

## Degree Program Assessment

### Program Purpose

Bachelor of Science in Construction Management (BSCM) Mission - The Bachelor of Science in Construction Management degree program's mission is to produce quality graduates with technical and managerial skills that meet the expectations of business, industries, government on the local, state, and national levels. Furthermore, these graduates are to become professional constructors distinct from architects and engineers.

### Objectives:

Program Objective 1.0 – Provide a core body of knowledge that will allow the student to better meet the needs of the various industry types

Program Objective 2.0 – Enhance student critical thinking and problem solving skills

Program Objective 3.0 – Produce professional constructors with the ability to effectively communicate within a team and with other professionals

Program Objective 4.0 – Establish a techno-student construction education that prepares students to lead in the utilization of information technology in the construction industry

Program Objective 5.0 – Create a strong construction safety culture within the student body

### Learning Outcomes:

SLO 1 – Create written communications appropriate to the construction discipline

SLO 2 – Create oral presentations appropriate to the construction discipline

SLO 3 – Create a construction safety plan

SLO 4 – Create construction project cost estimates

SLO 5 – Create construction project schedule.

SLO 6 – Analyze professional decisions based on ethical principles

SLO 7 – Analyze construction documents for planning and management of construction processes

SLO 8 – Analyze methods, materials, and equipment used to construct projects

SLO 9 – Understand construction management skills as a member of a multidisciplinary team

SLO 10 – Apply electronic-based technology to manage the construction process

SLO 11 – Apply basic surveying techniques for construction layout and control

SLO 12 – Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process

SLO 13 – Understand construction risk management

SLO 14 – Understand construction accounting and cost control

SLO 15 – Understand construction quality assurance and control

SLO 16 – Understand construction project control processes

SLO 17 – Understand the legal implications of contract, common, and regulatory law to manage a construction project

SLO 18 – Understand the basic principles of sustainable construction

SLO 19 – Understand the basic principles of structural behavior

SLO 20 – Understand the basic principles of mechanical, electrical and piping systems

#### Analysis:

Program Objective 1.0 has been flagged as a caution as both of the assessment tools showing a slight downward trend over the past five years with AIC Level I exam; however, the pass rate was higher than national averages. Added to this, the Senior Exit Exam Action Item for question review was completed two cycles back but it still shows a drop in the averages. Program Objective 2.0 also with a caution indicator as the number of students being recognized for their efforts by the department has increased slightly but it is not keeping up with increasing enrollments. It is not a concern, but needs to be monitored. Program Objective 3.0 is not being achieved and it of concern as there have yet to be any CM students recognized as a Distinguished Communicator when they graduate. Objective 4.0 is being achieved as much of the curriculum has gone into the digital age with BIM, Procore, On-Screen-Takeoff (OST), etc. Program Objective 5.0 needs to proceed with caution as assessment as there were only 2 OSHA Certificates issued for Construction Safety and Health. There are four CM courses that have construction safety content. This exceeds targets.

Since many of the Action Items were completed in the last three cycles, almost all Programs Student Learning Outcomes (SLOs) are now meeting targets; however there are three with cautions. SLO 8 is at caution as it seems that students do understand how to analyze materials, methods on a project (targets being met); however, the assessment Senior Exit Exam is scoring in the high 30s and low 40s. Even the survey assessments indicate average to above average learning in this area. The same can be said for SLO 12. SLO 14 had a 10 point drop in the AIC score and also was flag with a caution.

## Recommendations:

For the Program Objectives, all Action Items have been completed with exception of marketing the OSHA Construction Health and Safety Certificate and monitor the past downward trends on the AIC and Senior Exit exams. If they continue in the next cycle, they will need to be reviewed for causes.

Several Action Items were identified for the program SLOs. The Senior Exit Exam question sets for SLOs 8, 16, and 20 still need to be overhauled. Exam results go counter to the other assessments meaning that the questions may be not relevant due to topical change or flawed in their construction. The program assessment for SLO 3, 4 and 5 have been successfully moved to the responsibility of the instructors in CM 2215 Construction Safety, CM 3331 Construction Estimating, and CM 4101 Construction Planning and Scheduling. These are no longer be assessed through CM 4202's Senior Project.

The three year assessment cycle come due in the Spring of 2023 for the 2022 assessment cycle. An Action Items has been created as a reminder.