**Bakersfield College**

**Program Review – Annual Update**

**I. Program Information:**

Program Name: WELDING

Program Type: X Instructional  Non-Instructional

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.**

Program Description: 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.**

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

1. How did your outcomes assessment results inform your program planning?

**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 through assessment these needs are improving. 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 4 years ago and continues to be a focus moving forward. In addition, discussions are taking place between welding faculty and Delano Unified School District to articulate a two year welding course to satisfy requirements for WELD B1A and B1B. This articulation agreement will address deficiencies listed above.**

1. How did your outcomes assessment results inform your resource requests?

**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 two 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.**

1. Instructional Programs only**:** How do course level student learning outcomes align with program learning outcomes?

**Our resource request for 2013-2014 and 2014-2015 academic year focuses on adding another full-time faculty member. With the addition of six sections to accommodate the C6 program which focuses on basic skills, the need for additional faculty has been met. Our outcome assessment showed the need for embedded basic skills in all courses. The C6 program fills this need but six new sections overloads existing faculty. For the C6 program to continue successfully additional faculty will be key. In addition, two sections WELD B53A and WELD B74A are being taught at Delano/RFK. These two courses also address the need for embedded Basic Skills at the high school level. However, this expansion to Delano/RFK has negatively impacted resources at the main campus.**

1. How do the program learning outcomes align with Institutional Learning Outcomes?

**Embedded remediation in welding courses covering critical thinking, communication, and job related skills has led to program PLO’s and SLO’s aligning with and supporting the Institutional Learning Outcomes. Furthermore, these soft-skills help students engage productively in all levels of society.**

1. Describe *any significant changes* in your program’s strengths since last year.

* **Institutional data reveals that student demand for welding courses remains high, 5 additional seats were added to all waitlists and were immediately filled during the first few days of open registration.**
* **Basic Skills has been embedded into approximately 70% of existing welding curriculum, allowing displaced welders to easily transition from one industry to another. For example, welders laid off in the automotive manufacturing industry may be able to find work in the oil and gas, and agriculture industry where basic skills are required.**
* **Faculty has addressed the increased emphasis on industry safety standards. In the welding industry safety and safe work practices have become critical. The welding industry is no longer production driven, but safety driven. All welding courses place emphasis and redundancy on safe work practices (SWP) to better prepare students to embrace safety rules upon entering workforce.**

1. Describe *any significant changes* in your program’s weaknesses since last year.

**With the addition of extra sections, six at BC and four in Delano, the need for additional replacement equipment is high.**

1. If applicable, describe any unplanned events that affected your program.

**The Delano/RFK expansion project required additional equipment for lab start up. An original order for 21 each XMT 350’s was reduced to 8 each. This resulted in an equipment shortage of 13 welding units. With administration pushing to add two more sections in the Spring 2015 semester, more replacement equipment will be required at the main campus. Due to logistical concerns, older equipment will be placed at Delano/RFK and new replacement equipment will be housed at the main campus.**

**III. Resource Analysis:**

1. Human Resources
2. If you are requesting any additional positions, explain briefly how the additional positions will contribute to increased student success. (Faculty Request form; Classified Request form)

**No additional positions requested.**

1. Professional Development (Professional Development form)
2. Describe briefly the effectiveness of the professional development your program has been engaged with (either providing or attending) during the last cycle, focusing on how it contributed to student success.

**Professional development is a key component to meet the changing needs of industry and help students attain success. The welding program at Bakersfield College has six sections that focus on plate and pipe certification that prepares student for industry. This past year the staff used the funds for professional development to get a CWI certificate, Certified Welding Inspector, and ICWI, Instructional Certified Welding Inspector. This allows the staff to enhance the learning environment by adding additional instructional material and allow for student success as they assimilate into industry.**

1. Provide rationale for future professional development opportunities and contributions that your program can make.

**The need for Instructor certification in other areas of the welding industry is essential for the continued growth and success of the students and the program. We see a need to have instructors on staff with endorsements in the many phases of inspection and also training on CNC Plasma programing. These professional development opportunities not only add more expertise for the instructors but open the door for additional sections with qualifications to serve the best interest of the students and community.**

1. Facilities (M&O requests can be submitted by completing the [M&O request form](https://committees.kccd.edu/sites/committees.kccd.edu/files/Copy%20of%2012%20M%26O%20Needs%20Workbook%2012-13%20APR.xlsx).)

Has your area received any facilities maintenance, repair or updating in this cycle? **YES**

1. If yes, how has the outcome contributed to student success?

**The updates included the addition of eight carts to house eight new Miller Multi-Process Machines purchased with C-6 funding. The lack of space in the welding labs requires innovating thinking to create lab flow and safety that enhances the learning environment. The staff designed the carts and when built** **installed the new equipment in a stacked structure creating a lab flow that utilizes the space to its full potential.**

1. If no, how will your facilities request contribute to student success?
2. Technology (Technology requests can be made by filling out the [ISIT Request form](http://www.bakersfieldcollege.edu/irp/Annual%20Program%20Reviews/2012-13/13%20ISIT%20Priority%20Workbook%2012-13.xlsx).)
3. Has your program received new or repurposed technology in this cycle? **YES**
   1. If yes, how has this technology contributed to student success?

**The welding staff has received updated office computers that replaced existing computers that were 7 years old. This update was essential to help the welding staff keeps records and organize class material.**

**The procurement of 8 Pulse-GMAW Welders for 1 welding lab. This is welding technology that industry is using as a benchmark for structural and pipe welding. The exposure by students to this technology better prepares them for the job market and ensures better success.**

* 1. If no, how will your new or repurposed technology request contribute to student success?

1. Do you need new or repurposed classroom technology to support student success and/or new office technology to support faculty/staff success? Justify your request.
2. Budget (Changes to the budget allocation can be requested using the [Budget Change Request Form](http://committees.kccd.edu/bc/committee/programreview)).

If you are requesting any additional funding, explain briefly how it will contribute to increased student success.

**With the increase of sections, addition of 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.**

**IV. Trend Data Analysis:**

Highlight *any significant changes* in the following metrics and discuss what such changes mean to your program.

1. Changes in student demographics (gender, age and ethnicity).

**Ethnicity**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Ethnicity** | 2009-10 |  | 2010-11 |  | 2011-12 |  | 2012-13 |  | 2013-14  Subject |  | 2013-14  College wide |  |
| African American  American Indian  Asian/Filipino/Pac. Islander  Hispanic/Latino  White  Two or more races  Unknown | 40  6  10  195  99  0  5 | 11%  2%  3%  55%  28%  0%  1% | 38  5  10  210  116  7  2 | 10%  1%  3%  54%  30%  2%  1% | 38  1  4  188  98  10  1 | 11%  0%  1%  55%  29%  3%  0% | 20  0  4  220  83  5  2 | 6%  0%  1% 66%  25% 1%  1% | 17  1  1  244  59  10  2 | 5%  0%  0%  73%  18%  3%  1% | 1,288  109  1,078  15,750  6,101 841  364 | 5%  0%  4%  62%  24%  3%  1% |

**Ethnic trend data in welding compares similarly with college wide data. African American, American Indian, Two or more races, and Unknown are identical in regard to percentage of participation. The only significant change has occurred when comparing the Hispanic/Latino group to Whites. There was a shift from 2012-13 to 2013-2014 academic year. Hispanic/Latino participation increased from 66% to 73%, while White participation declined from 25% to 18%. This change has partly occurred due to the insertion of the C6 cohort into the welding program. The C6 group contained a majority of Hispanic/Latino students due to the areas that were targeted for recruitment. The were no directives to target areas with Hispanic/Latino populations. The high school welding classes where the majority of the recruitment took place contained a majority of Hispanic/Latino students. The decline of white participation remains unexplained.**

**Gender**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2009-10** |  | **2010-11** |  | **2011-12** | | **2012-13** |  | **2013-14**  **Subject** |  | **2013-14**  **College wide** | |
|  | # | % | # | % | # | % | # | % | # | % | # | % |
| **Gender2** |  |  |  |  |  |  |  |  |  |  |  |  |
| Female  Male | 17  338 | 5%  95% | 23  365 | 6%  94% | 23  315 | 7%  93% | 19  314 | 6%  94% | 23  310 | 7%  93% | 13,932  11,460 | 55%  45% |

**The gender data for welding remains low (7%) when compared to college wide data (55%). The welding faculty agrees that this inequity is probably due to several factors. A male dominated workplace may deter females from entering welding training. Also, a male dominated classroom environment may also be a factor in the disparity. Counselor directives at the high school level have traditionally steered females away from College level CTE when advising on college preparatory high school coursework. The welding department and CTE counseling center at BC have been involved in the recruitment and retention of female students through open houses, reserving seats, and partnering females in the classroom environment. Although there has been no considerable growth over the past 5 years, there has not been a decline and female participation remains constant indicating a maximum saturation level may have been reached. The welding department will continue recruitment efforts at current level unless directed otherwise by administration.**

**AGE**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2009-10** |  | **2010-11** |  | **2011-12** | | **2012-13** |  | **2013-14** |  | **2013-14** | |
|  | # | % | # | % | # | % | # | % | # | % | # | % |
| **Age2** |  |  |  |  |  |  |  |  |  |  |  |  |
| 19 & Younger  20-29  30-39  40 & Older | 59  185  71  40 | 17%  52%  20%  11% | 79  192  75  42 | 20%  49%  19%  11% | 62  181  66  31 | 18%  53%  19%  9% | 67  169  66  32 | 20%  51%  20%  10% | 72  182  52  28 | 22%  54%  16%  8% | 6,494  13,191 3,315  2,528 | 25%  52%  13%  10% |

**Trend data for age in welding has remained consistent over the past five years in regards to age. In addition, the data is consistent with College wide data.**

1. Changes in enrollment (headcount, sections, course enrollment and productivity).

# Course Enrollments

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **2009-10** | **2010-11** | **2011-12** | **2012-13** | **2013-14** | **Trendlines** |
| **Enrollment5** |  |  |  |  |  |  |
| **First Day** |  |  |  |  |  |  |
| Total First Day  *Traditional*  *Distance Ed* | 874  *874*  *-* | 797  *797*  *-* | 828  *828*  *-* | 822  *822*  *-* | 837  *837*  *-* |  |
| **Census Day** |  |  |  |  |  |  |
| Total Census Day  *Traditional*  *Distance Ed* | 813  *813*  *-* | 780  *780*  *-* | 753  *753*  *-* | 774  *774*  *-* | 902  *902*  *-* |  |
| **Students/Section6** |  |  |  |  |  |  |
| Total  *Traditional*  *Distance Ed* | 20  20 - | 18  18 - | 20  20 - | 20  20 - | 21  21 - |  |

**The total number of sections and number offered by the welding program have remained fairly constant over the past 5 years. There was a slight decline from 2009-10 to 2010-11 year from 874 to 797. This was due to welding instructors deciding to decrease overload class assignments and devote energies to other aspects of the welding program like recruitment, curriculum changes, and facility improvement.**

1. Success and retention for face-to-face, as well as online/distance courses.

**There has been no significant changes in success/retention rates for welding. However, we have seen a gradual increase over the past year. Success has increased from 80% in 2012-13 to 84% in 2013-14. In addition, retention has also risen from 92% in 2012-13 to 95% in 2013-14. This increase reflects a focus placed by faculty on completion of Certificates of Achievement. Certificates are advertised heavily in all classes and students have responded by completing more classes and applying for Certificates when they complete the required courses. Certificates have been advertised as “mini-diplomas” that will enhance a student’s Resume’ after they exit the program. Finally, both success/retention are above the College wide average.**

**V. Progress on Program Goals:**

1. 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**  **(if applicable)** |
| 1. To develop and conduct Welding classes at Delano/ RFK. | 1: Student Success  2: Communication  3: Facilities & Infrastructure  4: Oversight & Accountability  5: Integration  6: Professional Development | Completed:  \_\_\_\_\_\_\_\_\_\_ (Date)  Revised: \_\_\_\_\_\_\_\_\_\_ (Date)  Ongoing: \_\_\_\_\_\_\_\_\_\_ (Date) |  |
| 1. Create JSA for Delano / RFK | 1: Student Success  2: Communication  3: Facilities & Infrastructure  4: Oversight & Accountability  5: Integration  6: Professional Development | Completed:  \_\_\_\_\_\_\_\_\_\_ (Date)  Revised: \_\_\_\_\_\_\_\_\_\_ (Date)  Ongoing: \_\_\_\_\_\_\_\_\_\_ (Date) |  |
| 1. Implement 4 new welding sessions for Delano / RFK | 1: Student Success  2: Communication  3: Facilities & Infrastructure  4: Oversight & Accountability  5: Integration  6: Professional Development | Completed:  \_\_\_\_\_\_\_\_\_\_ (Date)  Revised: \_\_\_\_\_\_\_\_\_\_ (Date)  Ongoing: \_\_\_\_\_\_\_\_\_\_ (Date) | Courses:  Weld 74A, Weld 54A, Weld 55A & Weld 55B |
| 1. AWS CWI Certifications and Membership | 1: Student Success  2: Communication  3: Facilities & Infrastructure  4: Oversight & Accountability  5: Integration  6: Professional Development | Completed:  \_8-25-14\_\_\_ (Date)  Revised: \_\_\_\_\_\_\_\_\_\_ (Date)  Ongoing: \_\_\_\_\_\_\_\_\_\_ (Date) |  |

1. New or revised goals (if applicable)

|  |  |  |
| --- | --- | --- |
| **New/Replacement Program Goal** | **Which institutional goals from the Bakersfield College Strategic Plan will be advanced upon completion of this goal? (select all that apply)** | **Anticipated Results** |
|  | 1: Student Success  2: Communication  3: Facilities & Infrastructure  4: Oversight & Accountability  5: Integration  6: Professional Development |  |

**VI. Curricular Review (Instructional Programs only):**

1. Review of Course Information:
   * Column A list all of the courses associated with the degree.
   * Column B list the Fall term the review process will be started for ongoing compliance.
   * Column C list the compliance due date.
   * Column D list any changes to courses with regard to distance education.
   * Column E list corresponding C-ID descriptors if available. <http://www.c-id.net/>

**\*\*Dates listed should reflect a five year cycle allowing for one year of review**

**to maintain ongoing compliance.\*\***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **A. Course** | **B. Fall Term Review will be Submitted** | **C. Compliance Due Date** | **D. Distance Education Changes** | **E. C-ID Descriptors Available** |
| Weld 1a | 2016 | 1/1/2017 | NA | NA |
| Weld 1b | 2016 | 1/1/2017 | NA | NA |
| Weld 53a | 2016 | 1/1/2017 | NA | NA |
| Weld 53b | 2018 | 4/1/2019 | NA | NA |
| Weld 54a | 2018 | 4/1/2019 | NA | NA |
| Weld 54b | 2019 | 2/1/2020 | NA | NA |
| Weld 55ab | 2018 | 4/1/2019 | NA | NA |
| Weld 55cd | 2016 | 2/1/2017 | NA | NA |
| Weld 55ef | 2016 | 2/1/2017 | NA | NA |
| Weld 65ab | 2019 | 2/1/2020 | NA | NA |
| Weld 74a | 2018 | 4/1/2019 | NA | NA |
| Weld 74b | 2016 | 1/1/2017 | NA | NA |
| Weld 81 | 2016 | 4/1/2019 | NA | NA |
| Weld 90 | Deleted 2006 | 9/1/2012 | NA | NA |

1. Review of Program Information:

Is the program information housed in CurricUNET accurate? (Considerations: changes in course(s) names and/or suffixes as well as additions/deletions of courses). If not, then a program modification needs to be started in CurricUNET to reflect the necessary changes. Explain the requested changes below.

**The pre-requisites for WELD 55AB is currently 53A only. We have launched a modification that will list 74A as an alternative pre-requisite. However, faculty feels the need to add 53B as another alternative pre-requisite. Enrollment for 55AB is low due to only one option for the pre-requisite. Alternative pre-requisites will provide more qualified students and will better serve the student population and community.**

Is the program and course listing information in the current catalog accurate? If not, list the requested

changes below. Catalog information should reflect what is in CurricUNET.

**The current catalog is correct.**

1. Student Education Plan (SEP) Pathway(s) uploaded to “Attached Files” in CurricUNET.

If applicable, SEP Pathway with CSU Breadth indicated? **No**

If applicable, SEP Pathway with IGETC indicated? **No**

If applicable, SEP Pathway with BC General Education indicated? **No**

**\*\*Please ensure that the information housed in CurricUNET and the current catalog match. \*\***

1. If applicable, provide a description of the program’s future adoption of C-ID descriptors and Associate Degree for Transfer (ADT) or Model Curricula.

**Not Applicable**

**VII. Conclusions and Findings:**

Present any conclusions and findings about the program.

**VIII. Attachments (place a checkmark beside the forms listed below that are attached):**

[Faculty Request Form](http://committees.kccd.edu/bc/committee/programreview)  [Classified Request Form](http://committees.kccd.edu/bc/committee/programreview)  [Budget Change Request Form](http://committees.kccd.edu/bc/committee/programreview)

Professional Development  [ISIT Form](http://committees.kccd.edu/bc/committee/programreview)  [M & O Form](http://committees.kccd.edu/bc/committee/programreview)

[Best Practices Form](http://committees.kccd.edu/bc/committee/programreview) **(Required)**  Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**IX. Certificates of Achievement:**

Programs with stackable certificates fill out the following form.

Stand alone certificates fill out the entire Annual Update.

**VII. Conclusions and Findings:**

**The welding department feels that the data shows growth and success in the areas of enrollment, retention, and student success. However, the data shows the need to change efforts to increase female enrollment. The data reveals female enrollment has flat-lined, showing no increase over the past year. The welding faculty plans to develop new strategies to recruit and retain female students. Although not reflected in the current data, the enrollment for welding will increase dramatically this year and following years with the administrative directive to create a welding program in Delano. This increase in enrollment and expansion to Delano will place an extreme burden for the purchase of equipment to replace BC equipment that is shifted to Delano.**

**VIII. Attachments (place a checkmark beside the forms listed below that are attached):**

[Faculty Request Form](http://committees.kccd.edu/bc/committee/programreview)  [Classified Request Form](http://committees.kccd.edu/bc/committee/programreview) X [Budget Change Request Form](http://committees.kccd.edu/bc/committee/programreview)

X Professional Development  [ISIT Form](http://committees.kccd.edu/bc/committee/programreview) X [M & O Form](http://committees.kccd.edu/bc/committee/programreview)

X [Best Practices Form](http://committees.kccd.edu/bc/committee/programreview) **(Required)**  Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**IX. Certificates of Achievement:**

Welding has stand alone Certificates

**Certificate Form**

**Annual Update 2014-15**

**Name of Program:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Certificate Name** | **JSC** | **CA** | **Is the certificate stackable?** | **Is the certificate a**  **stand alone program?** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Please discuss the following questions regarding all area Certificates of Achievement (CA):

1. List certificates that are proposed for *addition*.
2. List certificates that are proposed for *deletion*.
3. For this CA, what are the SOC codes (Occupational Titles and codes) that students who complete the CA will be able to obtain entry-level employment in, and what are the projected annual openings and median salary for each occupational title? You can use your latest Program Review data for your response.
4. For this CA, what process was followed to ensure the required and possible elective courses were adequate for entry level employment (such as advisory committee input, surveys, industry feedback, licensing or accreditation agencies)? How often do/will you re-examine the effectiveness of certificate requirements?
5. What is your annual completion target (number of certificates awarded) for this CA? What was the number of awards in this CA for each of the past three years? Based on your results, what changes could you make in your program to meet or continue to exceed your target (such as course content, scheduling/sequence, outreach, instructional strategies)?
6. Based on what you know about your area, what emerging/potential institutional factors (internal) and industry factors (external) will impact this certificate? How are you planning to incorporate these factors in your planning and evaluation of this certificate?