**Bakersfield College**

**Program Review – Annual Update**

**I. Program Information:**

Program Name: Industrial Technology (Engineering and Industrial Technology Department)

Program Type:  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.

Program Description: Describe how the program supports the Bakersfield College Mission.

There are several Industrial Technology courses, along with a number of Associate of Science degrees with options within the disciplines that comprise the Industrial Technology area. The current courses that are identified as Industrial Technology (INDT) include: INDT B10 (Occupational Readiness), INDT B275 (Special Problems in Automotive), and INDT B271 (Special Problems in Welding). The Occupational Readiness course meets the educational planning requirements for certificates and degrees, as well as providing skill areas such as measurement, job-seeking skills, portfolio creation, industry awareness, math review, and other topics. The course uses a text call “High Performance Manufacturing”, which is well-suited for our Industrial Technology students, and was created by the Manufacturing Skills Standards Council (MSSC), a highly regarded industry advocacy group. Our Special Problems courses provide an opportunity for students to pursue advanced-level experiences in the discipline, as well as organizing and managing projects, teaching and assisting other students in the discipline, and performing lab activities that the coursework does not have time to cover. These Special Problems courses are offered as no-load for the faculty that offer them, providing benefit to the students at no direct cost to the College.

Unlike other colleges that have technical coursework included in Industrial Technology, such as Industrial Maintenance at Porterville College, our discipline areas at Bakersfield College are well-developed, which allows technical coursework to be offered in the individual disciplines. However, the INDT B10 course was created to serve all Industrial Technology disciplines, without requiring each discipline to offer similar courses. This has proved cost-effective to the College, as the INDT B10 sections are always fully-enrolled.

Since CTE is an essential part of the Community College mission, and since student success, retention, completion, and placement are all vital components of the College mission as well, our Industrial Technology (INDT) courses are designed to advise students and develop skills for success among the students enrolled in these courses.

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

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

Indirectly, our outcomes assessments were used to reinforce the fact that our lab activities, facilities, and

maintenance of our equipment are all components of a successful program. We recognize that the costs

associated with all of these items increase yearly due to inflation and higher material costs. Therefore, we

have requested an increase in a number of budget categories.

Due to the college scorecard recognizing only degrees and Certificate of Achievements, we will need to investigate the amount of work needed to turn some of our Job Skills Certificates into Certificates of Achievement in order to increase our department’s completion rates for the scorecard indicators.

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

Indirectly, our outcomes assessments were used to reinforce the fact that our lab activities, facilities, and maintenance of our equipment are all components of a successful program. We recognize that the costs associated with all of these items increase yearly due to inflation and higher material costs. Therefore, we have requested an increase in a number of budget categories

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

The student learning outcomes of various programs of the EIT department integrate the institutional learning objectives throughout the curriculum in the context of each industry applying the respective technologies.

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

Similar to section “C” above, The student learning outcomes of various programs of the EIT department integrate the program learning objectives throughout the curriculum in the context of each industry applying the respective technologies.

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

As a department, Engineering and Industrial Technology has seen significant improvements, including the addition of new faculty members (expansion) in the welding and electronics programs. Individual changes among the disciplines are addressed in their APR’s.

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

We continue to have, as a department, the same challenges with resources, staffing, equipment updating/replacement, the level of student academic preparation, and the effect of the cyclical nature of the economy on our funding and enrollment. However, we have improved in several ways, including addressing some equipment/technology issues through C6, STEM, and Chevron grant funding, embedded remediation/basic skills instruction through the C6 grant, and other initiatives on the campus, including the Critical Academic Skills workshops.

We have also benefited from an improved economy, particularly in the construction and technical/mechanical services areas.

An area of concern is the District’s insistence that VTEA funding is directed to personnel, and equipment funding that is viable to maintaining current industry expectations is no longer supported through VTEA funding. We believe that continuing on this path will not provide the core indicator improvements that are needed to justify the level of VTEA funding that we currently receive.

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

The sole full-time instructor for the manufacturing technology program was recently elected as department chair which could affect the offerings of MFGT B1AB, required for the AS Industrial Technology.

**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)
3. Professional Development (Professional Development form)
4. 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.
5. Provide rationale for future professional development opportunities and contributions that your program can make.
6. 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?

1. If yes, how has the outcome contributed to student success?
2. If no, how will your facilities request contribute to student success?

This question will be answered in each program’s APR.

1. 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).)
2. Has your program received new or repurposed technology in this cycle?
   1. If yes, how has this technology contributed to student success?
   2. If no, how will your new or repurposed technology request contribute to student success?

This question will be answered in each program’s APR.

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.

A Budget Change Request form will be submitted with each program’s APR.

**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).
2. Changes in enrollment (headcount, sections, course enrollment and productivity).
3. Success and retention for face-to-face, as well as online/distance courses.
4. Other program-specific data that reflects significant changes *(please specify or attach).*

The program data supplied to us for Industrial Technology only shows the enrollment in the three INDT courses, not the total enrollment in the 09 TOP code. Therefore, less than 200 students in our department were examined by the data. This is not a large enough representative sample for which to determine trends and performance.

However, the individual disciplines within Industrial Technology have performed their trend data analysis.

In the future, we will be looking at those individual analyses and determining the implications on our department as a whole.

**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. Continue to coordinate with local industry through the work of advisory boards and other collaborative efforts.  [Continued goal from last year. Changes in curriculum were either made or proposed in response to feedback by  advisors. Evaluation of the change will take place over the next several years] | 1: Student Success  2: Communication  3: Facilities & Infrastructure  4: Oversight & Accountability  5: Integration  6: Professional Development | Completed:  \_\_\_\_\_\_\_\_\_\_ (Date)  Revised: \_\_\_\_\_\_\_\_\_\_ (Date)  Ongoing: \_\_\_\_\_\_\_\_\_\_ (Date) | This is an ongoing process. All Industrial Technology disciplines use an Advisory Committee structure to help  them determine equipment needs, curriculum changes, student placement, and other important issues.  Individual program responses to this goal were addressed on those program’s APR’s. |

|  |  |  |  |
| --- | --- | --- | --- |
| **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)** |
| **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)** |
| 2. Continue to coordinate with local industry through the work of advisory boards and other collaborative efforts.  [Continued goal from last year. Changes in curriculum were either made or proposed in response to feedback by  advisors. Evaluation of the change will take place over the next several years] | 1: Student Success  2: Communication  3: Facilities & Infrastructure  4: Oversight & Accountability  5: Integration  6: Professional Development | Completed:  \_\_\_\_\_\_\_\_\_\_ (Date)  Revised: \_\_\_\_\_\_\_\_\_\_ (Date)  Ongoing: \_\_\_\_\_\_\_\_\_\_ (Date) | This is an ongoing process. Individual program responses to this goal were addressed on those program’s APR’s. |

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** |
| MFGT B1AB | 2016 | 2/1/2017 | None | None |
| ELET B1 | 2017 | 2/1/2018 | None | None |
| INDR B10 | 2018 | 1/1/2019 | None | None |
| INDR B11 | 2018 | 1/1/2019 | None | None |
| INDR B20A | 2018 | 1/1/2019 | None | None |
| INDT B10 | 2016 | 3/1/2017 | None | None |
| WELD B1A | 2016 | 1/1/2017 | None | None |
| WELD B1B | 2016 | 1/1/2017 | None | None |
| INDR B20B | 2018 | 1/1/2019 | None | None |
| MFGT B2 | 2016 | 2/1/2017 | None | None |
| WOOD B2 | 2015 | 12/1/2016 | None | None |
| AUTO B1AB | 2018 | 5/3/2019 | None | None |
| CNST B1 | 2016 | 1/1/2017 | None | None |
| COMP B5 | 2018 | 1/1/2019 | None | None |

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.

\_\_\_INDR B10 and INDR B11 need to be deleted and replaced with INDR B12\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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.

\_ INDR B10 and INDR B11 need to be deleted and replaced with INDR B12\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

If applicable, SEP Pathway with CSU Breadth indicated? Yes or No

If applicable, SEP Pathway with IGETC indicated? Yes or No

If applicable, SEP Pathway with BC General Education indicated? Yes or 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.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**VII. Conclusions and Findings:**

Present any conclusions and findings about the program.

Industrial Technology as a “program” is very limited because we only provide three courses and one degree (Industrial Technology, General). However, Industrial Technology includes the following disciplines: Automotive, Construction, Electronics, Industrial Drawing, Manufacturing, Welding, and Woodworking. Each of these disciplines is a strong and fully-functional program.

We need to bring back the Water Technology (Water and Wastewater Treatment) program. This program was discontinued several years ago due to budget cuts, but is highly needed by industry. It is also a cost-effective program in terms on generating FTES. The adjunct instructors that teach the courses are currently working on Curricunet updating of course outlines.

INDT B10, Occupational Readiness, needs to be re-tooled so more students can participate in the course even though the faculty resources are limited. We will work on this challenge during this school year.

The eight Industrial Technology degrees need to be restructured in a way that addresses these needs: There are not common core classes throughout the disciplines, so each discipline needs to maintain the same course requirements as are currently defined.

The name of the degree (AS, Industrial Technology) can be the same regardless of the Industrial Technology discipline pursued by the student (eliminate the “option” from the name). This would combine the number of awards in each discipline into one quantity.

We would need to have a way of allowing students to pursue multiple disciplines through a “general” option of possible courses.

Institutional Research should prepare a report that combines all 09 TOP codes, which will allow us to look at Industrial Technology trends and outcomes together.

It would be beneficial to train all Engineering and Industrial Technology faculty and adjuncts on the “best practices” developed and used in the various grants and initiatives

**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.

**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?