



Cincinnati State CET: Construction Management

QIP

- I. Strategic Plan
- II. Degree Program Assessment Implementation Plan
- III. Determination of Achievement of SLOs and Degree Program Objectives

I. Strategic Plan

- - -

Included in this package is the previous formal, in-depth strategic plan that was formulated in 2011 prior to the college-wide transition to semesters as mandated by the state. This strategic plan was then revisited and updated in 2014 and again in 2017. We continue to be guided by the vision and insights generated out of this strategic plan with current updates voted upon in June of 2025. Additionally, we have determined in our post-covid state, that a new vision and plan are necessary for growing strategically into the future. We have made it a goal and anticipate a fully drafted and approved new strategic plan by the end of academic year 2026-27.

- - -

The purpose of this Strategic Plan is to establish a comprehensive vision for managing Civil Engineering Technology – Construction Management’s resources in a manner that supports and promotes the fulfillment of its mission. This document sets out a plan to establish the strategy that CETC will pursue over the next *five years*. That strategy will result in a *net growth of the Civil Engineering Technology – Construction management and a solidification of its role in the civil/construction arena in Greater Cincinnati*. This plan aims to describe the mission statements and vision for the program, state the objectives and outcomes of the program as well as establish its goals within this plan period. This plan will also provide the analysis of the program including an outline of the strengths, weaknesses, opportunities and threats which will need to be addressed in order to reach our goals. The plan will describe the personnel that will be involved, the data that will be collected, and outline the implementation plan, general timeline, and evaluation procedures.

The mission and vision of the institution is stated as follows on Cincinnati State’s website:

Mission:

Cincinnati State provides access, opportunity, and support in achieving success for individuals seeking exceptional technical, transfer and experiential/cooperative education and workforce training.

Vision:

Cincinnati State advances the educational and economic vitality of our state and region as the college of choice.

The Construction Management program contributes to the mission and vision of the institution in several ways. The Construction Management program was created and has been modified over the years to be student-focused and accessible. Student surveys are collected and reviewed annually to make sure that we are meeting the needs of students. We evening course options to allow students the flexibility that they need to complete coursework as either full-time or part-time students.

Our technical education meets the needs and changing trends of industry. Changes have been made to coursework and our curriculums to make sure that we are keeping up with industry’s needs. As BIM has become a larger part of the construction industry, a course was created to meet this need. We are currently assessing the need to make BIM, laser scanning, and augmented reality part of our curriculum so that we can continue to meet the needs of our students and industry. Our general education courses are continually reviewed to make sure that they meet accreditation and transfer standards. The CET curriculum and coursework included in the Construction Management program is continually reviewed to make sure that it meets or exceeds the requirements of ACCE, the Ohio Department of Education, the Ohio Department of Higher Education, and the Higher Learning Commission.

Cincinnati State has transfer agreements with several 4-year colleges and universities in the area. The Construction Management has specific agreements with the Construction Management department at Northern Kentucky University and University of Cincinnati. Co-operative education has been a cornerstone of our curriculum since its inception. Students are required to complete two semesters of co-op prior to graduation.

CETC Mission and Educational Objectives:

The mission of the Civil Engineering Technology's Construction Management major at Cincinnati State Technical and Community College (CSTCC) is to develop technically competent and professional graduates for successful careers within the construction profession. The primary objective of the CETC major is to provide the community with a qualified graduate that possesses a broad understanding of basic technical fundamentals coupled with the knowledge of the most current advancements in the profession. A second objective of the CETC major is to prepare its graduates for the possibility of pursuing further educational opportunities in construction management/construction technology or related fields. To achieve success in fulfilling these objectives the program must be dedicated to continuous improvement of the current curriculums, equipment, software, and educational delivery systems.

The program has formalized educational objectives that our students should possess within several years of graduation. These educational objectives form the strategy for guiding the program to deliver a quality educational product and are as follows:

- Prepare Civil Engineering Technology - Construction Management graduates to successfully enter and pursue baccalaureate degrees.
- Prepare Civil Engineering Technology - Construction Management technicians to enter and advance professionally in technical and management positions in the local construction industry.

Program Learning Outcomes (ACCE Degree Program Objectives)

The program has formalized educational objectives that our students should possess within several years of graduation. These educational objectives form the strategy for guiding the program to deliver a quality educational product and are as follows:

- Graduates of the Construction Management Program will transfer to completed their education at the Bachelor degree level in a related field of study.
- Graduates of the Construction Management Program will obtain a position in a civil engineering, architectural, construction, or related company.

Student Learning Outcomes

Upon graduation from an accredited Associate Degree Program, ACCE requires that all graduates shall be able to:

1. Apply effective communication, both orally and in writing.
2. Apply quantity takeoff skills for bidding or budgeting purposes on a construction project.
3. Apply the aptitude to schedule a basic construction project.
4. Apply current technology related to the construction industry.
5. Apply the interpretation of construction documents (contracts, specifications, and drawings) used in managing a construction project.
6. Apply basic principles of construction accounting.
7. Apply basic surveying techniques used in building layout.
8. Understand basic principles of ethics in the construction industry.
9. Understand the fundamentals of contracts, codes, and regulations that govern a construction project.
10. Understand basic construction methods and materials.
11. Understand basic safety hazards on a construction site and standard prevention measures.
12. Understand the basic principles of structural design.
13. Understand the basic principles of mechanical, electrical, and plumbing systems.

II. Degree Program Assessment Implementation Plan

- Assessment 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

To determine whether students have met the required student outcomes, assessments will be conducted on a regular cycle in a series of courses which address each published outcome. The table below shows the courses that will be evaluated along with the outcome that will be assessed in each of these courses. The outcomes are listed below the table. A calendar showing the data collection cycle for these courses is provided on the next page.

Student Outcomes CET Construction Management														
		1	2	3	4	5	6	7	8	9	10	11	12	13
Course	CET 108											DA		
	CET 110							DA						
	CET 125												DA	
	CET 135		DA											
	CET 141									DA	DA			DA
	CET 230				DA	DA								
	CET 235			DA										
	CET 240						DA							
	CET 285	DA							DA					
	CET 291/292	IA	IA	IA	IA	IA	IA	IA	IA	IA	IA	IA	IA	IA

Student Learning Outcomes

Upon graduation from an accredited ACCE Associate Degree program, graduates shall be able to:

- SLO 1 – Apply effective communication, both orally and in writing.
- SLO 2 – Apply quantity takeoff skills for bidding or budgeting purposes on a construction project.
- SLO 3 – Apply the aptitude to schedule a basic construction project.
- SLO 4 – Apply current technology related to the construction industry.
- SLO 5 – Apply the interpretation of construction documents (contracts, specifications, and drawings) used in managing a construction project.
- SLO 6 – Apply basic principles of construction accounting.
- SLO 7 – Apply basic surveying techniques used in building layout.
- SLO 8 – Understand basic principles of ethics in the construction industry.
- SLO 9 – Understand the fundamentals of contracts, codes, and regulations that govern a construction project.
- SLO 10 – Understand basic construction methods and materials.
- SLO 11 – Understand basic safety hazards on a construction site and standard prevention measures.
- SLO 12 – Understand the basic principles of structural design.
- SLO 13 – Understand the basic principles of mechanical, electrical, and plumbing systems.

FA 2025	SP 2026	SU 2026	FA 2026	SP 2027	SU 2027	FA 2027	SP 2028	SU 2028
SLO 3 CET 235	SLO 2 CET 135	SLO 1 CET 285	SLO 5 CET 230	SLO 9 CET 141	SLO 8 CET 285	SLO 11 CET 108	SLO 12 CET 246	
SLO 4 CET 230	SLO 7 CET 253		SLO 6 CET 240	SLO 10 CET 141			SLO 13 CET 242	
FA 2028	SP 2029	SU 2029	FA 2029	SP 2030	SU 2030	FA 2030	SP 2031	SU 2031
SLO 3 CET 235	SLO 2 CET 135	SLO 1 CET 285	SLO 5 CET 230	SLO 9 CET 141	SLO 8 CET 285	SLO 11 CET 108	SLO 12 CET 246	
SLO 4 CET 230	SLO 7 CET 253		SLO 6 CET 240	SLO 10 CET 141			SLO 13 CET 242	

III. Determination of Achievement of SLOs and Degree Program Objectives

Assessment Plan for Student Learning Outcome 1

Apply effective communication, both orally and in writing.

Direct Assessment:

Course: CET 285 Construction Management Capstone

Performance Criteria: The performance of the students will be measured via faculty evaluation on a rubric used as part of the student presentation in this class. Each student will participate in the oral presentation. A rubric has been developed using criterion measured by the instructor on a 1 (unsatisfactory) to 5 (exemplary) scale.

Tool: Presentation Rubric. The performance goal is that 70% of the students in the class will score a “3” or higher on this rubric.

Implementation Strategy: Implementation of this specific tool for ACCE Student Learning Outcome will take place in each semester. The instructor will keep all rubrics and student work for submission to Program Chair after the semester. After the implementation, the instructor will fill out the feedback form, indicating the percentage of students scoring in each category. The Program Chair will use the information to compare to previous semesters and also determine if the performance criteria has been achieved. The summary of this feedback will be included and reviewed by the program faculty. The program will discuss improvement strategies as needed. A report will be reviewed by the Industry Advisory Board as well.

Results	Speaking Voice	Poise & Appearance	Eye Contact & Body Language	Organization	Technical Content	Media Usage	Time Management	% ≥ 3
SU 2020	4.06	3.88	3.69	4.13	4.06	4.00	3.63	100%
SU 2021	4.38	4.23	4.00	4.23	4.31	4.00	4.08	100%
SU 2022	4.30	4.10	4.20	4.20	4.50	4.00	4.20	100%
SU 2023	4.27	4.00	4.09	4.18	4.36	4.00	4.18	100%
SU 2024	4.20	3.93	3.60	4.20	4.13	4.00	3.80	100%

Indirect Assessment:

Course: CET 291 & CET 292

Performance Criteria: The performance of the students will be measured indirectly via survey of the students’ coop employer. The specific performance goal for this outcome is that a minimum of 70% of the class will perform at a level of 3 or better.

Tool: A survey is administered to the employer of all students during their coop semester.

Implementation Strategy: The Coop Coordinator administers the survey for all students in the semesters they are enrolled in coop. The Program Chair will use the information to compare to previous semesters and also determine if the performance criteria has been achieved.

Assessment Plan for Student Learning Outcome 2

Apply quantity takeoff skills for bidding or budgeting purposes on a construction project.

Direct Assessment:

Course: CET 135 Construction Estimating

Performance Criteria: The performance of the students will be measured via faculty evaluation used during an estimating lab. The specific performance criterion for this outcome is that a minimum of 70% of the class will correctly quantify a scope of work on the course project within a +/- 15% degree of accuracy.

Tool: Embedded Component in an Estimating Lab. The first lab consists of generating a takeoff for a portion of the overall scope of a project. To successfully generate an accurate takeoff, the student must be skilled in the use of an Architectural Scale, basic plan reading and have the aptitude to look at a detail to evaluate and correctly apply all of the materials used in the specific system.

Implementation Strategy: Implementation of this specific tool for ACCE Student Learning Outcome will take place in each semester. The instructor will keep all rubrics and student work for submission to Program Chair after the semester. After the implementation, the instructor will fill out the feedback form, indicating the percentage of students scoring in each category. The Program Chair will use the information to compare to previous semesters and also determine if the performance criteria has been achieved. The summary of this feedback will be included and reviewed by the program faculty. The program will discuss improvement strategies as needed. A report will be reviewed by the Industry Advisory Board as well.

Results	Quantity Accuracy	% ≥ 3
SU 2020	3.00	100%
SP 2022	2.88	88%
FA 2022	2.80	80%
SP 2023	2.92	92%
SP 2025	3.00	100%

Indirect Assessment:

Course: CET 291 & CET 292

Performance Criteria: The performance of the students will be measured indirectly via survey of the students' coop employer. The specific performance goal for this outcome is that a minimum of 70% of the class will perform at a level of 3 or better.

Tool: A survey is administered to the employer of all students during their coop semester.

Implementation Strategy: The Coop Coordinator administers the survey for all students in the semesters they are enrolled in coop. The Program Chair will use the information to compare to previous semesters and also determine if the performance criteria has been achieved.

Assessment Plan for Student Learning Outcome 3

Apply the aptitude to schedule a basic construction project.

Direct Assessment:

Course: CET 235 Construction Scheduling

Performance Criteria: The performance of the students will be measured via faculty evaluations using a rubric. A rubric has been developed using criterion measured by the instructor on a 1 (unsatisfactory) to 4 (exemplary) scale. The specific performance criterion for this outcome is that a minimum of 70% of the class will perform at a level of 3 or better.

Tool: As a culminating project in the Scheduling course, students are required to create a schedule for a basic construction project. The performance goal is that 70% of the students in the class will score a “3” or higher on this rubric.

Implementation Strategy: Implementation of this specific tool for ACCE Student Learning Outcome will take place in each semester. The instructor will keep all rubrics and student work for submission to Program Chair after the semester. After the implementation, the instructor will fill out the feedback form, indicating the percentage of students scoring in each category. The Program Chair will use the information to compare to previous semesters and also determine if the performance criteria has been achieved. The summary of this feedback will be included and reviewed by the program faculty. The program will discuss improvement strategies as needed. A report will be reviewed by the Industry Advisory Board as well.

Results	Activities	Durations	Logic	Cost/Resource Loading	% ≥ 3
FA 2024	2.75	2.92	2.69	3.36	77%

Indirect Assessment:

Course: CET 291 & CET 292

Performance Criteria: The performance of the students will be measured indirectly via survey of the students’ coop employer. The specific performance goal for this outcome is that a minimum of 70% of the class will perform at a level of 3 or better.

Tool: A survey is administered to the employer of all students during their coop semester.

Implementation Strategy: The Coop Coordinator administers the survey for all students in the semesters they are enrolled in coop. The Program Chair will use the information to compare to previous semesters and also determine if the performance criteria has been achieved.

Assessment Plan for Student Learning Outcome 4

Apply current technology related to the construction industry.

Direct Assessment:

Course: CET 230 Construction Management

Performance Criteria: The performance of the students will be measured via faculty evaluations using a rubric. A rubric has been developed using criterion measured by the instructor on a 1 (unsatisfactory) to 3 (exemplary) scale. The specific performance criterion for this outcome is that a minimum of 70% of the class will perform at a level of 3 or better.

Tool: In CET 230 Construction Management, students learn about a variety of technologies used in the construction industry. Specifically, they will learn to use various tools in Procore. For this outcome assessment students must process a submittal from a hypothetical project subcontractor. They are assessed on their ability to operate the software along with their ability to discern the adequacy of the submittal material.

Implementation Strategy: Implementation of this specific tool for ACCE Student Learning Outcome will take place in each semester. The instructor will keep all rubrics and student work for submission to Program Chair after the semester. After the implementation, the instructor will fill out the feedback form, indicating the percentage of students scoring in each category. The Program Chair will use the information to compare to previous semesters and also determine if the performance criteria has been achieved. The summary of this feedback will be included and reviewed by the program faculty. The program will discuss improvement strategies as needed. A report will be reviewed by the Industry Advisory Board as well.

Results	Required Information	Attachment	% ≥ 3
FA 2020	3.00	2.75	94%
SP 2021	3.00	2.43	86%
FA 2021	3.00	2.00	75%
FA 2022	3.00	3.00	100%
SU 2023	3.00	1.80	70%
FA 2023	3.00	2.77	92%
FA 2024	3.00	2.25	81%

Indirect Assessment:

Course: CET 291 & CET 292

Performance Criteria: The performance of the students will be measured indirectly via survey of the students' coop employer. The specific performance goal for this outcome is that a minimum of 70% of the class will perform at a level of 3 or better.

Tool: A survey is administered to the employer of all students during their coop semester.

Implementation Strategy: The Coop Coordinator administers the survey for all students in the semesters they are enrolled in coop. The Program Chair will use the information to compare to previous semesters and also determine if the performance criteria has been achieved.

Assessment Plan for Student Learning Outcome 5

Apply the interpretation of construction documents (contracts, specifications, and drawings) used in managing a construction project.

Direct Assessment:

Course: CET 230 Construction Management

Performance Criteria: The performance of the students will be measured via faculty evaluations via a course assignment. As a requirement for the assignment, students must answer a question about the conformance of the submittal material being processed. The specific performance criteria for this assignment is for at least 70% of the students correctly answer the yes or no question.

Tool: In CET 230 Construction Management, students learn about a variety of technologies used in the construction industry. Specifically, they will learn to use various tools in Procore. For this outcome assessment students must process a submittal from a hypothetical project subcontractor. They are assessed on their ability to operate the software along with their ability to discern the adequacy of the submittal material.

Implementation Strategy: Implementation of this specific tool for ACCE Student Learning Outcome will take place in each semester. The instructor will keep all rubrics and student work for submission to Program Chair after the semester. After the implementation, the instructor will fill out the feedback form, indicating the percentage of students scoring in each category. The Program Chair will use the information to compare to previous semesters and also determine if the performance criteria has been achieved. The summary of this feedback will be included and reviewed by the program faculty. The program will discuss improvement strategies as needed. A report will be reviewed by the Industry Advisory Board as well.

<u>Results</u> Goal=70%	FA 2020	SP 2021	FA 2021	FA 2022	SU 2023	FA 2023	FA 2024
<u>% Correct Answer</u>	89 %	100%	73%	92%	83%	81%	89%

Indirect Assessment:

Course: CET 291 & CET 292

Performance Criteria: The performance of the students will be measured indirectly via survey of the students' coop employer. The specific performance goal for this outcome is that a minimum of 70% of the class will perform at a level of 3 or better.

Tool: A survey is administered to the employer of all students during their coop semester.

Implementation Strategy: The Coop Coordinator administers the survey for all students in the semesters they are enrolled in coop. The Program Chair will use the information to compare to previous semesters and also determine if the performance criteria has been achieved.

Assessment Plan for Student Learning Outcome 6

Apply basic principles of construction accounting.

Direct Assessment:

Course: CET 240 Cost Engineering

Performance Criteria & Tool: The performance of the students will be measured via faculty evaluations via a course assignment. Students complete a calculation for a basic cashflow scenario for a construction project. They are graded on their accuracy through a test submission in the learning management system. The specific performance criterion for this outcome is that a minimum of 70% of the class will score of 75% or better on this submission.

Implementation Strategy: Implementation of this specific tool for ACCE Student Learning Outcome will take place in each semester. The instructor will keep all rubrics and student work for submission to Program Chair after the semester. After the implementation, the instructor will fill out the feedback form, indicating the percentage of students scoring in each category. The Program Chair will use the information to compare to previous semesters and also determine if the performance criteria has been achieved. The summary of this feedback will be included and reviewed by the program faculty. The program will discuss improvement strategies as needed. A report will be reviewed by the Industry Advisory Board as well.

Results	SU 2020	FA 2020	SP 2021	FA 2021	FA 2022	SP 2023	FA 2023	FA 2024
≥ 75%	40%	100%	79%	100%	100%	75%	83%	75%

Indirect Assessment:

Course: CET 291 & CET 292

Performance Criteria: The performance of the students will be measured indirectly via survey of the students' coop employer. The specific performance goal for this outcome is that a minimum of 70% of the class will perform at a level of 3 or better.

Tool: A survey is administered to the employer of all students during their coop semester.

Implementation Strategy: The Coop Coordinator administers the survey for all students in the semesters they are enrolled in coop. The Program Chair will use the information to compare to previous semesters and also determine if the performance criteria has been achieved.

Assessment Plan for Student Learning Outcome 7

Apply basic surveying techniques used in building layout.

Direct Assessment:

Course: CET 110

Performance Criteria & Tool: The performance of students is measured via question 3 of Test 2 dealing with a basic residential building layout. The specific performance criteria is for 70% of students to earn a 15 out of 20 on the test question.

Implementation Strategy: Implementation of this specific tool for ACCE Student Learning Outcome will take place in each semester. The instructor will keep all rubrics and student work for submission to Program Chair after the semester. After the implementation, the instructor will fill out the feedback form, indicating the percentage of students scoring in each category. The Program Chair will use the information to compare to previous semesters and also determine if the performance criteria has been achieved. The summary of this feedback will be included and reviewed by the program faculty. The program will discuss improvement strategies as needed. A report will be reviewed by the Industry Advisory Board as well.

Results	SP 2021	SP 2022
≥ 15	67%	50%

Indirect Assessment:

Course: CET 291 & CET 292

Performance Criteria: The performance of the students will be measured indirectly via survey of the students' coop employer. The specific performance goal for this outcome is that a minimum of 70% of the class will perform at a level of 3 or better.

Tool: A survey is administered to the employer of all students during their coop semester.

Implementation Strategy: The Coop Coordinator administers the survey for all students in the semesters they are enrolled in coop. The Program Chair will use the information to compare to previous semesters and also determine if the performance criteria has been achieved.

Assessment Plan for Student Learning Outcome 8

Understand basic principles of ethics in the construction industry.

Direct Assessment:

Course: CET 285 Construction Management Capstone

Performance Criteria: The performance of the students will be measured via faculty evaluation on a rubric used to evaluate an assignment. A rubric has been developed using criterion measured by the instructor on a 1 (unsatisfactory) to 4 (exemplary) scale.

Tool: Ethics Rubric. Students submit a written assignment wherein they are required to respond to ethical scenarios provided. The performance goal is that 70% of the students in the class will score a “3” or higher on this rubric.

Implementation Strategy: Implementation of this specific tool for ACCE Student Learning Outcome will take place in each semester. The instructor will keep all rubrics and student work for submission to Program Chair after the semester. After the implementation, the instructor will fill out the feedback form, indicating the percentage of students scoring in each category. The Program Chair will use the information to compare to previous semesters and also determine if the performance criteria has been achieved. The summary of this feedback will be included and reviewed by the program faculty. The program will discuss improvement strategies as needed. A report will be reviewed by the Industry Advisory Board as well.

Results	Ethical Principles	Professional Responsibilities	% ≥ 3
SU 2020	3.33	2.67	77%
FA 2020	2.33	2.33	33%
SU 2021	2.27	2.09	27%
SU 2022	2.25	2.00	38%
SU 2023	2.83	2.67	58%
SU 2024	2.13	2.27	27%

Indirect Assessment:

Course: CET 291 & CET 292

Performance Criteria: The performance of the students will be measured indirectly via survey of the students' coop employer. The specific performance goal for this outcome is that a minimum of 70% of the class will perform at a level of 3 or better.

Tool: A survey is administered to the employer of all students during their coop semester.

Implementation Strategy: The Coop Coordinator administers the survey for all students in the semesters they are enrolled in coop. The Program Chair will use the information to compare to previous semesters and also determine if the performance criteria has been achieved.

Assessment Plan for Student Learning Outcome 9

Understand the fundamentals of contracts, codes, and regulations that govern a construction project.

Direct Assessment:

Course: CET 230 Construction Management

Performance Criteria: The performance of the students will be measured via test question. The specific performance goal is that at least 70% of the students correctly answer the question.

Tool: In CET 230 Construction Management, students take a test covering contracts and contract law in which they must answer the question, “Which of the following is an example of a “pay-when-paid” clause?”

Implementation Strategy: Implementation of this specific tool for ACCE Student Learning Outcome will take place in each semester. The instructor will keep all rubrics and student work for submission to Program Chair after the semester. After the implementation, the instructor will fill out the feedback form, indicating the percentage of students scoring in each category. The Program Chair will use the information to compare to previous semesters and also determine if the performance criteria has been achieved. The summary of this feedback will be included and reviewed by the program faculty. The program will discuss improvement strategies as needed. A report will be reviewed by the Industry Advisory Board as well.

Results	FA 2021	FA 2022	FA 2023	FA 2024
% Correct Answer	89%	92%	100%	82%

Indirect Assessment:

Course: CET 291 & CET 292

Performance Criteria: The performance of the students will be measured indirectly via survey of the students’ coop employer. The specific performance goal for this outcome is that a minimum of 70% of the class will perform at a level of 3 or better.

Tool: A survey is administered to the employer of all students during their coop semester.

Implementation Strategy: The Coop Coordinator administers the survey for all students in the semesters they are enrolled in coop. The Program Chair will use the information to compare to previous semesters and also determine if the performance criteria has been achieved.

Assessment Plan for Student Learning Outcome 10

Understand basic construction methods and materials.

Direct Assessment:

Course: CET 141 Building Construction

Performance Criteria: The performance of the students will be measured via test question. The specific performance goal is that at least 70% of the students correctly answer the question.

Tool: In CET 141 Building Construction students take a final test covering building construction materials in which they must answer the question, “When exposed to flame, _____ coatings develop a thick, rigid foam protective layer that insulates a substrate and prevents the spread of fire.”

Implementation Strategy: Implementation of this specific tool for ACCE Student Learning Outcome will take place in each semester. The instructor will keep all rubrics and student work for submission to Program Chair after the semester. After the implementation, the instructor will fill out the feedback form, indicating the percentage of students scoring in each category. The Program Chair will use the information to compare to previous semesters and also determine if the performance criteria has been achieved. The summary of this feedback will be included and reviewed by the program faculty. The program will discuss improvement strategies as needed. A report will be reviewed by the Industry Advisory Board as well.

Results	SU 2020	SP 2021	SP 2022-1	SP 2022-2	SP 2023	SP 2024-1	SP 2024-2
% Correct Answer	92%	100%	86%	100%	100%	86%	100%

Indirect Assessment:

Course: CET 291 & CET 292

Performance Criteria: The performance of the students will be measured indirectly via survey of the students’ coop employer. The specific performance goal for this outcome is that a minimum of 70% of the class will perform at a level of 3 or better.

Tool: A survey is administered to the employer of all students during their coop semester.

Implementation Strategy: The Coop Coordinator administers the survey for all students in the semesters they are enrolled in coop. The Program Chair will use the information to compare to previous semesters and also determine if the performance criteria has been achieved.

Assessment Plan for Student Learning Outcome 11

Understand basic safety hazards on a construction site and standard prevention measures.

Direct Assessment:

Course: CET 108 OSHA 10 for Construction

Performance Criteria: The performance of the students will be measured simply by successful completion of the course. The specific performance goal is that 100% of the students enrolled complete the course.

Tool: OSHA 10 certification exam. The test is created and administered by an OSHA certified instructor. The student will need to pass both portions of the exam with a 70% or better to obtain their certification and demonstrate knowledge in basic safety hazards on a construction site and standard prevention measures. Course topics include: Introduction to OSHA, material handling, tools-hand and power, scaffolds, stairways and ladders, excavations, electrical, personal protective equipment, and fall protection.

Implementation Strategy: Implementation of this specific tool for ACCE Student Learning Outcome will take place in each semester. The instructor will keep all rubrics and student work for submission to Program Chair after the semester. After the implementation, the instructor will fill out the feedback form, indicating the percentage of students scoring in each category. The Program Chair will use the information to compare to previous semesters and also determine if the performance criteria has been achieved. The summary of this feedback will be included and reviewed by the program faculty. The program will discuss improvement strategies as needed. A report will be reviewed by the Industry Advisory Board as well.

Results	SP 2020	SP 2021	FA 2021	SP 2022	FA 2022	SP 2023	SP 2024
% Passed	50%	73%	67%	62%	43%	63%	100%

Indirect Assessment:

Course: CET 291 & CET 292

Performance Criteria: The performance of the students will be measured indirectly via survey of the students' coop employer. The specific performance goal for this outcome is that a minimum of 70% of the class will perform at a level of 3 or better.

Tool: A survey is administered to the employer of all students during their coop semester.

Implementation Strategy: The Coop Coordinator administers the survey for all students in the semesters they are enrolled in coop. The Program Chair will use the information to compare to previous semesters and also determine if the performance criteria has been achieved.

Assessment Plan for Student Learning Outcome 12

Understand the basic principles of structural design.

Direct Assessment:

Course: CET 125 Statics and Strength of Material

Performance Criteria & Tool: The performance of students is measured via Test 2 dealing with basic truss analysis using both methods of sections and method of joints. The specific performance criteria for this outcome is for at least 70% of students to earn a 70 out of 100 on the test.

Implementation Strategy: Implementation of this specific tool for ACCE Student Learning Outcome will take place in each semester. The instructor will keep all rubrics and student work for submission to Program Chair after the semester. After the implementation, the instructor will fill out the feedback form, indicating the percentage of students scoring in each category. The Program Chair will use the information to compare to previous semesters and also determine if the performance criteria has been achieved. The summary of this feedback will be included and reviewed by the program faculty. The program will discuss improvement strategies as needed. A report will be reviewed by the Industry Advisory Board as well.

Results	FA 2021	FA 2022
% \geq 70	78%	75%

Indirect Assessment:

Course: CET 291 & CET 292

Performance Criteria: The performance of the students will be measured indirectly via survey of the students' coop employer. The specific performance goal for this outcome is that a minimum of 70% of the class will perform at a level of 3 or better.

Tool: A survey is administered to the employer of all students during their coop semester.

Implementation Strategy: The Coop Coordinator administers the survey for all students in the semesters they are enrolled in coop. The Program Chair will use the information to compare to previous semesters and also determine if the performance criteria has been achieved.

Assessment Plan for Student Learning Outcome 13

Understand the basic principles of mechanical, electrical, and plumbing systems.

Direct Assessment

Course: CET 141 Building Construction

Performance Criteria: The performance of the students will be measured via faculty evaluations using a rubric. A rubric has been developed using criterion measured by the instructor on a 1 (unsatisfactory) to 3 (exemplary) scale. The specific performance goal for this outcome is that a minimum of 70% of the class will perform at a level of 3 or better.

Tool: In CET 141, students create a photo submission in which they are asked to find mechanical, electrical, and plumbing components to photograph. They must also correctly name and identify the function.

Implementation Strategy: Implementation of this specific tool for ACCE Student Learning Outcome will take place in each semester. The instructor will keep all rubrics and student work for submission to Program Chair after the semester. After the implementation, the instructor will fill out the feedback form, indicating the percentage of students scoring in each category. The Program Chair will use the information to compare to previous semesters and also determine if the performance criteria has been achieved. The summary of this feedback will be included and reviewed by the program faculty. The program will discuss improvement strategies as needed. A report will be reviewed by the Industry Advisory Board as well.

Results	Correctly Named	Identify Function	% ≥ 3
SP 2021	2.64	2.36	54%
SP 2022-1	2.14	2.00	43%
SP 2022-2	2.53	2.33	50%
SP 2023	2.50	2.25	54%

Indirect Assessment:

Course: CET 291 & CET 292

Performance Criteria: The performance of the students will be measured indirectly via survey of the students' coop employer. The specific performance goal for this outcome is that a minimum of 70% of the class will perform at a level of 3 or better.

Tool: A survey is administered to the employer of all students during their coop semester.

Implementation Strategy: The Coop Coordinator administers the survey for all students in the semesters they are enrolled in coop. The Program Chair will use the information to compare to previous semesters and also determine if the performance criteria has been achieved.

Summary Indirect Assessments:

Indirect Assessment:

Course: CET 291 & CET 292

Performance Criteria: The performance of the students will be measured indirectly via survey of the students' coop employer. The specific performance goal for this outcome is that the students will perform at a level of 3 or better on average.

Tool: A survey is administered to the employer of all students during their coop semester.

Implementation Strategy: The Coop Coordinator administers the survey for all students in the semesters they are enrolled in coop. The Program Chair will use the information to compare to previous semesters and also determine if the performance criteria has been achieved.

Results	SLO #1	SLO #2	SLO #3	SLO #4	SLO #5	SLO #6	SLO #7	SLO #8	SLO #9	SLO #10	SLO #11	SLO #12	SLO #13
SP 2018	4.00	4.25	3.80	4.00	3.60	4.00	4.25	4.20	4.00	3.83	4.00	4.25	3.75
SU 2018	4.00	3.75	3.67	4.14	4.14	3.67	4.00	4.43	4.00	4.14	4.43	4.17	4.00
FA 2018	3.50	3.75	3.50	4.17	4.00	3.67	2.33	3.40	3.75	3.33	3.60	2.75	3.00
SP 2019	3.71	3.50	3.17	3.67	3.43	3.20	3.50	3.50	3.20	3.57	4.00	3.17	2.67
SU 2019	4.08	3.78	3.89	3.92	4.10	3.89	4.00	3.92	3.80	4.08	4.23	3.89	3.80
FA 2019	4.38	3.43	4.00	4.14	3.86	3.80	4.00	4.29	3.60	4.00	4.00	3.67	3.83
SP 2020	3.33	3.50	4.00	4.00	4.00	3.00	#DIV/0!	3.00	4.00	3.50	3.50	3.00	#DIV/0!
SU 2020	4.00	4.20	4.00	4.13	3.75	4.00	5.00	4.00	3.75	3.89	3.88	3.67	4.33
FA 2020	4.36	4.20	4.67	4.60	4.22	4.50	4.14	4.22	4.75	4.40	4.40	4.50	4.17
SP 2021	4.50	4.40	4.40	4.71	4.29	4.25	4.60	4.57	4.60	4.71	4.86	4.17	4.29
SU 2021	4.40	4.22	4.13	4.22	3.90	4.13	4.38	4.30	4.13	4.40	4.60	3.88	3.63
FA 2021	3.71	4.20	4.00	4.00	3.83	3.75	4.29	4.29	3.60	4.33	4.14	3.60	3.00
SP 2022	4.38	4.50	4.40	4.38	4.50	4.00	4.20	4.17	4.33	4.50	4.57	4.20	4.00
SU 2022	4.20	4.00	4.00	4.33	4.11	3.57	3.83	4.30	4.14	4.67	4.30	4.00	4.00
FA 2022	4.00	3.00	3.50	4.00	4.00	#DIV/0!	4.00	3.50	4.00	4.00	4.00	4.00	3.00
SP 2023	4.75	4.33	3.75	4.75	4.50	3.67	4.00	4.67	4.00	4.75	4.50	4.00	3.67
SU 2023	4.29	3.92	3.92	4.29	3.82	3.80	3.90	4.21	3.92	4.41	4.29	4.00	3.70
FA 2023	4.11	3.88	3.67	4.00	3.78	3.57	4.00	4.11	3.63	4.38	4.38	3.56	3.50
SP 2024	4.50	4.20	4.80	4.56	4.38	4.00	4.20	4.44	4.33	4.44	4.56	4.50	4.17
SU 2024	4.11	3.93	4.08	4.12	4.00	4.25	3.92	4.19	3.86	4.26	4.22	3.86	3.92
FA 2024	4.13	4.33	4.33	4.38	4.13	4.40	4.43	4.43	4.17	4.43	4.38	4.00	3.80
SP 2025	4	4.25	4	4.167	4	3.5	3.6	4.167	3.75	4.333	4.2	3.667	3.6

Degree Program Objective 1:

Graduates of the Construction Management Program will transfer to completed their education at the Bachelor degree level in a related field of study.

Assessment Tool:

A survey will be administered to all students upon their final semester in the program. Students are asked to answer the following questions:

Upon graduation, will you be transferring to complete a Bachelor level degree?

Yes / No

If yes, what school and what degree? _____

Upon graduation, will you have a job in a position related to your Construction Management Associate Degree?

Yes / No

If yes, what company and what title? _____

Performance Criteria:

The desired result for this objective is assessed in conjunction with the second degree program objective. The desired result is that 95% of graduating students will answer yes to at least one of these related questions.

Degree Program Objective 2:

Graduates of the Construction Management Program will obtain a position in a civil engineering, architectural, construction, or related company.

Assessment Tool:

A survey will be administered to all students upon their final semester in the program. Students are asked to answer the following questions:

Upon graduation, will you be transferring to complete a Bachelor level degree?

Yes / No

If yes, what school and what degree? _____

Upon graduation, will you have a job in a position related to your Construction Management Associate Degree?

Yes / No

If yes, what company and what title? _____

Performance Criteria:

The desired result for this objective is assessed in conjunction with the second degree program objective. The desired result is that 95% of graduating students will answer yes to at least one of these related questions.