

## ACADEMIC PROGRAM REVIEW FORM

All academic programs and units at UAA are required by Board of Regents Policy P10.06.010 to engage in program review on a seven-year cycle. University Regulation R10.06.010 sets out the minimum requirements for program review, including centrality of program mission, quality, demand, program productivity, effectiveness, and efficiency. Exceptional reviews may be conducted, per University Policy and Regulation, and with the provost's approval. The UAA process integrates information about student learning outcomes assessment and the improvement of student learning, as well as progress on student success measures and the closing of equity gaps, aligning program efforts and resources with institutional priorities. Final decisions include commendations and recommendations, which guide future program efforts. The results of cyclical Academic Program Review are reported to the UA Board of Regents annually and are published on the UAA [Academic Program Review website](#).

This form is composed of four parts: the Program Section, the Dean Section, the Program Optional Response Section, and the Provost Section. Guidance for submission is provided in each section.

**Using the Form:** The form is pre-loaded with information specific to each program and posted on the [Academic Program Review website](#). The program should download and save their form to begin using it. The form is locked, so instructions are viewable and the only sections of the document that can be edited are the form fields.

The form uses narrative boxes, text only, and drop-down boxes. Narrative boxes have a character limit, which includes spaces. To undo an answer, press "Control-Z" or "Command-Z."

Responses are to be narrative text only, and must be ADA and FERPA compliant. Do not embed any tables or links, including to webpages or other documents. To be FERPA compliant, do not include the names of any current or former students. Rather, use statements such as, "In AY21 four program graduates were accepted to graduate programs in the field." Programs with specialized accreditation or other external recognitions must comply with restrictions regarding what may be published, as per the accreditor or external organization. Do not include appendices. Appendices to this form will not be accepted.

**Data:** Each program is provided a datasheet, along with this pre-loaded form. For questions about the data, please contact Institutional Research ([uaa.oir@alaska.edu](mailto:uaa.oir@alaska.edu)).

**Assistance:** For technical assistance with this form, email Academic Affairs ([uaa.oaa@alaska.edu](mailto:uaa.oaa@alaska.edu)).

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**Program(s) in the review:** OEC Advanced Welding, OEC Nondestructive Testing Technology, OEC Welding, UC Welding, and UC Welding Technology

**Specialized Accrediting Agency (if applicable):** N/A

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

**Year of last review:** AY2020

**Final decision from last review:** Continued Review

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**PROGRAM SECTION (Due on March 1)**

*The program review committee chair and committee members are assigned by the dean. All program faculty should be included in the review process, including faculty on the community campuses. After completing the Program Section below, the program review committee chair will sign, date, and email this form to the dean, copying all committee members. If the program is fully delivered on a community campus, copy the appropriate community campus director(s). The program review committee chair's signature and date lines are at the end of the Program Section.*

**Program Review Committee:**

Greg Russo, Assistant Professor, Welding Technology (ANC), Co-Chair

Jacob Keisling, Assistant Professor, Welding Technology (KPC), Co-Chair

Eli Van Ringelstein, Assistant Professor, Welding Technology (ANC)

Lorraine Stewart, Career and Technical Education Coordinator (KOD)

**1. Demonstrate that the program has responded to previous recommendations.**

***Recommendation 1: Expand opportunities to partner with career and technical education programs in local school districts.***

***How do you know the recommendation has been successfully achieved? (2000 characters or less)***

I have recently looked into the AY 19-20 Career and Technical Education Course Articulation by UAA course website. It appears that 2020 was the last updated version. The data is showing that UAA has Dual Enrollment articulation in place for the Anchorage School District, along with the Matsu School District. KPC has articulation in place and active students with Kenai Peninsula School District.

***Actions taken to date (2000 characters or less)***

KPC's director over the last month or so has asked welding faculty to cross reference the AY 20 data with the current changes we have made to align curriculum with UAA. Recommendations have been made to the director's office for the next step in the process. This recent task may be a topic of collaboration in future meetings with welding faculty at UAA and Kodiak.

***Evidence of success to date (2000 characters or less)***

A very evident view of success is that we currently have Middle College students enrolled in the program. Reports/surveys were recently submitted to UAA on current student progress. Recent meetings with administration and the recruiting team are showing we are moving forward with the Jumpstart, Middle College and CTE dual enrollment programs.

***Recommendation 2: Work closely with local admissions and advising staff and local secondary faculty to recruit additional students into Welding programs.***

***How do you know the recommendation has been successfully achieved? (2000 characters or less)***

The answer to this question will appear very diverse across our UAA and community campuses as recruitment methods are unique to each of these. Recruiting/advising staff, our intended audience and the needs of our specific community are just a few of many targets we hope to utilize to enhance our student numbers. Data compared to our previous 2020 expedited review is visible but is difficult to tie to recruitment efforts as the COVID-19 pandemic turned us upside down as a whole. Through recent faculty collaboration, discussion has highlighted new strategies that have been implemented and success of this will hopefully show as our economy begins to recover. As far as I can remember there has been a distinct disconnect between UAA, KPC, and Kodiak. Our recent collaboration is a testament to achievement in itself. We are all advisors and recruiters for our programs. Strategies of success and alternative ideas now have a transparent pathway that can be shared to benefit all efforts to get students in our labs.

***Actions taken to date (2000 characters or less)***

Faculty have continued to meet with our advising, recruiting, and admissions staff to navigate the intricacies associated with our programs' student numbers. Participants have included the student success coach, members of student services, public relations/web design team, campus/program recruiters, and CTE directors and staff from local high schools.

Job centers have been contacted along with other organizations such as the Alaska Native Corporations and unions that are assisting potential students with opportunities to choose a career path. Local radio segments have aired promoting the program. The goal in this effort is to not only target our local audience but reach our outlying communities. Continued communication with industry contacts has given workers laid off due to the pandemic a choice to refresh or build upon their skills through classes. Dual enrollment and Jumpstart programs have kept communication lines open with our department and our high schools. The program website is continually updating material in an attempt to recruit out-of-state students. With our local and state industry demand for skilled workers, strategies as small as flyers throughout local businesses have been implemented in an attempt to raise awareness of opportunities being offered on campus.

With many public schools cutting vocational CTE classes, we lose a large number of potential students that may not see our recruiting efforts. These actions taken above are creative and evolving methods that need continuous focus and tweaking to enhance growth in our student numbers. It is imperative that communication between all members invested and listed above stay open and transparent.

***Evidence of success to date (2000 characters or less)***

Evidence of our recruiting efforts is very limited at this time for two specific reasons. This report is being generated only two years after our last program review in 2020. We can see small trends beginning to form but analysis will not reflect success due to the second anomaly. With

our economy crippled due to the COVID-19 pandemic shortly after our last program review, our data is skewed and very difficult to reflect on. We can see very low student numbers in enrollment across the board during this period, as this is evident across the nation.

Evidence of success can be seen and heard in the actions taken above. These strategies have been implemented and are currently in practice. Evidence of success will hopefully bear fruit as our economy begins to recover and build. We can then identify our strengths and areas that need refinement.

Some success of these efforts has appeared regardless of these circumstances. Students surveyed through advising, this reporting period, have acknowledged enrolling due to newly implemented recruiting actions. Statements such as, I heard or saw advertisements but didn't think classes would meet face-to-face. Students that attended career days at school or visited job centers have reported seeing advertisements or our representatives. Middle College surveys have been recently reported and showed that our dual enrollment and partnerships with high schools are moving in the right direction. Shop tours for local high schools through Aspiring Workforce have slowly started making their way back to campus. We are confident that these trends will continue to grow in our program, and increase student numbers.

***Recommendation 3: Continue to explore alternative modes of delivery for some courses, where appropriate, in order to further enhance productivity and efficiency.***

**How do you know the recommendation has been successfully achieved? (2000 characters or less)**

Welding is an extremely hands-on intensive course. Much of the theory and supporting curriculum can be delicately delivered alternatively, but the technical skills necessary to obtain our governing body's certifications are dependent on time in the shop. The obvious goal is to allow and provide as much time as possible for students to hone these practices, as welding is a very perishable skill. The majority of these skills will be required to be demonstrated to a company during the hiring process regardless of degree/certification status.

Through recent faculty collaboration we have identified strategies that are beginning to take shape across our campuses regarding alternative modes of delivery. Shortly after our 2020 Program Review, we have noticed a couple of immediate results. As our programs aligned, UAA's new online class is now available to all students across the board. KPC's program, shortly after, adopted the same supporting curriculum that is utilized on the UAA campus. Discussion has also let us brainstorm other modes of delivery.

**Actions taken to date (2000 characters or less)**

The department has developed and is currently implementing its first online course, "Technical Drawings for Welders". The creation, implementation, and utilization of this course further strengthens students engaged in welding programs outside of UAA, such as Kenai Peninsula College, and Kodiak College with continuity of courses which lead to completion of required classes for the Undergraduate Certificate and the Occupational Endorsement Certificates in Welding and Nondestructive Testing.

For the welding portion of the course, the previous curriculum was reviewed, and a change in curriculum was implemented on the Anchorage campus in 2017. The new curriculum administered to students was chosen from the National Center for Construction Education and Research (NCCER). KPC campus adopted the same curriculum in 2020. This curriculum is also introduced at a lower level in many of our CTC high school programs. Discussion is currently in progress on strategies to alternatively deliver this curriculum outside of traditional lecture while acknowledging the publishers' terms of use and student availability to access the content.

Recent faculty discussion has also brought up the topic of Virtual Reality (VR) simulation welding machines. This alternative method of delivery has been implemented in various locations around the nation. Data are showing that even though it is not a substitute for the necessary skills required in industry, it can be a valuable tool in introduction and recruitment for beginning students.

**Evidence of success to date (2000 characters or less)**

At the time of this report, the first online course, Technical Drawings for Welders, is live and seems to be going well. There are currently 11 students enrolled which has stayed fairly consistent since its 2020 implementation. The audio and visual department has agreed to supply a video crew to help assist in video production. I believe that the class will continue growing since it can be beneficial for the Kenai Peninsula College welding students as well as the students at UAA. KPC has reported students enrolling in this course and will continue to advise students of its availability.

KPC has recently had a visit from a company promoting virtual reality simulators. The equipment was brought in, set up and made available for instructors, students, and staff to interact with. Details on cost, availability, and desired implementation are currently in progress.

The alignment of curriculum across campuses will only streamline and reinforce student learning as students transfer from high school, into our welding programs, and eventually into industry where NCCER is vastly growing and recognized across the nation.

**2. Demonstrate the centrality of the program to the mission, needs, and purposes of the university and the college/community campus. (2500 characters or less)**

The mission of the Welding Technology program is to educate and prepare students for entry-level employment in the welding and nondestructive testing field. This mission is facilitated throughout several campuses; Anchorage, Kenai Peninsula, and Kodiak. These campuses have Undergraduate Certificates, Advanced Occupational Endorsement Certificates, Occupational Endorsement Certificates, and an Associate of Applied Science (AAS) degree, which is currently one semester away from its deletion. The primary focus of each program orbits a more specific role each community has, inherent to the location of the campus. Some are shared relatively equal, and some are much more specific to the area in which their campuses serve. Anchorage campus sees the majority of interest from oil and gas exploration companies' corporate headquarters. These companies obtain and execute maintenance contracts on Alaska's North Slope region. Because preexisting structures warrant the need for maintenance contracts, and Alaska is not currently successful in ascertaining unified support for new transcontinental pipeline construction, the need for local nondestructive

testing technicians continues to solidify Anchorage's program. Kenai Peninsula College is situated closer to Nikiski's oilfield and oilfield service vendors. This location enables the Kenai campus to exclusively serve the needs of Alaska's more localized petroleum-based interests. This program shares spotlight with Kenai's Process Technology program, and assists Kenai's community interests in many of the same ways nondestructive testing assists Anchorage. Kodiak College serves the community's needs pertaining to the Program, almost entirely independently. The community's primary vested interest with the campus comes from shipyard and other maritime-related contracts such as ferry-based transportation and port authorities. Due to the distances between each campus, each community's needs continue to grow more and more specific, and therefore less applicable. Individual campus program reviews would yield a more accurate reflection.

### **3. Demonstrate program quality and improvement through assessment and other indicators.**

#### **a. Program Student Learning Outcomes Assessment and Improvement Process and Actions**

##### **i. OEC Advanced Welding**

- *Demonstrate hazard assessment and best safety practices; Demonstrate enhanced levels of technical skills in welding; Demonstrate intermediate knowledge of the interrelationship between metallurgy, welding and inspection processes; Demonstrate advanced forms of effective technical, oral, and written communication; Demonstrate application of advanced mathematical formulas and computations as applied in the welding and inspection fields.*

##### ***Describe your key findings for these outcomes. (3000 characters or less)***

Our program is under a 7 year review. In 2020 we have had an expedited review, therefore, our program has only been under review for the last two years. During this time, all campuses have experienced not only COVID, but the upcoming loss of the AAS degree, which was an epicenter for not only the continuation beyond UCs and OECs, but also orbited the foundation of our academic assessments. The majority of students that are attending class are meeting our current outcomes.

##### ***Describe actions taken to improve student learning for these outcomes. (3000 characters or less)***

##### ***Describe evidence that these actions are working. (3000 characters or less)***

##### **ii. OEC Nondestructive Testing Technology**

- *Demonstrate hazard assessment and best safety practices; Demonstrate entry-level technical skills in welding and nondestructive examination; Demonstrate technical knowledge of the interrelationship between metallurgy and inspection processes; Demonstrate advanced forms of effective oral and written communication; Demonstrate*

*application of advanced mathematical computations as applied in the inspection and nondestructive examination fields.*

***Describe your key findings for these outcomes. Programs may enter “See above” if there is a significant overlap of outcomes. (3000 characters or less)***

Our program is under a 7 year review. In 2020 we have had an expedited review, therefore, our program has only been under review for the last two years. During this time, all campuses have experienced not only COVID, but the upcoming loss of the AAS degree, which was an epicenter for not only the continuation beyond UCs and OECs, but also orbited the foundation of our academic assessments. The majority of students that are attending class are meeting our current outcomes.

***Describe actions taken to improve student learning for these outcomes. Programs may enter “See above” if there is a significant overlap of outcomes. (3000 characters or less)***

***Describe evidence that these actions are working. Programs may enter “See above” if there is a significant overlap of outcomes. (3000 characters or less)***

### **iii. OEC Welding**

- *Demonstrate hazard assessment and best safety practices; Demonstrate entry-level technical skills in welding; Demonstrate introductory knowledge of the interrelationship between metallurgy and welding; Demonstrate effective oral and written communication; Demonstrate effective oral and written communication.*

***Describe your key findings for these outcomes. Programs may enter “See above” if there is a significant overlap of outcomes. (3000 characters or less)***

Our program is under a 7 year review. In 2020 we have had an expedited review, therefore, our program has only been under review for the last two years. During this time, all campuses have experienced not only COVID, but the upcoming loss of the AAS degree, which was an epicenter for not only the continuation beyond UCs and OECs, but also orbited the foundation of our academic assessments. The majority of students that are attending class are meeting our current outcomes.

***Describe actions taken to improve student learning for these outcomes. Programs may enter “See above” if there is a significant overlap of outcomes. (3000 characters or less)***

***Describe evidence that these actions are working. Programs may enter “See above” if there is a significant overlap of outcomes. (3000 characters or less)***

**iv. UC Welding Technology**

- *Demonstrate competence in the oxy-acetylene cutting process; Demonstrate competence in the preparation of steel-plate certified groove welds; Demonstrate competence in the welding of steel-plate all position groove welds; Demonstrate competence in the oxy-acetylene cutting process of steel pipe (both with freehand and machine cutting); Demonstrate competence in the preparation of steel pipe to be welded with the stick-electrode process for common sizes of pipe used in industry; Demonstrate competence in the welding of steel pipe per Procedure KPC-I for testing and welds common schedules and sizes of pipe used in industry; Complete structural and pipe certification national testing standards.*

***Describe your key findings for these outcomes. Programs may enter “See above” if there is a significant overlap of outcomes. (3000 characters or less)***

Our program is under a 7 year review. In 2020 we have had an expedited review, therefore, our program has only been under review for the last two years. During this time, all campuses have experienced not only COVID, but the upcoming loss of the AAS degree, which was an epicenter for not only the continuation beyond UCs and OECs, but also orbited the foundation of our academic assessments. The majority of students that are attending class are meeting our current outcomes.

***Describe actions taken to improve student learning for these outcomes. Programs may enter “See above” if there is a significant overlap of outcomes. (3000 characters or less)***

***Describe evidence that these actions are working. Programs may enter “See above” if there is a significant overlap of outcomes. (3000 characters or less)***

**v. UC Welding**

- *No published Program Student Learning Outcomes. Catalog directs to learning outcomes for the Welding emphasis of AAS Technology, which is no longer offered.*

***Describe your key findings for these outcomes. Programs may enter “See above” if there is a significant overlap of outcomes. (3000 characters or less)***

Data used for program assessment are collected throughout the fall and spring semesters. Collected data includes certification results, internship evaluations, student product scores, and course grades. Due to COVID-related closures from spring 2020 through spring 2021 semesters, some data pieces were not collected due to course cancellations. When courses were running,

students lost valuable classroom time as a result of COVID illness and/or exposure. Additionally, our local military personnel were not permitted to take any face-to-face courses during the height of the pandemic.

Grade data is collected and used to determine if students are meeting general education and technical education knowledge and skill outcomes. During this review period, welding courses using grade data for assessment purposes were not delivered.

Employer feedback and faculty assessments are used to demonstrate students are successfully meeting key program outcomes. Visual assessments performed by faculty during lab activities also ensure that students are adhering to safety practices. If unsafe actions or behavior is occurring, all lab activities are immediately stopped and a brief safety explanation is presented by faculty to ensure that all students clearly understand the safety requirements. Internship evaluations are used to determine if students are meeting the technical requirements of the program in addition to the required soft skills needed in the workplace.

Welder certification results demonstrated a slight improvement from the fall 2020 semester to the fall 2021 semester. During the fall 2020 test session, a total of nine students tested with a pass rate of 70.6%. At this time, a majority of these students were attempting to complete testing from coursework offered in previous courses that were canceled or delayed during the previous semester as a result of COVID-19. Fall 2021 test session resulted in a 70.8% pass rate. Prequalification testing beginning in week eight of the semester, combined with instructor feedback, is incredibly helpful to the student learning process. Not all individuals enrolled in welding courses at Kodiak College are degree-seeking students. Community members often take welding courses for personal growth and development. Typically, these students are not interested in completing certification testing, but are required to participate in prequalification testing and instructor feedback for skill development and improvement.

***Describe actions taken to improve student learning for these outcomes. Programs may enter "See above" if there is a significant overlap of outcomes. (3000 characters or less)***

During this program review cycle, it has become abundantly clear that the program outcomes need significant updating. Due to minimal course delivery and enrollment over the past two years, available assessment data does not provide an accurate reflection of student success in the UC Welding program at Kodiak College.

***Describe evidence that these actions are working. Programs may enter "See above" if there is a significant overlap of outcomes. (3000 characters or less)***

No information provided.

- b. Demonstrate program quality and improvement through other means, for example, maintaining specialized accreditation, using guidance from advisory boards/councils, responding to community partners and local needs, maintaining currency of the curriculum, implementing innovative program design, intentionally integrating high-impact teaching and**

learning practices into the program, and meeting indications of quality in distance education, such C-RAC Standards. (3000 characters or less)

No information provided.

**4. Demonstrate student success and the closing of equity gaps.**

- a. Analyze and respond to the disaggregated data in the data sheet for your program. Provide clarifications or explanations for any positive or negative trends indicated by the data, and discuss what you are doing to close any equity gaps. The Student Success program review metrics are Junior Graduation Rate, Associate Graduation Rate, Semesters to Degree – Graduate Programs, and Course Pass Rates by Course Level. (3000 characters or less)**

In comparison to our last 2020 Expedited Review there is very little data to compare. With that being said, I'd like to highlight the data trend from 2017-2021. There has been recognizable growth in both full-time, and part-time students. The data listed under Race/Ethnicity is also showing positive growth. Of the nine listed, only one category has decreased over the last three years. Our students aged 18-24, and 25+ are showing great rates of growth. Last but not least, both our male and female numbers are showing a great increase over the past four years. Although student enrollment as a whole has decreased across the UAA system, there are positive trends in the data provided for this report.

These positive trends can reflect the work that the department has put into recruiting, advising, and the success of students leaving our programs. The welding and NDT industry has made extensive visible changes over the past few years to close equity gaps. Potential students are now recognizing these possibilities, whether it is through family, friends, or research, and are jumping at the opportunity to fill positions that years ago may not have been so easily attained. An example of evidence recently implemented was to hire a female adjunct with a military background. It has helped our veteran students navigate the GI Bill and shows our growing number of female students that our field is not as non-traditional as it was in the past. Contacting agencies such as our Native corporations lets them know that we are open for business and allows us to build crosswalks with their ongoing efforts to help young students find a career path. Our goal as a department should be to continue research on these industry changes and mirror them in our program, utilizing all faculty and staff that have the ability to contribute.

- b. Provide evidence of the overall success of students in the program, e.g., the percent of students who pass licensure examinations, the percent of students who go on to graduate school, the percent in post-graduation employment in the field or a related field. (3000 characters or less)**

Referencing our 2020 expedited review shows evidence of both success and areas in need of improvement and refinement. Although, with great collaboration, our curriculum is now aligned throughout the UAA and community campuses, this data can vary immensely between each of our specific campuses. Each of the two specific disciplines associated with the Department, welding and nondestructive testing, has different governing bodies associated with code, validity, and recognition. For welding, these bodies include; the American Welding Society

(AWS), the American Society of Mechanical Engineers (ASME), and the American Petroleum Institute (API). For nondestructive testing, the governing body is the American Society for Nondestructive Testing (ASNT). These codes are internationally recognized and utilized as well. These certifications may vary greatly between campuses based on the Weld Procedure Specification that each instructor is utilizing to fit the unique needs of our individual industry partners. The results of student success and the data requested above are then reported to each campus's designated staff and may or may not be available to view as a whole. With that being said, evidence of our students' successes has been communicated through our recent collaboration efforts. With Anchorage's newly accredited testing facility, internships in place, our OECs/ undergraduate certificates now in view to each campus, and our faculty that are AWS-certified welding inspectors, our department has a very solid platform to ensure student success. The recent work completed from our previous review is allowing students to enter our programs and seamlessly transition from campus to campus and to our industrial workforce with nationally-recognized credentials. Though our data may be scattered at the moment across multiple campuses, testimony through collaboration has shown that faculty has reported up to 90% successful licensure examinations, and students continuing education and/or entering the workforce. Continuing communication with students that are currently working in the field both highlights our student/program success and allows the department to reflect, adapt and adjust our curriculum based on their experience in the changing workforce. Through continued faculty collaboration that we have agreed to, we can begin to connect content that for so long has been very separate. This will greatly benefit the students that enter our program.

**5. Demonstrate demand for the program.**

- a. Analyze and respond to the data in the data sheet for your program. Provide clarifications or explanations for any positive or negative trends indicated by the data, and discuss what you are doing to improve. The Demand program review metrics are Ratio of Out-of-Discipline Credit Hours to Total Credit Hours, Number of Program Graduates Who Continue Education, Number of Program Graduates Who Return to UAA to Pursue an Additional Program, and Gap between Job Openings and Degree Completions. (Note: Gap between Job Openings and Degree Completions not required for AY22 Program Reviews.) (3000 characters or less)**

The data from the AY22 Program Review Data Sheet is very limited to the ratio of out-of-discipline credit hours to total credit hours. It has shown a steady increase over the five year period reflecting the importance that a student may require its completion for their major. Through advising, recruiting, and collaboration between disciplines, we hope this number will continue to rise.

The United States has a huge Welding and Non Destructive Technician deficit according to the entire industry. Alaska is no different and the data from the Department of Labor shows there are 109 annual openings in the Welding fields through existing labor force exits alone. Multiple welding and NDT industry owners and managers are saying they do not have enough employees to fill their need for annual openings. With Alaska's diverse oil and gas, construction, and marine industries a simple change in government administration can initiate massive projects that will require a high number of skilled workers in the welding and NDT fields. If we combined all enrollment numbers across our UAA/community campus Welding and NDT programs, with all

graduating and entering the field, this is still a number too small to fill Alaska's Welding and NDT technician positions. We are increasing our recruiting efforts, our connections with local industry members, and our connections with local welding union members to help our enrollment numbers and student success.

We have been working on several initiatives in Welding/NDT to put our FTES/FTEF numbers back on an increase. One initiative has been our recruiting efforts in which our instructors, recruiters, and staff have been to high schools, competitions, as well as offering welding qualifications to local secondary welding students. All of these efforts seem to be having an influence. The Welding/NDT program is built with a team of motivated individuals and, through all of our efforts, I believe that we will continue to increase the efficiency of our programs. One of the inhibiting factors to increasing FTES/FTEF is that the welding classes only have room for 18 students and the NDT room only accommodates 12.

Graduation rates are an incredibly valuable number but I believe our graduation rates could be misread and maybe a bit misleading. Graduation rates for technical programs nationwide are typically lower. We have many students employed by the first semester and the vast majority of students employed by the end of the second semester. Unfortunately, many of the students drop out for multiple reasons and opt for a paycheck rather than finishing their education. Students start our program to get an education in the industry and a job that pays well, and both may be achieved before graduation. We will continue across all campus programs on recruitment efforts such as dual enrollment to increase student numbers.

#### **6. Demonstrate program productivity and efficiency.**

**Analyze and respond to the data in the data sheet for your program. Provide clarifications or explanations for any positive or negative trends indicated by the data, and discuss what you are doing to improve. The Productivity and Efficiency program review metrics are Five Year Degree and/or Certificate Awards Trend, Student Credit Hours per Full-Time Equivalent Faculty, and Full-Time Equivalent Student per Full-Time Equivalent Faculty. (3000 characters or less)**

All programs' data concerning trends associated with production and efficiency show a decline. This decline coincides with enrollment. Enrollment has been plagued by COVID-19, COVID-19 restrictions, and other COVID-19 related impacts. Another unforeseen factor witnessed, pertaining to the data, were a bloom of change of majors, from certificate programs, to the Associate of Applied Science degree. When the AAS program was set to be terminated, there was a shift of UC and OEC students into the AAS program before the teach-out was to be implemented.

Positive data orbiting production and efficiency can be illustrated by the increase of industry-related interest, industry-led adjunct instruction, industry financial support, and industry-provided internship programs. 2017 through 2019, Kinross, a worldwide mining company with mines in Fairbanks, hired students from the Anchorage campus for summer internships, and awarded graduating students employment offers and continuing students job offers contingent upon graduation. In the same years, both Kakivik and Mistras, North Slope competing maintenance contractors providing corrosion inspection for Alaska's pipeline by way of nondestructive testing, conducts several radiographic testing courses, and hires qualifying students routinely. Alaska Industrial X-ray, an Anchorage based company specializing in the Aviation sector, conducts off-

campus nondestructive testing courses at their business site, and has been the longest active supporter and employer of our graduating students. Students leaving the program are being put to work, and sharing their successes with faculty and students by coordinating with instructors to visit classrooms and talk to students.

Despite numerical values and their associated perspectives and interpretations, the welding department is moving forward with improving the program by rebranding four certificate programs; offering new courses which include certification opportunities not available anywhere in the state, courses for rotational workers, and under-represented ethnicities. Furthermore, a special emphasis on modular education has been encouraged by the Provost. Certificate students can now enroll in and apply their certificates and take additional, yet minimal, courses and a complete an Associate of Applied Science degree in Technology.

**Optional: Discuss the extent to which, if any, extramural funding supports students, equipment, and faculty in the program. (2500 characters or less)**

Option declined.

- 7. Assess program distinctiveness, as well as any duplication resulting from the existence of a similar program or programs elsewhere in the University of Alaska System. Is duplication justified, and, if so, why? How are you coordinating with UAA's community campuses and the other universities in the system? (2000 characters or less)**

Welding programs across campuses are not easily distinguishable. Meaning, weight, and comparable value behind the terms, "Undergraduate Certificate" and "Occupational Endorsement" may be understood by administrators, but are unclear to industry leaders and prospective students. Regardless of whether a campus offers Undergraduate Certificates or Occupational Endorsements, the basic welding qualification tests (of which are typically required for entry level employment) are trained upon during laboratory exercises, and tested upon as both a required academic component of the course contingent upon graduation, and offered as a national certification through the American Welding Society. All programs meet mission statements, if students subscribe to "entry-level employment" by way of the majority of Alaska's state revenue coming from oil and gas exploration. For entry-level employment within the aforementioned, industry typically administers upper-tier welder qualification tests indicative of the generic "5 years of preferred experience". While instructors across campuses struggle to teach students how to pass a weld test, they are often left plagued with frustration in their pursuit of transitioning from training into simulation. Though this predicament spawns instructor-based creativity in developing new courses, instructors remain restricted to the confines of credit versus contact hours. The creation of newer courses and programs can, at times, lead to the dismantlement of campus cohesion. Department heads meet twice a semester and discuss program alignment and update continuity.

- 8. Assess the strengths of your program and propose one or two action steps to address areas that need improvement. (3500 characters or less)**

The strengths of the program are captured by educated and dedicated faculty with decades of industry-related experience with current active certifications directly related to the courses taught. The ability to expedite course offerings, collect student data, review academic assessments, and

formulate plans to improve could not exist without the dedication, effort, and support from our program's internal structure of academic advisors (student success coaches), program assistants, staff, administrators, vendors, and industry relationships. The program across all campuses does not benefit from the same staffing as one another, yet consistent and habitual needs arise. This puts faculty at a disadvantage. When faculty and faculty support are overloaded, students and the program could fail.

The program has implemented the following:

- An ongoing pool of adjunct applicants to be reviewed, per campus needs.
- Develop uniform material dimensions utilized across all applicable courses.
- Develop and employ material utilization tracking systems.
- Review all purchasing costs of steel, and cross-reference utilization of material against current course fees.
- Adjust course fees to reflect tariffs and increased shipping costs.
- Ensure all programs offering certificates have the staff, equipment, and capability to offer three of the four basic welding processes (SMAW, FCAW, and GMAW).
- Meetings twice a semester.
- Internal faculty program reviews.
- Voluntary assignment of program alumni employed "mayors", in regular rotations, on scheduled campus and online events.
- Voluntary assigned liaisons to all union trades, for the purposes of program advertisement, recruitment, and training opportunities.
- Vendor support of digital media associated with hybrid courses.
- A simulated, unofficial program review to be completely fulfilled by each campus to ascertain each campus's strengths, weaknesses, and ability to provide individual and independent data specific to their certificate program and community.

*After completing the Program Section above, the program review committee chair should sign, date, and email this form to the dean, copying the committee members. If the program is fully delivered on a community campus, copy the appropriate community campus director(s).*

**Committee chair's signature:**

DocuSigned by:  
*Greg Russo*  
2380387981429

**Date:** 3/1/2022

END OF PROGRAM SECTION

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## DEAN SECTION (Due on April 1)

*If the program is fully delivered on one or more community campus, the dean should consult with the director(s) of the campus. After completing the Dean Section below and signing it, the dean should email this form to the committee, and to [uaa.oaa@alaska.edu](mailto:uaa.oaa@alaska.edu). If the program is delivered on a community campus, copy the appropriate community campus director(s). The program has one week to provide an optional response to the Dean Section using the Program Optional Response section of this form.*

### Evaluation of Progress on Previous Recommendations

**For each recommendation from the last program review, indicate if the recommendation has been met or has not been met and provide commendations and guidance as appropriate. (2000 characters or less for each recommendation)**

***Recommendation 1: Expand opportunities to partner with career and technical education programs in local school districts.*** Recommendation has been met.

Recommendation 1 has been met. The Anchorage program has seen a number of changes that have stalled some of the outreach to specific schools nor have we been able to develop dual credit options as of yet. However, we have been doing outreach, and this has shown an increase in enrollments of Middle College students. We also have a closer relationship to King Tech High School and have been able to coordinate efforts for Welding students in their programs. KPC has developed and is running an articulation agreement with Kenai Peninsula School District for their Welding UC. Our outreach is currently expanding to examine Articulations with ASD and possibly MSD.

***Recommendation 2: Work closely with local admissions and advising staff and local secondary faculty to recruit additional students into Welding programs.*** Recommendation has been met.

Recommendation 2 has been met. We have seen better coordination between Welding and the Student Success Advisors (SSA's) on UAA's campus. It is difficult to gauge how the outreach is going due to COVID, however Anchorage has been working closely with King Tech during the COVID restrictions and has been able to coordinate cross-usage of facilities. The King Tech instructor is a graduate of the AAS in Welding and Non-destructive Testing. KPC has maintained their close connection to the KPSD, and has been able to partner with their programs in welding effectively.

***Recommendation 3: Continue to explore alternative modes of delivery for some courses, where appropriate, in order to further enhance productivity and efficiency.*** Recommendation has been met.

Recommendation 3 has been met, however there was limited success in some parts. As we work for the alternative delivery modes, only one course has been successfully transferred to an online modality. The Technical Drawings for Welders course has been successfully run online. However, due to the restrictions of needing actual welding experience to test for both Qualifications and Certification, the other courses have remained largely in-person. I believe that at this time we have met the recommendation for this program.

**Provide your analysis of #2-8 below, based on the data provided and the program's responses above.**

**1. Centrality of the program. (1750 characters or less)**

As the faculty pointed out, at least indirectly, workforce development and skills development are the focus of the program. This directly links to the mission of the Community and Technical College mission. Additionally, the core competency the programs focus on is Personal, Professional, and Community Responsibility. Each of these programs focus not only on the skills but the professional responsibilities to the job and the community. These programs are central to the workforce development within Alaska.

**2. Program Quality and Improvement (1750 characters or less)**

This is an interesting situation. We have had two major changes, with the COVID pandemic and the suspension of the Welding AAS, which have made it difficult to assess where we are. Additionally, we have had limited time to gather data for trends. However, I agree with the assessment that we are meeting student learning outcomes. The students are receiving the appropriate certifications and we currently have a near 100% employment of graduate. An additional issue that has been starting over the last year is the students who receive employment before completing the program and leave for those jobs. This is hard to gauge and will need to be integrated into their assessment plan.

**3. Student Success and the Closing of Equity Gaps (1750 characters or less)**

The Welding programs have shown an increase in diversity, though minor as it is. As pointed out by the faculty, the industry and UAA's efforts have led to a greater visibility to students across the board. As more students of underrepresented populations see the potential of welding careers or even the possibility of using these skills at home, we will continue to show an increase in diversity among the students. I recommend that the faculty continue the outreach to both industry and the public to increase the visibility of the program.

**4. Demand (1750 characters or less)**

I agree there is demand for the programs, industry constantly shows it. However, we are currently facing the issue of a lack of knowledge about CTC's workforce development programs. There are also shorter programs that allow students to get Welding Qualifications quicker. I recommend we work to first offer the OEC at all campuses and second, we work to make each welding OEC (basic and advanced) be one semester of 16 credits.

**5. Productivity and Efficiency (1750 characters or less)**

I agree, there is significant demand in the workforce area of Welding and Non-destructive Testing. I believe the reduction in enrollments, which was slight compared to other programs, comes from two issues. The first was the effect of COVID on operations. This showed a reduction of enrollments, showing a lower faculty-to-student ratio, because we reduced the capacities of the courses to meet COVID requirements for spacing and in-person operations. The second is we are seeing the effect of the elimination of the AAS in Welding and Non-Destructive Testing. The public believed that the program was shutting down, not just the degree. Both of these issues are being addressed and we are seeing a recovery of enrollments in the Welding programs this year.

**6. Duplication and Distinctiveness (1750 characters or less)**

As the faculty state there is not a major distinction between the UAA campuses. However, there are major differences in the offerings and individual focuses at the locations. There are minimal overlaps in student populations, yet Welding skills are in demand at each campus. So, the focus in distinctiveness is actually in the program students. The duplication is necessary to meet the needs of the communities served.

**7. Strengths and Ideas for Moving Forward (1750 characters or less)**

The Welding program is in a solid position to expand throughout the entire UAA system. There is industry need for the skills and we have a variety of locations that students may take the in-person courses. At the Anchorage campus we have implemented cost control measures to minimize waste and better adjust course fees. KPC has a strong coordination with the KPSD and a number of industry supporters. All the programs have strong connections with Industry. There are three things I believe we need to do moving forward: Advertising and Outreach to the public, coordinate better with Kodiak campus, and address the OEC options.

UAA is not known for specific workforce programs, specifically in the public. This applies to many programs, but with welding specifically. I would recommend the programs specifically work with University Advancement, the Dean's office, and Campus Directors to coordinate an outreach effort throughout Southcentral Alaska.

While there is good coordination with Anchorage and KPC, there seems to be less communication with Kodiak. I recommend we work with Kodiak faculty to create a single Undergraduate Certificate instead of two separate UCs.

Finally, I recommend all Welding specific OECs and UCs be available at every campus. Additionally, if possible these OECs' offerings should be scheduled to allow for a single semester completion.

**Dean's Final Evaluation**

**I commend the program for: (number and list the specific commendations in the narrative box, 1500 character limit)**

- 1.) The good coordination between Anchorage and KPC.
- 2.) The excellent industry coordination.
- 3.) The new cost control measures to maintain fiscal responsibility.

**I recommend that the program: (number and list the specific recommendations in the narrative box, 1500 character limit)**

- 1.) I would recommend the programs specifically work with University Advancement, the Dean's office, and Campus Directors to coordinate an outreach effort throughout Southcentral Alaska.

2.) I recommend we work with Kodiak Community Campus to create a single Undergraduate Certificate instead of maintaining the separate UCs.

3.) Finally, I recommend all Welding specific OECs and UCs be available at every campus. Additionally, if possible these OECs' offerings should be scheduled to allow for a single semester completion.

**Dean's overall recommendation to the provost:** Continuation -- Program is successfully serving its students and meeting its mission and goals. No immediate changes necessary, other than regular, ongoing program improvements.

**If an Interim Progress Report is proposed, recommended year:** N/A

**If a Follow-up Program Review is proposed, recommended year:** N/A

**Proposed next regular Program Review:** AY2026

*After completing the Dean Section above, sign, date, and email this form to the committee, and to [uaa.ooo@alaska.edu](mailto:uaa.ooo@alaska.edu). If the program is fully delivered on a community campus, copy the appropriate community campus director(s). The program has one week to provide an optional response to the Dean Section using the Program Optional Response section below.*

**Dean's signature:**



**Date:** 3/31/2022

END OF DEAN SECTION

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**PROGRAM OPTIONAL RESPONSE (Due within one week of receiving dean's review)**

*Programs have the option to submit to the provost a response to the dean's evaluation within one week of receiving the dean's review, using the narrative box below.*

*Optional responses should be submitted to [uaa.ooo@alaska.edu](mailto:uaa.ooo@alaska.edu), with a copy to the dean. If the program is fully delivered on a community campus, copy the appropriate community campus director(s) as well.*

**Optional Response: (10,000 characters or less)**

**Program Signature:** \_\_\_\_\_

**Date:** Select date.

END OF PROGRAM OPTIONAL RESPONSE SECTION

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**PROVOST SECTION (Due on August 1)**

*After completing, signing, and dating the Provost Section of this form, email the completed form to the program review committee and dean, with a copy to [uaa.oaa@alaska.edu](mailto:uaa.oaa@alaska.edu) for posting. If the program is delivered on a community campus, copy the appropriate community campus director(s) as well.*

**Provost's commendations, additional or adjusted recommendations, if any, and other general comments (3000 characters or less):**

I agree with the dean's commendations and recognize the faculty's efforts to address the current recommendations. The faculty have worked across the campuses to develop new and aligned curriculum and to find new ways to collaborate. Each campus contributes uniquely, such as KPC's exploration of virtual reality simulators, and each contributes to an increasingly coherent whole. Outreach to programs such as the Middle College is beginning to show results. Students are receiving their certifications, and placement has been 100% for graduates.

I also agree with the dean's recommendations, with the correction that the welding programs will continue to be offered at three of UAA's campuses (Anchorage campus, Kenai Peninsula College campus, Kodiak College campus). I also recommend that the programs explore the development of a single assessment plan. For example, each OEC could have a single summative assessment, and these can serve as formative for the Undergraduate Certificate.

Moving forward, I am asking programs to think about how they put students first by looking carefully at issues such as pre-requisites, especially "hidden" pre-requisites, excess credits, especially for additional upper-division or in-residence credits beyond the university requirements, and student progression through the curriculum. I am also asking faculty to think about what it means to embrace diversity and inclusivity on the course and program level and about how they demonstrate this in their particular program(s). For example, some ways to demonstrate this are through the use of proven, high-impact practices at the program level such as portfolios, community-based/service learning, and undergraduate research. Proven pedagogic strategies also include designing assignments using Transparency in Learning and Teaching (TILT), the inclusion of formative assessments in addition to summative ones, and implementing OER and ZTC materials, particularly where course materials can be more reflective of diverse perspectives.

As the programs move into the next review cycle, and as applicable, please consider how the program can continue to build on its efforts and use what it has learned through this Program Review process to further reflect on the program, its curricular design, how each course is delivered, and how its students

are supported. Please also consider how the program embraces and demonstrates its commitment to diversity and inclusion, as outlined above.

I agree with the dean's recommendation for a decision of Continuation, with the next regular Program Review in AY26, to align the review of all welding programs.

**Final decision:** Agree with the dean's overall recommendation with the additional guidance and adjustments as per the above comments.

Provost's signature: 

**Date:** 5/9/2022