plan and Goals [2024-2029]

The CM Program has four goals along with two visions to achieve its mission.

- Vision #1: to become an academic incubator nurturing the next-generation believers to become essential assets to the community and serve the world.
    - Goal #1: *Program Stability*
      The program will maintain and improve program enrollment in collaboration with the College of Engineering (CoE) leadership and the CBU Career Center.
    - Goal #2: *Industry Community Engagement*
      The program will create and maintain partnerships with the peer institutions, local industry, and community to benefit student learning and career development.

- Vision #2: to provide a unique learning environment where students enjoy their time with the faculty and find their learning fun and fruitful.
    - Goal #3: *Scholarly Activities*
      The program will provide an atmosphere where faculty can be committed to quality education, research, and professional development and offer students with guidance to become life-long learners in construction management fields.
    - Goal #4: *Continuous quality education*

The program will maintain quality education in construction management and help students understand Christian's role in fulfilling the Great Commission in the built environment.

The CM program's goals are aligned with the CBU's Priorities and CoE's Goals as shown in the following table.

| CM Goals [2024-2029] | Goal Alignment |
|---|---|
| **1. Program stability**<br>The program will maintain and improve program enrollment in collaboration with the CoE leadership and the CBU Career Center. | [CBU Priorities]<br><br>[CoE Goals]<br>#6. To be the school of choice for Christian engineering prospective students worldwide beginning with California. |
| **2. Industry and community engagement**<br>The program will create and maintain partnerships with the peer institutions, local industry, and community to benefit student learning and career development. | [CBU Priorities]<br>#5.Community and Global Engagement: Engage the local community and the nations.<br>[CoE Goals]<br>#8. To be the school of choice for hiring from individuals, businesses and organizations who share our values and need competent, personable and value-centered engineering graduates. |
| **3. Scholarly activities**<br>The program will provide an atmosphere where faculty can be committed to quality education, research, and professional development and offer students with guidance to become life-long learners in construction management fields. | [CBU Priorities]<br>##2. Research & Scholarship: Enhance scholarship, research and creative/professional achievements.<br>[CoE Goals]<br>#7. To be the school of choice for new Christian faculty and staff in the field of engineering who are called to the Christian academic environment either as employees or while on sabbatical. |
| **4. Continuous quality education**<br>The program will maintain quality education in construction management and help students understand Christian's role in fulfilling the Great Commission in the built environment. | [CBU Priorities]<br>#1. Educational Effectiveness: Enhance the quality of undergraduate, graduate, doctoral and professional education.<br>[CoE Goals]<br>#4. To be a school that provides an excellent dynamic curriculum taught by highly competent and caring faculty.<br>#5. To be a school that plays a decisive role in strategically motivating young people to pursue engineering and science as a vocation. |

The CM Strategic Plan includes strategies to achieve the four CM Program Goals and Plan of Work (PoW) for each objective as shown in Appendix II. The fourth column in the Plan of Work (PoW) and Goal report in the Appendix II shows detailed objectives for each year. Also the detailed objectives includes target amount or how achievement of each objective is assessed.

## 4. CM Program Learning Objectives and Learning Outcomes

The CM Program's educational objectives are in line with the university's mission statement. The CM Program through the BSCM degree contributes to this mission and its core values by offering the curriculum that prepares men and women for management and supervisory professions in the world of construction. Focusing on field operations, estimating, and project management processes as they relate to the built environment, the program curriculum combines solid technical training with people skills in a Christian context and biblical worldview. More specifically, the CM Program Education Objectives read as follows.

**Our alumni will show evidence of integrating a Christian worldview into their life and vocation by following the example of Christ in being an articulate, ethical and empowered servant leader.** This implies being aware of and meeting the needs of humanity by doing most if not all of the following:

- serving community and faith based organizations,
- serving professional societies,
- and serving employers by being a steward of time, competencies and resources.

**Our alumni will show competence to apply fundamental engineering concepts in a professional setting by active participation in professional engineering activities**. These activities will involve some of the following: creating, researching, innovating, designing, building, testing, inspecting, evaluating, estimating, planning, allocating, forecasting, selling, educating, communicating and collaborating.

**Our alumni will continue to develop professionally through involvement in post-graduate learning activities.** These activities would include participating in training or continued education, receiving a post graduate degree, attending and or delivering presentations, papers or posters at professional conferences, taking and passing the EIT and PE exam, and/or attending or delivering presentations at professional society meetings or in academic and educational settings.

**Our alumni will show evidence of success in at least one of a variety of post graduate experiences.** These experiences include but are not limited to employment in industry, public service, education, missions/NGO's, and/or participation in graduate school, and success could be demonstrated through achievements such as promotion, completion of an advanced degree, and awards.

Under the umbrella of Program Educational Objectives, the CM Program sets the Program Learning Outcomes by synchronizing them with those of ACCE's. With the Christian worldview and ethical minds as a foundation for their education, our students can demonstrate an ability to articulate a Christian worldview on personal, professional, technical, and societal issues and exhibit an understanding of the basic concepts in leadership. As far as the technical aspects of learning outcomes, our students should achieve the following 17 Student Learning Outcomes (SLOs) upon successful completion of their education at CBU:

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 of 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 basic principles of ***sustainable construction.***
16) Understand the basic principles of ***structural behavior.***
17) Understand the basic principles of ***HVAC, electrical and plumbing*** systems.

Course learning objectives support each SLOs and are indicated accordingly in the syllabus. Further, syllabi are presented in a consistent format as shown in the Appendix III.

## 5. CM Program Goals and SLOs Assessment Plan

### 5.1. CM Program Goals Assessment

CM programs' Goals and objectives, and Plan of Work (PoW) are discussed and developed by CM faculty in the beginning of each academic year (typically in August). Then, CM faculty along with support by IAB and construction partners implement PoW for the year. Data of achievement of the PoW is collected by all CM faculty and analyzed by the CM director at the end of the academic year. Result of assessment is discussed among CM

faculty and CM IAB is asked for their feedback. Depending on the assessment result, CM faculty take actions for correction or improvement. The Figure 2 shows the cycle of CM goals/objectives implementation and assessment.

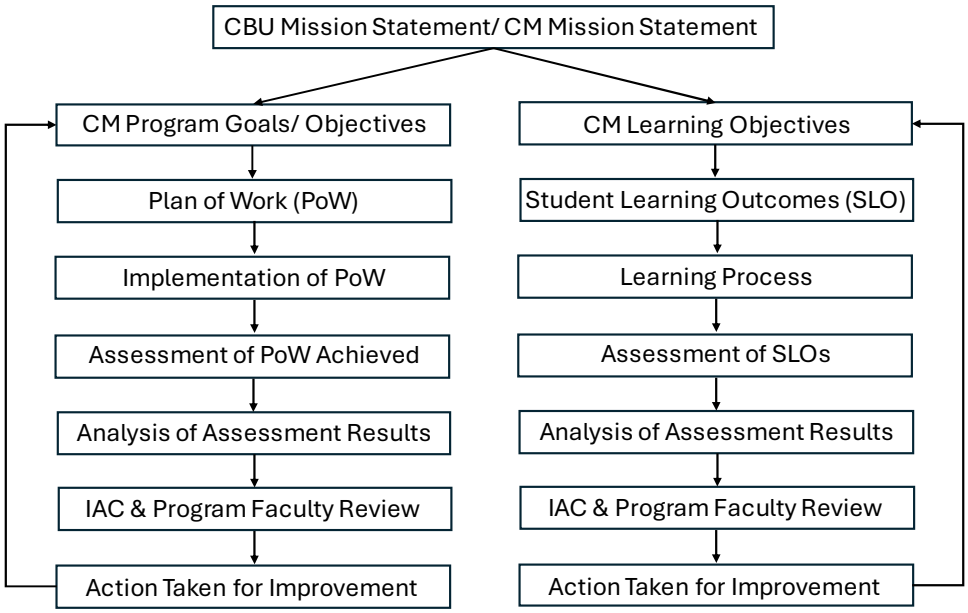


Figure 2. CM Objectives and Learning Outcomes Implementation Plan

The CM program Plan of Work and Report as shown in the Appendix II shows not only annual objectives, but also how each objective is measured. In addition, CM program goal achievement is reported to ACCE as requested by the ACCE (Section 8.5.1 and 9.4.1 of ACCE Document 103, Standards and Criteria for the Accreditation of Construction Education Programs) as shown in the Appendix IV.

Data for assessment of the CM objectives are collected by CM faculty along with CoE Office of Strategic Initiatives throughout an academic year. Then, the data is assessed and analyzed by the CM director near the end of each academic year. The assessment and analysis of each CM objective achievement includes:

- Determination of achievement: each CM objective is determined for achievement compared to the set target(s) directly.
- Analysis of the results in five years: results of CM objective achievement are kept track of in five years frame for change or updating CM goals and objectives in the future.
- Actions taken and impacts: results of the CM objectives assessment and analysis are reviewed and discussed among CM faculty for determination of corrective/improvement actions, if needed.

Figure 3 shows schedule for the assessment process every year: both for CM goals & objectives assessment and SLOs assessment.

| Assessment Items | Performed by | Month | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Aug. | Sept. | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May. | June | July |
| **CM Goals & Objectives** | | | | | | | | | | | | | |
| Review assessment results from the previous academeic year | CM faculty | | | | | | | | | | | | |
| Adjust/change Plan of Work | CM fauclty | | | | | | | | | | | | |
| Incorporate/improve CM courses as needed | CM faculty | | | | | | | | | | | | |
| Discuss with IAB | CM faculty, & IAB | | | | | | | | | | | | |
| Collect data for assessment | CM Director | | | | | | | | | | | | |
| Analyze the achievement | CM Director | | | | | | | | | | | | |
| **Student Learning Outcomes (SLOs)** | | | | | | | | | | | | | |
| Direct Measure in CM Courses | | | | | | | | | | | | | |
| Review assessment results from the previous academeic year | CM faculty | | | | | | | | | | | | |
| Incorporate/improve CM courses as needed | CM faculty | | | | | | | | | | | | |
| Discussion with IAB | CM faculty, & IAB | | | | | | | | | | | | |
| Collect data for assessment | CM faculty | | | | | | | | | | | | |
| Analyze the assessment results | CM Director | | | | | | | | | | | | |
| Indirect Measure | | | | | | | | | | | | | |
| Employer Survey: administration & data collection | CM Director & CoE Director of Strategic Initiatives | | | | | | | | | | | | |
| Alumni Survey: administration & data collection | CM Director & CoE Director of Strategic Initiatives | | | | | | | | | | | | |
| Senior Exit Survey: administration & data collection | CM Director | | | | | | | | | | | | |
| Analyze the collected data | CM Director | | | | | | | | | | | | |

Figure 3. Schedule for CM Goals & SLOs Assessment

## 5.2. CM Program Student Learning Outcomes Assessment

The 17 SLOs are assessed both directly and indirectly as follows:

1) Direct Assessment

Each of the 17 SLOs are assessed in annually or in every semester (if a CM course is offered in every semester) in at least one CM or Engineering courses (EGR). The Appendix V shows the map for SLO assessment in CM or EGR courses.

Typically this assessment is performed in a format of homework assignment, quiz, exam, or class project. CM faculty members contribute to the assessment process in his or her courses: selection of assessment tool (or format), administration of assessment, and collection of assessment data through an academic year. At the end of each semester, the CM director collects direct assessment data. Then, at the end of each academic year, the collected direct assessment is analyzed by the CM director. Then, the analyzed result is discussed among CM faculty, and shared with IAB for feedback. Figure 2 shows the continuous improvement cycle for SLOs.

The performance criteria for each SLO in direct assessment is that average score for CM students will be greater than or equal to 70% for the appropriate category.

2) Indirect Assessment
CM SLOs are measured indirectly in all the following methods every year.

- Employer Survey
  CM employers who have hired CBU CM graduates in recent 3 years are asked to evaluate their performance regarding the 17 SLOs. Typically, CM employers who come to the College of Engineering career fair in Fall semester are asked for the evaluation.
  The performance criteria for each SLO in employers' responses is that average score of employers' positive response will be greater than or equal to 70%, which indicates that students were well prepared in that skill or knowledge area.

- Senior Exit Survey
  Graduating CM seniors are asked to evaluate their perception regarding the 17 SLOs in their last semester.
  The performance criteria for each SLO in senior exit survey is that average score of CM seniors response will be greater than or equal to 3.5 on a 5- point scale.

- Alumni Survey

  CM alumni who graduated 3 years ago are asked to evaluate their learning experience at CBU and preparedness for their career in terms of the 17 SLOs.

  The performance criteria for each SLO in alumni survey is that average score of CM seniors response will be greater than or equal to 3.5 on a 5- point scale.

CM SLOs' indirect assessment is concluded by the overall performance criteria, all the three indirect SLO assessments should satisfy their own performance criterion. The Appendix VI shows the forms of indirect SLO assessment tools (questionnaire surveys) and the Appendix VII shows the form of annual CM SLO assessment report.

The annual CM SLO assessment report form includes CM faculty's actions or responses depending on the assessment result. This report is shared with IAB for their feedback. Also, the CM SLO assessment report is reported to ACCE as requested.

**SECTION NINE: ACADEMIC QUALITY PLANNING PROCESS AND OUTCOME ASSESSMENT**

**STANDARD 9: Conduct a systematic process of gathering, interpreting, and evaluating information that requires taking actions as part of an academic quality planning process and outcome assessment.**

To meet this standard, the Degree Program shall present proof of the development, existence, and use of:

- A Strategic Plan for the Educational Unit;
- An Assessment Implementation Plan that includes the four segments of:
  - Assessment of the ACCE SLOs using the appropriate mix of direct and indirect measurements,
  - Assessment of the Degree Program Objectives,
  - Data gathering,
  - Data interpretation; and
- A Determination of Achievement of SLOs and Degree Program Objectives that describes actions taken to maintain or improve performance of SLOs and Degree Program Objectives.

## 9. REQUIREMENTS

While ACCE recognizes the obligation of Degree Programs to use assessment terminology congruent with their Institutions, it is necessary for ACCE Visiting Teams to have a consistent understanding of terminology used in the assessment process. With that purpose in mind, the ACCE will use the definitions in Introduction Section as the preferred terminology in its assessment documentation.

If the Degree Program cannot use this terminology because of institutional constraints, they shall provide a glossary of compatible terminology at the beginning of Section 9 in the Self-Evaluation Study.

### 9.1. CONTINUOUS IMPROVEMENT

The Quality Improvement Plan (QIP) serves as the basis for the continuous improvement of the Degree Program. It shall have three major components:

- Strategic Plan for the Educational Unit,
- Degree Program Assessment Implementation Plan, and
- Determination of Achievement of SLOs and Degree Program Objectives.

These documents shall be included in the Self-Evaluation Study and made available for Visiting Teams to review.

## 9.2. EDUCATIONAL UNIT STRATEGIC PLAN

9.2.1. The Educational Unit shall have a comprehensive Strategic Plan that describes the systematic and sustained effort to enable the Degree Program to fulfill its mission.

9.2.2. The Strategic Plan shall review the internal status of the Degree Program resources as well as the external factors that influence the operation of the Degree Program.

9.2.3. The Strategic Plan shall be updated periodically and represent the collective input from all Degree Program constituencies.

## 9.3. DEGREE PROGRAM ASSESSMENT IMPLEMENTATION PLAN

The Degree Program shall produce an assessment implementation plan that is based on such tools as the results of surveys of graduates, employers of the graduates, and Industry Advisory Committee members; exit interviews; comprehensive exams; capstone projects; or other systematically structured information.

The mission, goals, and objectives shall reflect both short-range and long-range considerations and shall be clear as to the educational and institutional results expected.

At a minimum, the Degree Program Assessment Implementation Plan shall include the following:

9.3.1. Mission Statement of the Degree Program.

The Mission Statement expresses the underlying purposes and values of the Degree Program.

9.3.2. Degree Program Objectives.

The Degree Program Objectives shall be clearly defined and stated in a manner that permits an assessment of achievement.

9.3.3. Assessment Tools

These tools shall measure achievement of Degree Program Objectives and SLOs. All data from these tools shall be collected annually or collected across multiple years leading up to a complete assessment cycle; however, there must be a plan indicating what data is collected in each year. ACCE SLOs (Section 3.4) (Section 3.2 for Master's Degree) shall be regularly evaluated and reviewed with the appropriate participation of faculty, Industry Advisory Committee, and other pertinent parties.

9.3.4. Performance Criteria.

There must be at least one performance criteria for each assessment tool to achieve the Degree Program Objectives and SLOs.

9.3.5. Methodology.

The Degree Program shall comprehensively describe the methods used for data collection, the frequency of data collection, the assessment process, the evaluation process, and how it takes the results of assessment evaluation into consideration for Program improvement and development. A complete assessment cycle shall be performed at least once every three years. A complete assessment cycle is defined as data collection, data analysis, selection of appropriate actions (if needed), and review of the effect of such action (if applicable) in the assessment of SLOs and Program Objectives.

## 9.4. DETERMINATION OF ACHIEVEMENT OF STUDENT LEARNING OUTCOMES AND DEGREE PROGRAM OBJECTIVES

To determine student achievement of SLOs listed in Section 3.4 (or Section 3.2 for Master's Degree), the Degree Program shall:

9.4.1. Provide a summary report containing the following information for each SLO (e.g., direct and indirect) and Degree Program Objective:

- Methods of assessment,
- Current evaluation of the results,
- Last reported evaluation of the results,
- Resulting corrective actions,
- Follow-up of the impact of actions taken on student performance including the dates of each follow-up, and
- Description of any revisions made to Degree Program assessment tools (if applicable).

9.4.2. Evaluate each SLO by a minimum of two assessment methods, at least one of which must be direct. Provide a table identifying the specific assessment methods used for each SLO and the location the assessment is made (e.g., the course or activity) so each assessment can be easily located.

- If student teams or group projects are used for assessment, there must also be a process in this team/group environment to assess individual student learning.
- If an SLO direct assessment measure is an examination in a course with mixed enrollment, all non-construction majors shall be excluded from the assessment data collection.

9.4.3. Produce evidence in the form of assessment tools, associated grading rubrics, and one example of graded student work to:

- Demonstrate applicability of assessment content to the specified SLO.
- Demonstrate adequacy of the assessment tool in evaluating individual student's ability to meet each SLO at or above the required minimum level of Bloom's Taxonomy (e.g., Understand, Apply, etc.). Programs using third-party certifications shall provide comprehensive results for each SLO where such assessment is applied.
- The determination of achievement shall be documented in a systemic manner.

To determine the achievement of Degree Program Objectives, the Degree Program shall:

9.4.4. Evaluate each Degree Program Objective with at least one direct measure.

9.4.5. Provide evidence to demonstrate the applicability of the assessment to the specified Degree Program Objective.

Appendix II: Example of PoW and Goal Report

**Gordon and Jill Bourns College of Engineering**
**Construction Management (CM) Program**

**CM Program Mission, Strategic Plan and Goals**

**Mission:** *The CM program prepares men and women for management and supervisory professions in the world of construction, offers enriched technical training with people skills in Christian context and biblical worldview.*

**Strategic Plan: CM Program Plan of Work (2024-2025)**

| CM Goals [2024-2029] | Goal Alignment | Objectives | Plan of Work for 2024-2025 | Report on Plan of Work 2024-2025 |
|---|---|---|---|---|
| **1. Program stability**<br>The program will maintain and improve program enrollment in collaboration with the CoE leadership and the CBU Career Center. | [CBU Priorities]<br><br>[CoE Goals]<br>#6. To be the school of choice for Christian engineering prospective students worldwide beginning with California. | • Collaborate with the CM programs at regional community colleges for recruiting.<br>• Recruit through current CM students' high schools.<br>• Provide and improve placement services for employment and career opportunities for students. | • Recruit two new transfers from regional community colleges.<br>• Update CM brochure and share it with community colleges by electronically and hard copy.<br>• Develop CM student ambassador program and recruit two through CM student ambassadors.<br>• Continue to have job placement of 70% or higher of graduating seniors through the CoE placement services. | |
| **2. Industry and community engagement**<br>The program will create and maintain partnerships with the peer institutions, local industry, and community to benefit student learning and career development. | [CBU Priorities]<br>#5.Community and Global Engagement: Engage the local community and the nations.<br>[CoE Goals]<br>#8. To be the school of choice for hiring from individuals, businesses and organizations who share our values and need competent, personable and value-centered engineering graduates. | • Increase K-12 outreach efforts through the partnership with regional schools.<br>• Continue to participate in professional development through partnership with industries.<br>• Develop connection with diverse industry professionals/organizations.<br>• Communicate with CM alumni and get them engaged through CM social media. | • Hold or participate in one activity pertaining to K-12 regional schools.<br>• Participate in at least a training/professional development event through partnership with industries per each faculty member.<br>• Develop a *Linkedin* page/group for the CM program and invite alumni. | |
| **3. Scholarly activities**<br>The program will provide an atmosphere where faculty can be committed to quality education, research, and professional development and offer students with guidance to become life-long learners in construction management fields. | [CBU Priorities]<br>#2. Research & Scholarship: Enhance scholarship, research and creative/professional achievements.<br>[CoE Goals]<br>#7. To be the school of choice for new Christian faculty and staff in the field of engineering who are called to the Christian academic environment either as employees or while on sabbatical. | • Maintain faculty participation in research publication in its respective field of study.<br>• Conduct applied research and professional development opportunities.<br>• Maintain the level of faculty participation in professional societies<br>• Maintain the number of scholarly activities by faculty and undergraduate students. | • Disseminate result of applied research minimum one per faculty member.<br>• Attend/ involve with minimum one professional events/activities per faculty member.<br>• Advise minimum one scholarly activity per faculty member. | |
| **4. Continuous quality education**<br>The program will maintain quality education in construction management and help students understand Christian's role in fulfilling the Great Commission in the built environment. | [CBU Priorities]<br>#1. Educational Effectiveness: Enhance the quality of undergraduate, graduate, doctoral and professional education.<br>[CoE Goals]<br>#4. To be a school that provides an excellent dynamic curriculum taught by highly competent and caring faculty.<br>#5. To be a school that plays a decisive role in strategically motivating young people to pursue engineering and science as a vocation. | • Increase student participation in extra-curricular activities, e.g. student academic competitions or community service projects in program related fields.<br>• Increase the opportunities for student engagement with professional society events.<br>• Continuously improve the CM learning experiences for students and link program content closely to industry.<br>• Maintain an effective industry advisory board focused on continuous program improvement.<br>• Continue to improve/update CM curriculum to reflect industry trends and needs | • Attend AGC local events.<br>• Participate in ASC student competition: ASC Reno competitions.<br>• Arrange two project site visits or two guest lectures.<br>• Conduct employer and senior exit surveys and incorporate the feedback into CM course contents.<br>• Add or adjust CM topics to reflect new construction paradigms, technologies and methods into existing courses.<br>• Get CM curriculum reviewed by CM faculty and Industry Advisory Board members. | |

Appendix III: Example of CM course syllabus format

# Syllabus

## CON105A – Introduction to Construction Management (3 units)

**Instructor:** Dr. Jay Lee
**Office location:** TEGR – 352
**Telephone**: 951-552-8189
**Email:** jaylee@calbaptist.edu
**Office hours:** 9:00 - 11:00 AM on MWF; 1:00 - 2:00 PM on TR

**Course Instructor and Curriculum Partners:**

| | | |
|---|---|---|
| **Instructor:** Dr. Jay Lee | California Baptist University www.calbaptist.edu | Instructor of Record |
| **Academic Consultant:** Dr. Bob McCullouch | Associate Professor of Practice, Beaver Fellow Emeritus at Purdue University, West Lafayette |  |
| **Industry Partner 1:** Mr. Kevin Terry | Tovey Shultz https://toveyshultz.com/ |  |
| **Industry Partner 2:** Mr. John Rogers | Inland Empire Survey and Engineering https://iesurveyandeng.com/ |  |

**Course Description**

This course will explore fundamental concepts related to the theory and practice of construction management. The course includes an overview of the construction industry, job market, common project management tools, basic materials and methods of construction, risk management

challenges, sustainable operations, and leadership skills required to direct a construction company and project activities.

**Required Textbook**

John E. Schaufelberger and Len Holm (2017), *Management of Construction Projects: A Constructor's Perspective*; 2nd edition, ISBN: 978-1-138-69391-3

**Student Learning Outcomes**

| | Course Objective | ACCE Student Learning Outcome |
|---|---|---|
| 1 | Students will demonstrate understanding of the construction industry, opportunities in construction, and strategies for competing in the construction job market. | 10 |
| 2 | Students will show competence in applying the theories and practices to plan, organize, and control construction projects. | |
| 3 | Students will analyze the basic materials and methods of construction and understand developments in project delivery. | |
| 4 | Students will examine the managerial and leadership skills required of construction professionals in a contemporary environment. | |
| 6 | Students will show competence in quality management of construction projects. | 12 |
| 7 | Students will demonstrate understanding of the principles of sustainable construction. | 15 |

**ACCE Student Learning Outcomes**

10. Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process.
12. Understand construction quality assurance and control.
15. Understand basic principles of sustainable construction.

**ASSESSMENT POLICIES**

**Class preparation**

It is the general policy that the student will contribute a minimum of two hours of preparation time for each one hour of class time.

**Course Evaluation Plan**

An assessment instrument (checklist, rubric, etc.) will accompany each major graded assignment. See course website (weekly Blackboard postings) for specific assignment criteria and the accompanying grading instruments.

All assignments should be typed and should be original to this class (not used for another class assignment). All of the assignments and the corresponding instructions will be posted in Blackboard. In addition, all assignments are to be submitted electronically in Blackboard – hard copy or emailed submissions will not be accepted. Should you have any questions or concerns accessing or locating any of the assignments, folders, instructions, and due dates please notify the instructor immediately. Assignment due dates are specified in the weekly course schedule at the end of the syllabus. Upon gaining full access to the course in Blackboard, on the start date, be sure to navigate the course entirely in Blackboard to ensure you have proper access to all of the links, assignments, and instructions you will need to complete all of the assignments.

**Course Point Distribution: Graded assignments will be weighted as follows:**

| Graded Assignments | Weight |
|---|---|
| Homework Assignments | 20% |
| Quizzes | 20% |
| Term Paper | 20% |
| Mid-term Exam | 20% |
| Final Exam | 20% |
| **Total Points:** | **100%** |

Note that the scores posted on Blackboard are unweighted scores. Students are advised to refer to the above Course Point Distribution when computing the weighted scores for the final grade.

**Final Grades**

The following scale will be used when calculating final grades for graduate students:

| | | | | | |
|---|---|---|---|---|---|
| A | 93%-100% | A- | 90%-92% | B+ | 87%-89% |
| B | 83%-86% | B- | 80%-82% | C+ | 77%-79% |
| C | 73%-76% | C- | 70%-72% | | |

**Checking Grades**

Be sure to check your grades often via the *Blackboard*.

**EXPECTATIONS**

**Attendance**

Students are encouraged to read the university catalog which covers the attendance policy. Failure to follow this attendance policy may result in academic withdrawal and/or a failing grade. **CM class attendance is regarded mandatory due to the applied nature of course content and group learning formats, more than five absences per semester will prevent a student from passing the course regardless of his or her grade standing.** Students who elect to arrive late or leave early will be counted as absent. Should you not want to be marked absent for the class session, personally inform the professor prior to the class that you will leave early or, personally notify the professor after class if you were late. In an event of testing, a student electing to arrive late, will not be given extra time to complete the test. As a professional, you are expected to collaborate with your fellow students during in-class activities or out-of-class group projects, and to respect one another during all interactions, presentations, and class discussions.

**Late Assignments -** Late work is not acceptable; the course moves too quickly through new and challenging material. If a student is going to be absent, he or she should manage their course load accordingly and have the assignment(s) submitted on or before the respective due date. If a student is sick preceding class or has a personal emergency, he or she should contact the instructor immediately to discuss the nature of the situation. There is a formulaic deduction of points for late work, which is:

- Rule 1: Work turned in after the due date will be docked by 5% per day (or partial day) for up to one week. Therefore, the best possible score on late work ranges from 95% down to 65% (if turned in just before the one week deadline).
- Rule 2: No work will be accepted after one week of the original due date.
- The above rules apply even if absence is excused. The only exception to these rules is a major event resulting in a significant impact to the student's ability to keep up with coursework (e.g. hospitalization).

**Make-up Work -** Make-ups for missed exams and quizzes will be allowed in the event of an illness or emergency, but the instructor must be notified and approve it before the exam. In the case of an emergency, notify the instructor within 24 hours after the exam. There will be no make-ups for unexcused absences or absences where notification was received after 24 hours of the exam time.

**Academic Honesty -** Any incident of academic dishonesty (cheating, plagiarism, copying, and other forms) must be reported to the Dean of Students. A detailed discussion of academic dishonesty appears in the CBU *Student Handbook.*

**Students with Disabilities -** Students who have qualified disabilities and wish to arrange the appropriate accommodations, in addition to the general academic support services coordinated by the Academic Resources Center, must identify themselves to the Director of Disability Services. Disabled students who wish to arrange appropriate accommodations must complete and submit a Request for Accommodations form and provide recent (not older than 3 years) diagnostic test results.

**Materials Required**: Each student needs to have his or her required texts and resources as specified in the course syllabus. Materials or computer for note taking is required.

**Recording Class Sessions**

Recording of class sessions without the prior express written permission of the instructor is prohibited. Any permission granted shall include the requirements that a recording may only be used for content study purposes only and sharing a recording with anyone outside of the course and/or posting on social media are strictly prohibited. This course policy is in alignment with Student Handbook and the Standard of Student Conduct. Refer to Student Handbook policies 15.6, 15.7, and 15.8 for more information.

## Course Schedule

| Class | Date | Learning | Assignment |
|---|---|---|---|
| Week 1 | Sep 5/7 | Overview of class; Introduction to Construction Management | Read Schaufelberger and Holm Chapter 1 |
| Week 2 | Sep 12/14 | Project delivery, law and contracts | Read Schaufelberger and Holm Chapter 2<br>Quiz 1 |
| Week 3 | Sep 19/21 | Cost estimating for construction projects and cost control (Instructor Out on 9/19) | Read Schaufelberger and Holm Chapters 3 & 12 |
| Week 4 | Sep 26/28 | Planning and scheduling construction projects and time control | Read Schaufelberger and Holm Chapters 4, 5 & 12<br>Quiz 2 |
| Week 5 | Oct 3/5 | Procuring for construction projects and material management | Read Schaufelberger and Holm Chapter 7 |
| Week 6 | Oct 10/12 | MID-TERM Review; Subcontracting; Project start-up and risk management | Read Schaufelberger and Holm Chapters 6 & 8<br>Quiz 3<br>**MID-TERM EXAM (10/12)** |
| Week 7 | Oct 17/19 | Project monitoring, documentation, and closeout (Instructor Out on 10/17) | Read Schaufelberger and Holm Chapter 9/17 |
| Week 8 | Oct 24/26 | Communication and management within construction | Read Schaufelberger and Holm Chapter 10 |
| Week 9 | Oct 31 Nov 2 | Quality and safety management | Read Schaufelberger and Holm Chapters 13 & 14<br>Quiz 4 |
| Week 10 | Nov 7/9 | Financial management, pay applications, and progress billing | Read Schaufelberger and Holm Chapter 11 |
| Week 11 | Nov 14/16 | Project change orders, claims, and dispute resolution | Read Schaufelberger and Holm Chapters 15& 16<br>Quiz 5 |
| Week 12 | Nov 21/23 | Thanksgiving Holiday | |
| Week 13 | Nov 28/30 | Sustainability in construction project | Handout |
| Week 14 | Dec 5 | FINAL Review | **Term Paper Due (12/5)** |
| Week 15 | | **FINAL EXAM (TBA)** | |

The course schedule is subject to change based on the progress of the class. Instructor will post all course schedule changes on Blackboard after in-class announcement.

I am in receipt of the syllabus for CON105 Introduction to Construction Management for Fall 2023. I have read and I understand the contents of the syllabus.

SIGNED: _____

NAME (printed): _____

DATE: _____

# Appendix IV: ACCE Annual Summary Report of Achievement of SLOs and Degree Program Objectives

**Annual Summary Report of Achievement of Student Learning Outcomes and Degree Program Objectives**

**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***

## ACCE Form A-17

ACCE AMERICAN COUNCIL FOR CONSTRUCTION EDUCATION
PARTNERSHIP FOR EXCELLENCE

| Year | Academic Year | Degree Level | Bachelor's | Program Name | Degree Program Name | Institution Name | Name of Institution |
|---|---|---|---|---|---|---|---|

| Student Learning Outcome | | Method of Assessment | | Current Evaluation of Results and Resulting Corrective Actions | | | Last Reported Evaluation of Results and Follow-up on the impact of corrective actions taken | | | | Description of any revisions made to Degree Program assessment tools |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SLO # | SLO Description | | | Current Evaluation | Dates of evaluation | Corrective Actions | Last Evaluation | Dates of Last Evaluation | Follow-up of the impact of corrective actions taken | Date(s) of Follow-up | |
| #0 | Sample of feedback for Student Learning Outcomes | CONST XXX - Principles of Effective Construction Communications | Direct | Describe the results of the evaluation - example - "Meeting the targeted objective." | May-24 | Review the technical writing course for content and rigor. | Not meeting target | 5/1/2022 | Meeting with industry in AY2022 to discuss student's writing skills did not yield positive impact on writing skills. | 8/1/2023 | Made adjustments to the curriculum to incorporate the feedback received from our industry meeting that was held in AY2022. |
| | | Senior survey | Assessment Type | Meeting target | | None | Meeting target | | None | N/A | None needed at this time. |
| #1 | Create written communication appropriate to the construction discipline | | Direct | | | | | | | | |
| | | | Assessment Type | | | | | | | | |
| #2 | Create oral presentations appropriate to the construction discipline | | Direct | | | | | | | | |
| | | | Assessment Type | | | | | | | | |
| #3 | Create a construction project safety plan. | | Direct | | | | | | | | |
| | | | Assessment Type | | | | | | | | |
| #4 | Create construction project cost estimates. | | Direct | | | | | | | | |
| | | | Assessment Type | | | | | | | | |
| #5 | Create construction project schedules. | | Direct | | | | | | | | |
| | | | Assessment Type | | | | | | | | |
| #6 | Analyze professional decisions based on ethical principles. | | Direct | | | | | | | | |
| | | | Assessment Type | | | | | | | | |
| #7 | Analyze methods, materials, and equipment used to construct projects. | | Direct | | | | | | | | |
| | | | Assessment Type | | | | | | | | |
| #8 | Apply electronic-based technology to manage the construction process. | | Direct | | | | | | | | |
| | | | Assessment Type | | | | | | | | |
| #9 | Apply basic surveying techniques for construction layout and control. | | Direct | | | | | | | | |
| | | | Assessment Type | | | | | | | | |
| #10 | Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process. | | Direct | | | | | | | | |
| | | | Assessment Type | | | | | | | | |
| #11 | Understand construction accounting and cost control. | | Direct | | | | | | | | |
| | | | Assessment Type | | | | | | | | |
| #12 | Understand construction quality assurance and control. | | Direct | | | | | | | | |
| | | | Assessment Type | | | | | | | | |
| #13 | Understand construction project control processes. | | Direct | | | | | | | | |
| | | | Assessment Type | | | | | | | | |
| #14 | Understand the legal implications of contract, common, and regulatory law to manage a construction project. | | Direct | | | | | | | | |
| | | | Assessment Type | | | | | | | | |
| #15 | Understand the basic principles of sustainable construction.. | | Direct | | | | | | | | |
| | | | Assessment Type | | | | | | | | |
| #16 | Understand the basic principles of structural behavior. | | Direct | | | | | | | | |
| | | | Assessment Type | | | | | | | | |
| #17 | Understand the basic principles of HVAC, electrical and plumbing systems. | | Direct | | | | | | | | |
| | | | Assessment Type | | | | | | | | |
| #18 | Additional Program Specific SLO if needed | | Direct | | | | | | | | |
| | | | Assessment Type | | | | | | | | |
| #19 | Additional Program Specific SLO if needed | | Direct | | | | | | | | |
| | | | Assessment Type | | | | | | | | |
| #20 | Additional Program Specific SLO if needed | | Direct | | | | | | | | |
| | | | Assessment Type | | | | | | | | |

| Degree Program Objectives | | Assessment Tool | | Current Evaluation of Results and Resulting Corrective Actions | | | Last Reported Evaluation of Results and Follow-up of the impact of corrective actions taken | | | | Description of any revisions made to Degree Program assessment tools |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DPO # | DPO Description | Method of Assessment | Direct | Current Evaluation | Dates of evaluation | Corrective Actions | Last Evaluation | Dates of Last Evaluation | Follow-up of the impact of corrective actions taken | Date(s) of Follow-up | |
| #0 | | | Direct | | | | | | | | |
| #1 | | | Direct | | | | | | | | |
| #2 | | | Direct | | | | | | | | |
| #3 | | | Direct | | | | | | | | |
| #4 | | | Direct | | | | | | | | |
| #5 | | | Direct | | | | | | | | |
| #6 | | | Direct | | | | | | | | |
| #7 | | | Direct | | | | | | | | |
| #8 | | | Direct | | | | | | | | |
| #9 | | | Direct | | | | | | | | |
| #10 | | | Direct | | | | | | | | |
| #11 | | | Direct | | | | | | | | |
| #12 | | | Direct | | | | | | | | |
| #13 | | | Direct | | | | | | | | |
| #14 | | | Direct | | | | | | | | |
| #15 | | | Direct | | | | | | | | |
| #16 | | | Direct | | | | | | | | |
| #17 | | | Direct | | | | | | | | |
| #18 | | | Direct | | | | | | | | |
| #19 | | | Direct | | | | | | | | |
| #20 | | | Direct | | | | | | | | |

REV. 2024.07.19

# Appendix V: CM SLOs Assessment Map

## ACCE Curriculum Map - Construction Management

| | SLO1 | SLO2 | SLO3 | SLO4 | SLO5 | SLO6 | SLO7 | SLO8 | SLO9 | SLO10 | SLO11 | SLO12 | SLO13 | SLO14 | SLO15 | SLO16 | SLO17 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CON105 | | | I | | I | D | | | | I | | IPD | | | IPD | | |
| CON205 | | | | I/P | | | | I | | | | | | | | | |
| CON215 | I | | | | | | | P | | | | | | | | | |
| CON310 | | | | | | | IPD | | | | | | | | | P | |
| CON315 | P | | | | | | | P | | P | | | | | | | |
| CON325 | | | | | | | | | | | IPD | | | | | | |
| CON330 | | | P/D | | | | | | | | | | | | | | |
| CON340 | | | | | | | | | | | | | | | | D | |
| CON350 | | | | | | P | | | | D | | | | IPD | | | |
| CON430 | | | | D | | | | | | | | | | | | | |
| CON460 | | | | | P/D | | | D | | | | | IPD | | | | |
| CON470 | | | | | | | | | | | | | | | | | IPD |
| EGR241 | | | | | | | | | | | | | | | | I/P | |
| EGR251 | | | | | | | | | IPD | | | | | | | | |
| EGR306 | | I/P | | | | | | | | | | | | | | | |
| EGR401 | | | | | | | | | | | | | | | | | |
| EGR402 | D | D | | | | | | | | | | | | | | | |
| EGR451 | | | | | | | P | | | | | P | | | P | | |

| | |
|---|---|
| I | Introduced |
| P | Practiced |
| I/P | Introduced/Practiced |
| D | Demonstrated |
| P/D | Practiced/Demonstrated |
| IPD | Introduced/Practiced/Demonstrated |

Introduced
Reinforced
Demonstrated level of mastery

Outcome assessed

| | |
|---|---|
| **SLO1** | Create ***written communications*** appropriate to the construction discipline |
| **SLO2** | Create ***oral presentations*** appropriate to the construction discipline |
| **SLO3** | Create a construction project ***safety*** plan |
| **SLO4** | Create construction project ***cost estimates*** |
| **SLO5** | Create construction project ***schedules*** |
| **SLO6** | Analyze professional decisions based on ***ethical principles*** |
| **SLO7** | Analyze ***methods, materials, and equipment*** used to construct projects |
| **SLO8** | Apply ***electronic-based technology*** to manage the construction process |
| **SLO9** | Apply basic ***surveying*** techniques for construction layout and control |
| **SLO10** | Understand different ***methods of project delivery*** and the roles of and responsibilities of all constituencies involved in the design and construction process |
| **SLO11** | Understand ***construction accounting*** and cost control |
| **SLO12** | Understand construction ***quality*** assurance and control |
| **SLO13** | Understand construction ***project control*** processes |
| **SLO14** | Understand the ***legal implications*** of contract, common, and regulatory law to manage a construction project |
| **SLO15** | Understand basic principles of ***sustainable construction*** |
| **SLO16** | Understand the basic principles of ***structural behavior*** |
| **SLO17** | Understand the basic principles of ***HVAC, electrical and plumbing*** systems. |

# Exit Survey - Construction Management Program

Name:

1. What is the status of your job/grad school status? Please select one of the following.
   - ☐ Accepted a job offer
   - ☐ Under decision-making process for job offer(s)
   - ☐ Under interviewing process
   - ☐ Still searching for a job position
   - ☐ Will go to a graduate school (no job searching is planned)

If you are still searching, where are you searching (location)?
   - ☐ In Southern California
   - ☐ In Central California
   - ☐ In Northern California
   - ☐ In another state rather than California in the U.S.
   - ☐ In a foreign country rather than U.S.
   - ☐ No preference

If you have a permanent position, what company, where, and what is your job title/description?
- Name of company:
- Job title:
- Location of your company/project:

If you have a permanent position, what would be your salary? Please select one of the following,
   - ☐ Less than $50,000
   - ☐ Between $50,000 and $60,000
   - ☐ Between $60,000 and $70,000
   - ☐ Between $70,000 and $80,000
   - ☐ Between $90,000 and $100,000
   - ☐ More than $100,000

If you have a permanent position, which sector in the construction industry will you work? Please select one of the following,
   - ☐ Commercial construction
   - ☐ Residential construction
   - ☐ Heavy/Civil construction
   - ☐ Industrial construction
   - ☐ Specialty construction (Mechanical/Electrical/Plumbing)
   - ☐ Others (please specify your section: )

If you have a permanent position, where will you work? Please select one of the following,

   - ☐ In Southern California

☐ In Central California
☐ In Northern California
☐ In another state rather than California in the U.S.
☐ In a foreign country rather than U.S.

If you are pursuing M.S degree, what school, and which program (CE, CM, or MBA)?

2. Please provide your email address that you most frequently use other than calbaptist.edu.

Construction Management Program Outcomes

Please mark each student learning outcome based on the following scale:

1. Strongly Disagree
2. Disagree
3. Somewhat Disagree
4. Agree
5. Strongly Agree

| As a result of the courses taken and internship experience, | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| I can create ***written communications*** appropriate to the construction discipline. | ☐ | ☐ | ☐ | ☐ | ☐ |
| I can create ***oral presentations*** appropriate to the construction discipline. | ☐ | ☐ | ☐ | ☐ | ☐ |
| I can create a construction project ***safety plan***. | ☐ | ☐ | ☐ | ☐ | ☐ |
| I can create construction project ***cost estimates***. | ☐ | ☐ | ☐ | ☐ | ☐ |
| I can create construction project ***schedules***. | ☐ | ☐ | ☐ | ☐ | ☐ |
| I can analyze professional decisions based on ***ethical principles***. | ☐ | ☐ | ☐ | ☐ | ☐ |
| I can analyze ***methods, materials***, ***and equipment*** used to construct projects. | ☐ | ☐ | ☐ | ☐ | ☐ |
| I can apply ***electronic-based technology*** to manage the construction process. | ☐ | ☐ | ☐ | ☐ | ☐ |
| I can apply basic ***surveying techniques*** for construction layout and control. | ☐ | ☐ | ☐ | ☐ | ☐ |
| I understand different ***methods of project delivery*** and the roles and responsibilities of all constituencies involved in the design and construction process. | ☐ | ☐ | ☐ | ☐ | ☐ |
| I understand construction ***accounting*** and cost control. | ☐ | ☐ | ☐ | ☐ | ☐ |
| I understand construction ***quality*** assurance and control. | ☐ | ☐ | ☐ | ☐ | ☐ |
| I understand construction ***project control*** processes. | ☐ | ☐ | ☐ | ☐ | ☐ |
| I understand the ***legal implications of contract***, common, and regulatory law to manage a construction project. | ☐ | ☐ | ☐ | ☐ | ☐ |
| I understand the basic principles of ***sustainable construction***. | ☐ | ☐ | ☐ | ☐ | ☐ |
| I understand the basic principles of ***structural behavior***. | ☐ | ☐ | ☐ | ☐ | ☐ |
| I understand the basic principles of ***mechanical, electrical and plumbing systems***. | ☐ | ☐ | ☐ | ☐ | ☐ |

Do you have anything to say about the CM program? Feel free to continue to the next page ☺

# Employer Survey
# B.S. in Construction Management

Employer:

Employer Representative & Title:

Number of program graduates hired within the past three years:

**Confidentiality statement**: *All information from interviews will be reported in aggregate and not linked to any individual or company. This information is intended to help with our continuous improvement efforts.*

**Explanation of interview questions**: *Our program curriculum and facilities are informed by several desired learning outcomes. Our interest is in understanding your perceptions as to how well prepared program graduates are positioned for success in the workplace with regard to these learning outcomes. For each outcome, please rate the overall performance of graduates as "meets expectations" or "below expectations," and provide any insight into of the performance of our graduates within the context of your work environment. Please remember that you are not rating a specific employee, but rather graduates collectively from the* **Construction Management *program*** *during the past 3-years.*

| Construction Management Learning Outcomes | Employer Rating | Employer Comments |
|---|---|---|
| 1. Create ***written communications*** appropriate to the construction discipline. | Select one out of the list. | |
| 2. Create ***oral presentations*** appropriate to the construction discipline. | Select one out of the list. | |
| 3. Create a construction project ***safety plan*.** | Select one out of the list. | |
| 4. Create construction project ***cost estimates***. | Select one out of the list. | |
| 5. Create construction project ***schedules***. | Select one out of the list. | |
| 6. Analyze professional decisions based on ***ethical principles***. | Select one out of the list. | |

| Construction Management Learning Outcomes | Employer Rating | Employer Comments |
|---|---|---|
| 7. Analyze ***methods, materials, and equipment*** used to construct projects. | Select one out of the list. | |
| 8. Apply ***electronic-based technology*** to manage the construction process. | Select one out of the list. | |
| 9. Apply basic ***surveying techniques*** for construction layout and control. | Select one out of the list. | |
| 10. Understand different ***methods of project delivery*** and the roles and responsibilities of all constituencies involved in the design and construction process. | Select one out of the list. | |
| 11. Understand ***construction accounting*** and cost control. | Select one out of the list. | |
| 12. Understand ***construction quality*** assurance and control. | Select one out of the list. | |
| 13. Understand construction ***project control*** processes. | Select one out of the list. | |
| 14. Understand the ***legal implications of contract***, common, and regulatory law to manage a construction project. | Select one out of the list. | |
| 15. Understand the basic principles of ***sustainable construction***. | Select one out of the list. | |
| 16. Understand the basic principles of ***structural behavior***. | Select one out of the list. | |
| 17. Understand the basic principles of ***mechanical, electrical and plumbing systems.*** | Select one out of the list. | |

**Additional Comments or Suggestions**: please provide any other comments or suggestion to the Construction Management program at CBU below.

# Alumni Survey
# B.S. in Construction Management

- Job title:
- Year of your graduation from CBU CM program:
- Number of years you have worked in the construction industry after graduation from CBU:
- Construction sector you work for: Others: please specify

Please specify for Others:

**Confidentiality statement**: *All information from this survey will be reported in aggregate and not linked to any individual. This information is intended to help with continuous improvement efforts in the CM program at CBU.*

**Explanation of survey questions**: *the main purpose of this survey is to understand your perceptions as to how well the CM program prepared you as a construction professional in the workplace regarding the CM learning outcomes below. For each outcome, please rate your perception: if you agree or disagree with "I was well prepared through the learning experience in the CM program at CBU to be able to…". Also please provide any insight/comments.*

| *I was well prepared through the learning experience in the CM program at CBU to be able to …..* | Alumni Rating | Alumni Comments |
|---|---|---|
| 1. Create ***written communications*** appropriate to the construction discipline. | Please select one: | |
| 2. Create ***oral presentations*** appropriate to the construction discipline. | Please select one: | |
| 3. Create a construction project ***safety plan*.** | Please select one: | |
| 4. Create construction project ***cost estimates***. | Please select one: | |
| 5. Create construction project ***schedules***. | Please select one: | |
| 6. Analyze professional decisions based on ***ethical principles***. | Please select one: | |

| *I was well prepared through the learning experience in the CM program at CBU to be able to …..* | Alumni Rating | Alumni Comments |
|---|---|---|
| 7. Analyze ***methods, materials, and equipment*** used to construct projects. | Please select one: | |
| 8. Apply ***electronic-based technology*** to manage the construction process. | Please select one: | |
| 9. Apply basic ***surveying techniques*** for construction layout and control. | Please select one: | |
| 10. Understand different ***methods of project delivery*** and the roles and responsibilities of all constituencies involved in the design and construction process. | Please select one: | |
| 11. Understand ***construction accounting*** and cost control. | Please select one: | |
| 12. Understand ***construction quality*** assurance and control. | Please select one: | |
| 13. Understand construction ***project control*** processes. | Please select one: | |
| 14. Understand the ***legal implications of contract***, common, and regulatory law to manage a construction project. | Please select one: | |
| 15. Understand the basic principles of ***sustainable construction***. | Please select one: | |
| 16. Understand the basic principles of ***structural behavior***. | Please select one: | |
| 17. Understand the basic principles of ***mechanical, electrical and plumbing systems.*** | Please select one: | |

**Additional Comments or Suggestions**: please provide any other comments or suggestion to the Construction Management program at CBU below.

# CM SLO Assessment Annual Report: 2024-2025

| ACCE/CM Student Learning Outcomes | | Direct Assessment [1] | | | Indirect Assessment | | | | | | Reponse/Actions |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | In CM Courses | | | Employer Survey [2] | | Senior Exit Survey [3] | | CBU Alum Survey [3] | | |
| | | CM Course | Number of data | Score | # of Responses | Score | # of Responses | Score | # of Responses | Score | |
| **SLO1** | Create ***written communications*** appropriate to the construction discipline | EGR401 | | | | | | | | | No action at this time. Objective and self-report measures all positive. |
| **SLO2** | Create ***oral presentations*** appropriate to the construction discipline | EGR401 | | | | | | | | | No action at this time. Objective and self-report measures all positive. |
| **SLO3** | Create a construction project ***safety*** plan | CON330 | | | | | | | | | No action at this time. Objective and self-report measures all positive. |
| **SLO4** | Create construction project ***cost estimates*** | CON430 | | | | | | | | | No action at this time. Objective and self-report measures all positive. |
| **SLO5** | Create construction project ***schedules*** | CON460 | | | | | | | | | No action at this time. Objective and self-report measures all positive. |
| **SLO6** | Analyze professional decisions based on ***ethical principles*** | CON105 | | | | | | | | | No action at this time. Objective and self-report measures all positive. |
| **SLO7** | Analyze ***methods, materials, and equipment*** used to construct projects | CON310 | | | | | | | | | No action at this time. Objective and self-report measures all positive. |
| **SLO8** | Apply ***electronic-based technology*** to manage the construction process | CON460 | | | | | | | | | No action at this time. Objective and self-report measures all positive. |
| **SLO9** | Apply basic ***surveying*** techniques for construction layout and control | EGR251 | | | | | | | | | No action at this time. Objective and self-report measures all positive. |
| **SLO10** | Understand different ***methods of project delivery*** and the roles of and responsibilities of all constituencies involved in the design and construction process | CON350 | | | | | | | | | No action at this time. Objective and self-report measures all positive. |
| **SLO11** | Understand ***construction accounting*** and cost control | CON325 | | | | | | | | | No action at this time. Objective and self-report measures all positive. |
| **SLO12** | Understand construction ***quality*** assurance and control | CON105 | | | | | | | | | No action at this time. Objective and self-report measures all positive. |
| **SLO13** | Understand construction ***project control*** processes | CON460 | | | | | | | | | No action at this time. Objective and self-report measures all positive. |
| **SLO14** | Understand the ***legal implications*** of contract, common, and regulatory law to manage a construction project | CON350 | | | | | | | | | No action at this time. Objective and self-report measures all positive. |
| **SLO15** | Understand basic principles of ***sustainable construction*** | CON105 | | | | | | | | | No action at this time. Objective and self-report measures all positive. |
| **SLO16** | Understand the basic principles of ***structural behavior*** | CON340 | | | | | | | | | No action at this time. Objective and self-report measures all positive. |
| **SLO17** | Understand the basic principles of ***HVAC, electrical and plumbing*** systems. | CON470 | | | | | | | | | No action at this time. Objective and self-report measures all positive. |

**Note**

1 Benchmark: >70%

2 Benchmark for Action for Survey Data < 70%

3 Benchmark for Action for Survey Data < 3.5 on 5-pt. scale