

CENTRAL ARIZONA COLLEGE AND SUNDT CONSTRUCTION: EDUCATION AT THE SPEED OF INDUSTRY

INTRODUCTION

In the spring of 2016, Sundt Construction approached Central Arizona College (CAC) to explore an apprenticeship partnership in Heavy Equipment Operations. During these discussions, a larger gap in available skilled workers emerged, leading Sundt and CAC to conclude that expanding the partnership beyond the apprenticeship was necessary and warranted. Three months later, updated, approved and industry-vetted curriculum was being offered; an unprecedented turnaround in collegiate curriculum process setting.

OVERCOMING OBSTACLES

There was one major and significant obstacle for CAC in that most of its construction courses and curriculum were outdated and focused primarily on residential building. In order to meet the growing needs of commercial construction, CAC administrators worked with Sundt leadership to develop five craft trade pathways in structural welding, heavy equipment operations, industrial construction, pipefitting and concrete construction technology.

These new and enhanced pathways were specifically customized and designed to:

- Align with NCCER Core Certification and American Welding Society requirements.
- Embed OSHA 30.
- Consist of stackable certificates equaling 30 college credit hours.
- Include workplace skills.
- Lead to level 1 and 2 certifications in the trade as well as a CAC credential.

The most unique attribute of this partnership is the fact that Sundt and CAC designed every aspect of the courses and programs jointly. The need for CAC to work at the same speed of industry and develop the program quickly was successfully accomplished with faculty and industry subject matter experts working collaboratively. This was a pivotal moment in traditional higher education course and program development and design.

The process started with the specific craft competencies and skills needed by Sundt and ended with five customized and tailored academic pathways. This has led to a true partnership where Sundt provides instructors for two of the pathways, direct employee interaction with CAC students, and equipment and materials for pipefitting and welding that includes but is not limited to a rover, GPS equipment, shoring and trenching equipment, a welding training wall, and pipefitting-training aide. CAC furnishes on-site lab and office space for Sundt personnel that lead instruction.

BEST PRACTICE PROFILES

ACCESSING OPPORTUNITY

Students began coursework in August 2017 in heavy equipment operations, welding and pipefitting, and in October 2017 in the newly created programs of industrial and concrete construction.

Once students earn their certificates, those who are hired by Sundt receive a \$1,000 tuition reimbursement to help defray the cost of the \$2,500 program.

The new approach is working. CAC's construction technology program was dwindling with fewer than 10 students enrolled annually. At the beginning of the 2017 fall semester, more than 100 students were already enrolled in the CAC-Sundt Pre-employment Pathways Training Programs, and in the spring of 2018, that number rose to 176 students.

There are four key tenants of this partnership that have been instrumental in its success. These include commitment, co-design, co-delivery and consistent engagement.

COMMITMENT

Discussions about commitment to the partnership was paramount to Sundt. Previous experiences in attempting to partner with higher education and other entities had failed to materialize or produce a workforce that met their expectations. Likewise, the College was venturing into unfamiliar territory and taking a risk by starting a new apprenticeship program and developing new credentials. There was concern on both sides that the time and effort expended to begin such an expensive partnership may not produce the desired results for the College or Sundt.

As part of the planning, considerable time was invested by the College's President, Department Chair and faculty with Sundt's Senior Vice President and Administrative Officer, Education Consultant and Craft Workforce Development Manager in discussions about commitment and sustainability. A significant result of these discussion was a formal sustainability agreement signed by the College's Board of Governors and Sundt's Board of Directors.

Because of potential leadership changes, formalizing a commitment to sustainability can provide a solid foundation for embedding the partnership into the culture of both entities.

CO-DESIGN CURRICULUM

Because the College did not currently have the curriculum in place, it was determined that both CAC and Sundt would co-design the course content, sequencing of courses and the credential maps for the certificates. Faculty from CAC along with Sundt's Craft Workforce Development Manager built the program together course by course, starting with the desired skill competencies and working backwards.

BEST PRACTICE PROFILES

Particular needs of Sundt, such as work ethic skills, were built into the program general learning outcomes and are actually assessed as part of the grading and evaluation of student performance. Students are assigned work-ethic points for promptness, effort and professionalism. The curriculum that CAC and Sundt designed was intentionally aligned with NCCER Core Certification and American Welding Society requirements including embedded OSHA 30 standards.

Building successful partnerships require the ability of academia to suspend ego and utilize the skill and knowledge of industry to design the curriculum that meets industry needs and expectations.

CO-DELIVER PROGRAM

Another tenant of successful education and industry partnerships includes co-delivering the instruction. As with the challenge of having to design new curriculum and credentials, there was a need to find qualified faculty to teach in the new program. As a result, the decision was made to utilize Sundt employees to serve as adjunct instructors for the program. Sundt employees bring to the classroom current trends and industry standards while incorporating the sense of an actual work environment. To further strengthen the “Sundt Program,” Sundt provided the students in the program with backpacks and hard hats which give them a sense of connection to the industry they are pursuing as a career.

Co-delivering a partnership program not only provides students with a meaningful connection to industry standards but allows for College faculty to be constantly engaged with industry professionals and exposed to new and emerging trends.

CONSISTENTLY ENGAGE

For a truly successful partnership, a high level of ongoing engagement is vital for program sustainability and for demonstrating on-going commitment. These mechanisms should go beyond yearly advisory committee meetings that are made up of diverse employers. Since forging the partnership, CAC and Sundt have co-presented at local, state and national conferences and events, submitted co-written articles for publication, and applied for numerous innovation awards together. Sundt has an office on campus for adjunct faculty and for recruiters to meet with students about employment opportunities. Further, CAC and Sundt have co-hosted events such as an end of semester bar-b-que for the students.

Constant and meaningful engagement is critical for successful partnerships and enables the partners to stay connected and united in their purpose.

