

## REPORT ON AY2022-2023 ACADEMIC ASSESSMENT

**Submission date:** 11/3/2023

**Assessment Plan covered in the report:** Construction Management AAS

**College:** Community and Technical College

**Campuses where the program(s) is delivered:**  Anchorage  KOD  KPC  MSC  PWSC

**Submitted by:** Joel Condon, Chair/Associate Professor, jcondon1@alaska.edu

*After responding to the questions below, the program should email this form to the dean, with a copy to the appropriate community campus director(s) if the program is delivered on a community campus.*

- 1. Please list and number the Program Student Learning Outcomes your program assessed in AY23. For each outcome, indicate one of the following: Exceeded faculty expectations, Met faculty expectations, or Did not meet faculty expectations.**

***Example: 1. Communicate effectively in a variety of contexts and formats – Exceeded faculty expectations; 2. Adopt critical perspectives for understanding the forces of globalization and diversity – Met faculty expectations.***

1. Demonstrate effective communication, both orally and in writing. -Met faculty expectations.
2. Create construction project cost estimates. -Met faculty expectations.
3. Create construction project schedules. -Met faculty expectations.
4. Demonstrate the ability to use current technology related to the construction process. -Met faculty expectations.
5. Interpret construction documents (contracts, specifications, and drawings) used in managing a construction project. -Met faculty expectations.
6. Apply basic principles of construction accounting. -Met faculty expectations.
7. Use basic surveying techniques used in building layout. -Met faculty expectations.
8. Discuss the basic principles of ethics in the construction industry. -Met faculty expectations.
9. Identify the fundamentals of contracts, codes, and regulations that govern a construction project. -Met faculty expectations.
10. Recognize basic construction methods, materials and equipment. -Met faculty expectations.

11. Recognize basic safety hazards on a construction site and standard prevention measures. -Met faculty expectations.
12. Recognize the basic principles of structural design. -Met faculty expectations.
13. Recognize the basic principles of mechanical, electrical and piping systems. -Met faculty expectations.

**2. Describe your assessment process in AY23 for these Program Student Learning Outcomes, including the collection of data, analysis of data, and faculty (and other, e.g., advisory board) conversations around the findings. (1000 words or less)**

The assessment process uses both direct and indirect tools. Direct assessment tools included results from exams and assignments. Student work was collected and analyzed. Performance criteria was established for each assessment tool (i.e. At least 70% of students earn a score of 80% or better). Results were tabulated for each PSLO. Faculty discussed results and considered any needs for change.

The indirect assessment tool applied was a Qualtrics survey sent to all graduating AAS students. There were only three students graduating with a CM AAS degree. This small number is a reflection of the industry preference for CM BS graduates. Results of the survey showed that a majority of students felt they were proficient in the program learning objectives.

**3. What are the findings and what do they tell the faculty about student learning in your program? (1000 words or less)**

Findings indicate that all direct performance criteria and indirect Qualtrics survey data were acceptable. However, three of the direct assessment performance criteria failed to achieve the desired result. Considering that a score of 80% is a relatively high expectation, and that well above 50% of students met this challenge, reevaluation of this performance criteria metric will be examined by faculty.

Overall, data pertaining to student learning indicates that the program is being effectively taught and students are performing at levels that are satisfactory. This assessment coincides with conclusions reached by the CM external accrediting body, the American Council for Construction Education (ACCE), which found there to be no deficiencies or weaknesses in the CM AAS program. ACCE recommended reaccreditation through 2029.

**4. Based on the findings, did the faculty make any recommendations for changes to improve student achievement of the Program Student Learning Outcomes? Yes**

- i. Please describe the recommended action(s), what improvements in student learning the program hopes to see, the proposed timeline, and how the program will know if the change(s) has worked. If no recommendations for changes were made, please explain that decision. (1000 words or less)**

PSLO 13: The Mechanical, Electrical & Plumbing course has changed how the workshops that accompany projects are delivered. The workshops, along with their answer keys, are now released at the same time as projects, allowing students to study the procedures demonstrated in the workshops so those procedures can be more effectively applied to the projects. This process is being implemented Fall 23 and results can be assessed through end-of-semester grades on the midterm and final exams.

PSLO 2: The Cost Estimating class has expanded the application of estimating techniques to create a comprehensive project cost estimate. In the past, estimates were limited to quantity takeoffs applied to a single construction assembly. The expanded scope is being implemented in Fall of 23 and results can be assessed through end-of-semester grades on the midterm and final exams.

**5. In the past academic year, how did your program use the results of previous assessment cycles to make changes intended to improve student achievement of the Program Student Learning Outcomes? Please check all that apply.**

- Course curriculum changes
- Course prerequisite changes
- Changes in teaching methods
- Changes in advising
- Degree requirement changes
- Degree course sequencing
- Course enrollment changes (e.g., course capacity, grading structure [pass/fail, A-F])
- Changes in program policies/procedures
- Changes to Program Student Learning Outcomes (PSLOs)
- College-wide initiatives (e.g., High-Impact Practices)
- Faculty, staff, student development
- Other
- No changes were implemented in AY23. *(If no options above were selected)*

**If you checked "Other" above, please describe. (100 words or less)**

- 6. Do you have any information about how well these or other past improvements are working? Are they achieving their intended goals? Please include any data or assessment results that help you demonstrate this. (1000 words or less)**

Changes made in AY21 to the sequence of structural courses resulted in improved scores on the AIC Exam. AY20 students scored 69%. In AY22 students scored 78%; more than 10% higher than the national average.

The Mechanical, Electrical & Plumbing class is currently undergoing further refinement. It has undergone various improvements in the past. Between AY20 and AY22, results on the AIC Exam showed a 10% improvement, from 60% to 70%. It is hoped that the latest improvements yield similar results.

In AY20, AutoCAD Civil 3D, was discontinued. It was used as a direct assessment for the use of electronic-based technology. Bluebeam Revu was adopted and greater emphasis was placed on Excel. AIC results showed an improvement from 72% to 74% indicating that the program did not suffer from the loss of Civil 3D and students now use electronic-based technology that is more responsive to industry needs.

Although AAS students do not take the AIC Exam, AAS and BS students share the above classes.

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### **DEAN SECTION (Due to the program on January 15)**

*After completing the Dean Section and signing it, the dean should email this form to the program, and copy [uaa\\_ooo@alaska.edu](mailto:uaa_ooo@alaska.edu) for posting. If the program is delivered on one or more community campus, the dean should consult with the appropriate community campus director(s) on the response and copy the appropriate community campus director(s) when emailing the response to the program.*

- 1. Based on the program's responses above, what guidance and support do you have for the program moving forward? (200 words or less)**

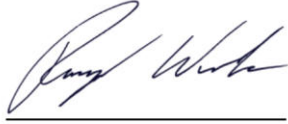
The program is still meeting both the Student Learning Outcomes and the ACCE requirements. I recommend that the faculty continue to find the changes needed to maintain the high level of accreditation earned by the program. Additionally, continue to examine the changes that are being implemented in the cost estimating class and Mechanical, Electrical, and Plumbing course.

- 2. Discuss what the program is doing particularly well in terms of its processes for the assessment and improvement of student learning, for example, the use of a common rubric or prompt, a signature assignment, etc. (200 words or less)**

The program is maintaining the high level of rigor that the ACCE found amazing, leading to a 7-year accreditation. This includes the assessment of the program. I commend the faculty for their

continued vigilance and focus on making sure the students are prepared for the industry and meeting the ACCE learning outcomes.

**Dean's signature:**



A handwritten signature in black ink, appearing to read "Randy White", is written above a solid horizontal line.

**Date:** 2/9/2024