

# Bakersfield College

## Program Review – Annual Update 2015

### I. Program Information:

Program Name:

Program Type:         Instructional         Student Affairs         Administrative Service

***Bakersfield College Mission:*** Bakersfield College provides opportunities for students from diverse economic, cultural, and educational backgrounds to attain Associate and Baccalaureate degrees and certificates, workplace skills, and preparation for transfer. Our rigorous and supportive learning environment fosters students' abilities to think critically, communicate effectively, and demonstrate competencies and skills in order to engage productively in their communities and the world.

Describe how the program supports the Bakersfield College Mission:

**The welding program is committed to student success in career development by becoming an exemplary model and implementing best practices established in the mission of Bakersfield College. The welding program increases student success by:**

- Enhancing our students' experience with online instruction.
- Developed Skills Certificates for students.
- Use embedded remedial skills in lecture and lab.
- Use technology to increase completion rates.
- Uses professional development opportunities to address retention.

Program Mission Statement:

**The EIT faculty and staff strive to offer effective, up to date and student centered instruction, being sensitive to the diversity of our students, their educational needs, and their career goals. We provide relevant course and lab work geared toward day and night students seeking careers in EIT related fields, also meeting the needs of students seeking training for career advancement or skills updating. We use a multi-dimensional approach in preparing our students not only for their specific career goals, but also provide activities that assist them with meeting their personal, academic, and intellectual goals. Our faculty actively pursues professional development, program/facilities improvement, and college/community involvement, seeking partnerships and collective efforts.**

### **Career and Technical Education Team Mission Statement**

**To empower people with the knowledge and skills necessary for career development and life success in a technological and global society.**

**II. Progress on Program Goals:**

A. List the program's current goals. For each goal (minimum of 2 goals), discuss progress and changes. If the program is addressing more than two (2) goals, please duplicate this section.

Program Goal	Which institutional goals from the Bakersfield College Strategic Plan will be advanced upon completion of this goal? (select all that apply)	Progress on goal achievement (choose one)	Comments
1. To develop and conduct Welding classes at Delano/ RFK.	<p><input checked="" type="checkbox"/> 1: Student Learning</p> <p><input checked="" type="checkbox"/> 2: Student Progression and Completion</p> <p><input checked="" type="checkbox"/> 3: Facilities</p> <p><input type="checkbox"/> 4: Oversight and Accountability</p> <p><input type="checkbox"/> 5: Leadership and Engagement</p>	<p><input type="checkbox"/> Completed: _____ (Date)</p> <p><input type="checkbox"/> Revised: _____ (Date)</p> <p><input checked="" type="checkbox"/> Ongoing: 8/31/2015 (Date)</p>	<p><b>The welding program is committed to student success in career development by becoming an exemplary model and implementing best practices established in the mission of Bakersfield College. The welding program has increased student enrollment by offering six sections at Delano/RFK. Equipment was transferred to RFK creating a need to replace equipment at main campus and add additional equipment at RFK to increase section offerings from two to four per semester.</b></p>
2. The need to address deficiencies in soft skills, reading, and trade arithmetic changed the overall focus of lecture, lessons, and lab work. The welding faculty embedded lecture that addressed these components and results will prove	<p><input checked="" type="checkbox"/> 1: Student Learning</p> <p><input checked="" type="checkbox"/> 2: Student Progression and Completion</p> <p><input checked="" type="checkbox"/> 3: Facilities</p> <p><input type="checkbox"/> 4: Oversight and Accountability</p> <p><input type="checkbox"/> 5: Leadership and Engagement</p>	<p><input type="checkbox"/> Completed: _____ (Date)</p> <p><input type="checkbox"/> Revised: _____ (Date)</p> <p><input checked="" type="checkbox"/> Ongoing: 8/31/2015 (Date)</p>	<p><b>These embedded components have been inserted into WELD 53A and WELD 74A and implemented at Delano/RFK , with a special emphasis on trade math, locating information, and writing. Embedding basic skills into welding curriculum have been an ongoing process that began 5 years ago and continues to be a focus moving forward. In</b></p>

<p>through assessment these needs are improving.</p>			<p>addition, discussions are taking place between welding faculty and Delano Unified School District to implement dual enrollment in a two year welding course to satisfy requirements for WELD B1A and B1B. This will also address deficiencies listed above.</p>
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B. List new or revised goals (if applicable)

New/Replacement Program Goal	Which institutional goals will be advanced upon completion of this goal? (select all that apply)	Anticipated Results
<p>. To develop and conduct Welding classes in outline areas.</p>	<p>X 1: Student Learning  X 2: Student Progression and Completion  X 3: Facilities  <input type="checkbox"/> 4: Oversight and Accountability  <input type="checkbox"/> 5: Leadership and Engagement</p>	<p>1. With the addition of extra sections, six at BC and four in Delano, the need for additional replacement equipment is high.  2. With the increase of</p>

		<p><b>sections, addition a full time tenured facility, and increased prices in consumables and material the need for additional budget is essential. The older equipment is requiring more repairs and additional parts are necessary to keep in stock so repairs can be made so disruption in learning does not occur.</b></p>

**III. Trend Data Analysis:**

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- A. Some categories saw minor fluctuations. A minor change occurred in the age category. Welding saw a slight increase in the 19 and younger group. Enrollment for this group increased from 22% in 2013-14 to 27% in 2014-15. This is due to the addition of Welding classes at RFK in Delano that due to location and time were filled with high school age or recent high school graduates. We also saw a slight increase in the number of SEP's completed. This rose from 66% in 2013-14 to 71% in 2014-15. This highlights the continued effort of the welding faculty to encourage students to complete the Matriculation process.
- B. After comparing the enrollment data, one *significant* change was discovered. Enrollment increased from 837 in 2013-14 to 927 in 2014-15. This increase is due to Dual Enrollment, and Delano welding sections at RFK. This increase highlights the need for additional faculty, including adjunct and one full time position. With administrations "Strategic Directive" to increase Dual Enrollment to other area high schools and additional RFK sections, enrollment

could soon exceed 1000. The burden on the existing faculty to mentor and evaluate adjunct, maintain BC/Delano lab facilities, participate in CCP2 Grant activities is becoming excessive. Coupled with the need to teach overload at the main campus an additional full time position or Welding/Manufacturing chair is desperately needed to insure quality courses, and maintain oversight during this expansion.

- C. There were significant changes in regards to Success and Retention. Although AS degree awards stayed the same, a large increase was discovered in Certificates. Certificates increased from 45 in 2013-14 to 66 in 2014-15. This highlights faculty's continued effort to encourage students to complete Certificate programs of study. In addition, this displays the need for additional course offerings to allow students to complete Certificate programs.
- D. No data available.
- E. Below are the additional welding courses that have been added through "Dual Enrollment." Currently there have been six sections added with plans to add 2-3 sections at the Arvin High School campus in Spring 2015. This increase further highlights the need for an additional full time position or Welding/Manufacturing chair to maintain quality of instruction at main campus and expansion sites.
  - #72616 WELD B1A-Shafter High School
  - #72615 WELD 53A-Shafter High School
  - #72381 WELD 53A-Delano
  - #72415 WELD 53A- Delano
  - #72449 WELD 54A- Delano
  - #72398 WELD 74A- Delano

#### **IV. Program Assessment (focus on most recent year):**

- A. The need to address deficiencies in soft skills, such as reading, and trade math continue to be a focus for the welding department. Along with the embedded remediation in all welding courses, trade math lessons were added to introductory courses of WELD B1A and WELD B1B. Jeremy Staat created multiple trade math lesson plans that combined lecture/practice/worksheets rooted in industry relevant situations to maximize engagement. Pre/post tests were given and there was marked improvement. However, after "trade math" lessons were implemented in class they have become unsustainable due to the length of time necessary to insure all students obtained the math skill covered. 30 minute lessons turned into 1 hour lessons due to the varying levels, normally very low, of math proficiency in a class of 21 adult learners. Jeremy Staat brought forth an idea to help solve this issue by utilizing "Work Keys" program in the Academic Development" department. The welding faculty agreed this would be a solid strategy to address the reading and math deficiencies without consuming precious class time needed for welding theory. A Pre/Post test will still be administered to compare results between the "Trade Math" Lessons and shift to "Work Keys." At this point "Work Keys" is a voluntary component of WELD B1B. However, if students show similar improvement with "Work Keys" the welding department will assess how to implement/integrate "Work Keys" into all courses and possibly add the ability to earn the "Work Keys" certificate for welders.
  
- B. If successful, the workload to integrate/implement "Work Keys" into the welding program would be substantial. This further adds to the argument found in the conclusion of the "Program Review" for additional full-time faculty or creation of a Welding Department Chair.
  - Establish/Foster relationship between Welding and Academic Development

- Curriculum may have to be formally revised in CurricuNet
- Process for students to acquire “Work Keys” certificate created
- Tracking system developed to capture and track student engagement/scores program wide (over 900 students)
- Promotion of “Work Keys” certificate to industry partners.

The need to successfully address soft skills to prepare welding students for employment continues to be an important component of the welding program. Our industry partners continue to comment on the topic during “Advisory Board” meetings.

- C. Embedded remediation, trade math, and looking forward “Work Keys” covering critical thinking, communication, and math skills has led to SLO’s/PLO’s aligning with and supporting the ILO’s of Bakersfield College. These soft-skills embedded within the ILO’s will insure that welding students will be prepared not only for welding jobs but have the necessary skills to advance into supervisory positions as well.
- D. Combined with C.

**Institutional Learning Outcomes:**

Think: Think critically and evaluate sources and information for validity and usefulness.

Communicate: Communicate effectively in both written and oral forms.

Demonstrate: Demonstrate competency in a field of knowledge or with job-related skills.

Engage: Engage productively in all levels of society – interpersonal, community, the state and the nation, and the world.

- E. Describe *any significant changes* in your program’s strengths since last year.
- Increased enrollment continues to be a strong force.
  - Addition of full-time position has injected new ideas, energy, and ability to offer more sections which quickly filled. In addition, this position has allowed for energy to be focused on developing Delano welding program.
  - Increase in the number of Job Skills Certificates awarded.
- F. Describe *any significant changes* in your program’s weaknesses since last year.
- Equipment-with BC welding equipment being shifted to Delano replacement machines have been purchased through a CTE “Enhancement Grant.
- G. If applicable, describe any unplanned events that affected your program.
- Participation in the CCPT2 “Dual Enrollment” Grant-negatively impacted program by increasing workload on faculty.
  - Summer Bridge Workshop- negatively impacted program by increasing workload on faculty.

**V. Assess Your Program’s Resource Needs:** To request resources (staff, faculty, technology, equipment, budget, and facilities), please fill out the appropriate form. <https://committees.kccd.edu/bc/committee/programreview>

**A. Human Resources and Professional Development:**

1. If you are requesting any additional positions, explain briefly how the additional positions will contribute to increased student success. Include upcoming retirements or open positions that need to be filled.

***The welding department would like to request either an additional full-time position or creation of a Welding Faculty Chair position. Argument/Support found in Conclusion section of this document.***

2. Professional Development:

- a. Describe briefly the effectiveness of the professional development your program has been engaged in (either providing or attending) during the last year, focusing on how it contributed to student success.

***Two faculty members attended the AWS Certified Welding Inspector seminar and have used acquired knowledge to create inspection lectures that focus on teaching students weld inspection methods and criteria for judging a weld to meet code requirements. Inspection tools and weld defect replicas have been ordered through the CTE Enhancement Grant. These will be added to the welding curriculum when they become available.***

- b. What professional development opportunities and contributions can your program make to the college in the future?

***Through the use of VTEA funds remaining two faculty members will attend the AWS CWI seminar and be able to implement weld inspection curriculum into their courses.***

B. Facilities:

1. How have facilities' maintenance, repair or updating affected your program in the past year as it relates to student success?

***Repairs have been completed on AC unit for IT208M, IT 208, and IT 207. Student success has been enhanced by allowing lecture to be held in classroom versus another location when AC is not working.***

2. How will your Facilities Request for next year contribute to student success?

***We have requested new lighting for the welding booths. Poor lighting continues to be an issue for students inside welding booths. Increasing the amount of light in the welding booth will translate into increased skill attainment for all welding classes. Students will no longer struggle with low light conditions that provide a barrier to learning.***

C. Technology and Equipment:

1. Understanding that some programs teach in multiple classrooms, how has new, repurposed or existing technology or equipment affected your program in the past year as it relates to student success?

***No new technology received during past year.***

2. How will your new or repurposed classroom, office technology and/or equipment request contribute to student success?

***Student success related to welding skill attainment will be increased. Many studies, including one completed by the University of Iowa show that when welding simulators are used for basic Introductory courses skill attainment drastically increases when students enter welding lab area. The welding department has one simulator. However, it is difficult for a class of 21 students to engage simulation exercises with only one unit. "Reality Works" has entered the simulation market and are producing a table top simulator for a reasonable price of \$4500.00 per unit.***

3. Discuss the effectiveness of technology used in your area to meet college strategic goals.

***Through the acquisition of simulators and creation of a "Welding Sim Lab" students can meet strategic goals of the welding department in a shorter period of time. These skills include actual welding skill, but also include enhanced computer skills, understanding of advanced welding equipment, and critical thinking skills engaged in the simulated environment.***

- D. Budget: Explain how your budget justifications will contribute to increased student success for your program.

**VI. Conclusions and Findings:**

The welding program is in a significant growth trend. Many factors such as “Dual Enrollment”, Delano Campus expansion, and increased enrollment at the Main Campus have contributed. This expansion has dramatically increased the existing faculty workload and made it difficult to develop and implement any “Strategic Directive” ideas. Below are some ideas presented by welding faculty that would be very difficult to move forward under the current workload/department structure.

- “Welding Simulation Lab”-funded through CCPT2 funds.
- CTE Courtyard improvement plan.
- “Industry Environment” simulation lab
- “Work Keys” Certificate program.
- Create and write curriculum for an Advanced GTAW welding course. 80% of students polled responded they would enroll in Advanced GTAW course.

One idea that has circulated is to combine Welding/Manufacturing together in a single department and create a Department Chair position. This would create enough FTE to allow release time to be provided for the Chair position. The release time could be utilized to manage the expansion under CCPT2 directives, and begin advancing “Strategic Directives” within welding/manufacturing department.

**VII. Forms Checklist (place a checkmark beside the forms listed below that are submitted as part of the Annual Update):**

Best Practices Form **(Required)**

Curricular Review Form **(Instructional Programs Required)**

Certificate Form **(CTE Programs Required)**

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 Faculty Request Form

Classified Request Form

Budget Form

Professional Development Form

ISIT Form

Facilities Form (Includes Equipment)

Other: \_\_\_\_\_