

# Bakersfield College

## Program Review – Annual Update 2015

**I. Program Information:**

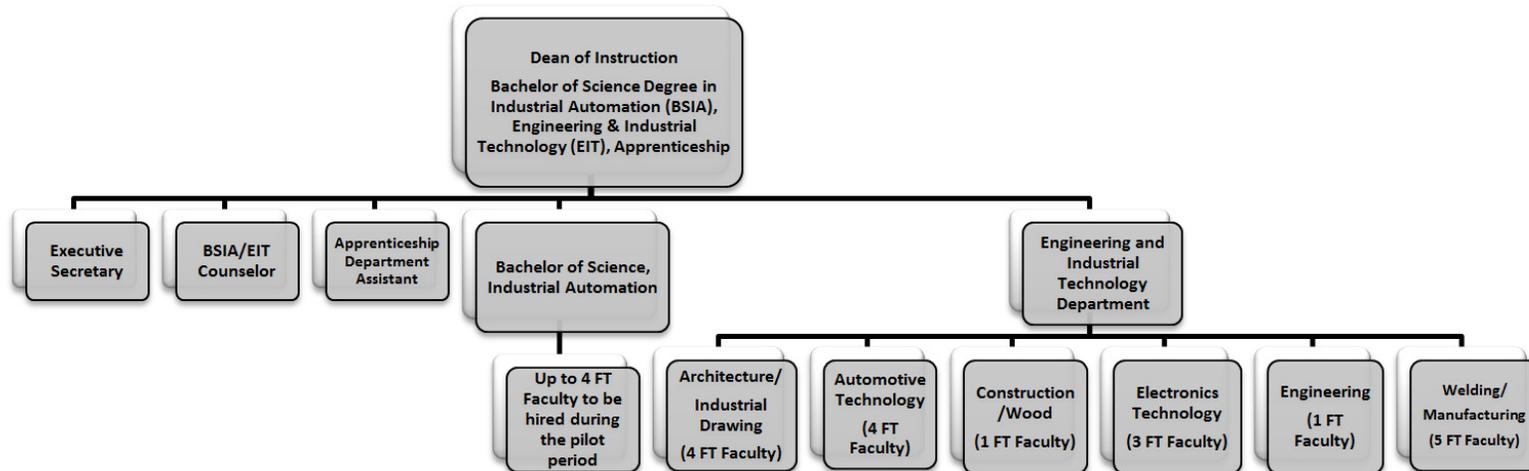
Program Name: *Dean of Instruction Office Unit, Bachelor of Science in Industrial Automation Degree Program, Engineering and Industrial Technology and Apprenticeship (BSIA/EIT/APPR)*

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 selection of Bakersfield College to participate in the California Community College Baccalaureate Degree Program prompted an administrative reorganization at the college. The dean responsible for this area was reassigned from a unit managing the Biology, Engineering & Industrial Technology, Math, and Physical Science Departments, STEM\* and MESA programs to managing the Engineering & Industrial Technology department, Apprenticeship program, Bachelor of Science in Industrial Automation degree program, STEM grant project director, and the CCPT II grant lead. The resulting change is reflected in the organizational chart shown below.



\*STEM is a combination of the BSIA/EIT/APPR and Sciences and Math Units.

The BSIA/EIT/APPR Unit supports the instructional activities and programmatic planning in each of the programs within the Engineering and Industrial Technology Department, Apprenticeship, and the Bachelor of Science Degree Program in Industrial Automation. Support includes managing faculty and staff evaluations, enrollment management strategies, the development and monitoring of budgets, and the facilitation of effective communication within the unit.

**Program Mission Statement:**

As a unit of Academic Affairs, the mission of the Office of the Dean of the Bachelor of Science in Industrial Automation (BSIA), Engineering and Industrial Technology (EIT), and Apprenticeship (APPR) is to provide leadership in the development and evaluation of instructional programs, academic support services, faculty, and curriculum to ensure integrity and excellence of academics in these disciplines at Bakersfield College.

**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.

*Based on Program Goals outlined in the Annual Update for the STEM-IT Unit.*

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. Provide administrative support for implementation of two new grants that may potentially be funded this year – Title V ( <i>Making it Possible</i> – Bakersfield College’s Pathway to Equitable Student Success for Underprepared Students in Kern County) and C <sup>6</sup> Consortium-Round 4.	<input checked="" type="checkbox"/> 1: Student Learning <input checked="" type="checkbox"/> 2: Student Progression and Completion <input type="checkbox"/> 3: Facilities <input type="checkbox"/> 4: Oversight and Accountability <input type="checkbox"/> 5: Leadership and Engagement	<input type="checkbox"/> Completed: _____ (Date) <input checked="" type="checkbox"/> Revised: _____ (Date) <input type="checkbox"/> Ongoing: _____ (Date)	Title V grant awards not yet announced and did not receive the C6 grant award.

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
2. In the administration of the STEM grant, support the planning and development of three showcase labs for Biology and Geology, a 3D Computational Computer Lab, and a STEM Success Center.	<input checked="" type="checkbox"/> 1: Student Learning <input type="checkbox"/> 2: Student Progression and Completion <input checked="" type="checkbox"/> 3: Facilities <input checked="" type="checkbox"/> 4: Oversight and Accountability <input type="checkbox"/> 5: Leadership and Engagement	<input type="checkbox"/> Completed: _____ (Date) <input type="checkbox"/> Revised: _____ (Date) <input checked="" type="checkbox"/> Ongoing: _____ (Date)	<p>Geology and 3D Computational labs were completed. Biology lab and Aera STEM Success Center will be completed this academic year.</p>
3. Identify resources to support the development of an Industrial Technology program at the Delano Center.	<input checked="" type="checkbox"/> 1: Student Learning <input type="checkbox"/> 2: Student Progression and Completion <input checked="" type="checkbox"/> 3: Facilities <input checked="" type="checkbox"/> 4: Oversight and Accountability <input checked="" type="checkbox"/> 5: Leadership and Engagement	<input type="checkbox"/> Completed: _____ (Date) <input type="checkbox"/> Revised: _____ (Date) <input checked="" type="checkbox"/> Ongoing: _____ (Date)	<p>Received grant funding through the BC Foundation and the CCPT II grant. Reassigned a full-time welding faculty to the Delano Center who collaborated with the local high schools and community to build a welding program. Robert F. Kennedy High School provided facilities and BC provided equipment for welding courses.</p> <p>Adjunct faculty staffed sections of Introduction to Engineering and Design and Introduction to Electronics at the Delano Center.</p>
4. Support the development of the curriculum in a baccalaureate degree within the Industrial Technology programs.	<input checked="" type="checkbox"/> 1: Student Learning <input checked="" type="checkbox"/> 2: Student Progression and Completion <input type="checkbox"/> 3: Facilities <input type="checkbox"/> 4: Oversight and Accountability <input checked="" type="checkbox"/> 5: Leadership and Engagement	<input type="checkbox"/> Completed: _____ (Date) <input type="checkbox"/> Revised: _____ (Date) <input checked="" type="checkbox"/> Ongoing: _____ (Date)	<p>Almost all course outlines are completed and in the Curriculum Committee process.</p>

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
1. Complete first phase of BSIA implementation and support processes.	<input checked="" type="checkbox"/> 1: Student Learning <input checked="" type="checkbox"/> 2: Student Progression and Completion <input type="checkbox"/> 3: Facilities <input type="checkbox"/> 4: Oversight and Accountability <input type="checkbox"/> 5: Leadership and Engagement	Have successful processes in place for the first junior class in Fall, 2016.
2. Serve as the project director for the last year of the HSI STEM and the CCPT II grants.	<input checked="" type="checkbox"/> 1: Student Learning <input checked="" type="checkbox"/> 2: Student Progression and Completion <input checked="" type="checkbox"/> 3: Facilities <input checked="" type="checkbox"/> 4: Oversight and Accountability <input checked="" type="checkbox"/> 5: Leadership and Engagement	Meet grant goals including facilities renovations to support unique teaching and student learning pedagogies. Curricular alignment and dual enrollment initiatives with KHSD for CTE pathways.
3. Seek additional federal grant funding and industrial donation opportunities.	<input checked="" type="checkbox"/> 1: Student Learning <input type="checkbox"/> 2: Student Progression and Completion <input checked="" type="checkbox"/> 3: Facilities <input type="checkbox"/> 4: Oversight and Accountability <input type="checkbox"/> 5: Leadership and Engagement	Submitted applications for next round of STEM grant funding opportunity, collaborative NSF grants with CSUB, and industry donations.
4. Guide a curricular reorganization within the EIT department.	<input checked="" type="checkbox"/> 1: Student Learning <input checked="" type="checkbox"/> 2: Student Progression and Completion <input type="checkbox"/> 3: Facilities <input type="checkbox"/> 4: Oversight and Accountability <input type="checkbox"/> 5: Leadership and Engagement	Clearer pathways for students will be communicated to students and increased collaboration among faculty, industry and feeder schools.

**III. Trend Data Analysis: N/A**

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

- A. Changes in student demographics (gender, age and ethnicity). **N/A**
- B. Changes in enrollment (headcount, sections, course enrollment and productivity). **N/A**
- C. Success and retention for face-to-face, as well as online/distance courses. **N/A**
- D. Changes in the achievement gap and disproportionate impact (Equity). **N/A**
- E. Other program-specific data that reflects significant changes (*please specify or attach*). All Student Affairs and Administrative Services should respond.

In 2014-2015, Apprenticeship enrolled 177.7 FTEs, a 150% increase over the previous four years. This program is fully staffed with adjunct faculty at a negligible FTEF. Engineering and Industrial Technology enrolled 610.5 FTEs, a 10% increase over the previous four years. Average FTEF is at 27.4 with 67% full-time contractual and 33% adjunct, overload, and summer. The BSIA is in its infancy with hiring processes in place for one full time faculty, BSIA/EIT Counselor and Executive Secretary. Currently, the BSIA can boast 0 FTEs & 0 FTEF.

During the last academic year, the adjunct STEM Counselor met with 897 STEM students which included incoming and continuing students. There were 400 Student Educational Plans (SEPs) completed: 172 completed in ENGR B47, Introduction to Engineering and Design; 35 STEM SEPs completed at the local High School Visits during the Spring 2015 semester; and the remaining 193 STEM (including engineering) students completed SEPs in consultation with the STEM Counselor. With the reorganization, advising, counseling and educational planning activities for the engineering students within the STEM population in addition to the BSIA will be facilitated by the BSIA/EIT Counselor.

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

- A. How did your outcomes assessment results inform your program planning? Use bullet points to organize your response. **N/A**
- B. How did your outcomes assessment results inform your resource requests? The results should support and justify resource requests. **N/A**
- C. How do course level student learning outcomes align with program learning outcomes? Instructional programs can combine questions C and D for one response (SLO/PLO/ILO). **N/A**
- D. How do the program learning outcomes or Administrative Unit Outcomes align with Institutional Learning Outcomes? All Student Affairs and Administrative Services should respond.

Institutional Learning Outcomes	Administrative Unit Outcomes
Think critically and evaluate sources and information for validity and usefulness.	<ul style="list-style-type: none"> <li>• Manage the faculty evaluation and improvement process.</li> <li>• Facilitate the evaluation of current and the development of new academic programs and courses</li> </ul>
Communicate effectively in both written and oral forms.	<ul style="list-style-type: none"> <li>• Implement and monitor mechanisms that facilitate communication within the unit and college-wide</li> </ul>
Demonstrate competency in a field of knowledge or with job-related skills.	<ul style="list-style-type: none"> <li>• Develop and manage a budget that supports the needs of the unit while maintaining the financial integrity of the college</li> </ul>
Engage productively in all levels of society – interpersonal, community, the state and the nation, and the world	<ul style="list-style-type: none"> <li>• Create and sustain an environment that fosters positive customer service experiences</li> </ul>

**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. **TBD**

Newly formed unit with no full-time office staff hired yet. Strengths will need to be identified this year.

- F. Describe *any significant changes* in your program’s weaknesses since last year. **TBD**

Newly formed unit with no full-time office staff hired yet. Weaknesses will need to be identified this year.

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

Delayed hiring processes which contribute to lack of support for the unit.

**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.

Positions approved for this year are in the hiring process. No other requests will be made for this office next year.

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.

Since this unit is not yet staffed, cannot fully report on professional development. However, the adjunct STEM Counselor regularly attends the California Engineering Liaison Council, a statewide articulation group, and other professional development conferences such as the Council for Opportunity in Education.

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

B. Facilities:

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

Newly renovated office space provides centralized services for students and faculty the unit supports.

2. How will your Facilities Request for next year contribute to student success? **N/A**

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

We are requesting a larger copier in our office. The current copier was used to support limited faculty needs. Now that the unit has expanded, there is a need for a copier to serve the high output needs of the apprenticeship program and office staff. This will allow for more efficient support of the unit, thus providing better customer service to our student population.

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

Office technology is effectively used to support Unit activities.

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

Since this is a new unit, there is no budget for the Unit Dean. We are requesting budgetary support for the Dean Office.

#### **VI. Conclusions and Findings:**

Present any conclusions and findings about the program. This is an opportunity to provide a brief abstract/synopsis of your program's current circumstances and needs.

Since this is a new administrative unit, the 2014-15 accomplishments of the Dean for the STEM-IT Unit are included along with the WorkPlan for the Dean of this new unit.

**Accomplishments  
July 2014 to June 2015  
Academic Affairs  
*Prepared by Liz Rozell***

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- ✓ Worked with the Baccalaureate team to submit a successful application to be a pilot college for a Baccalaureate degree in Industrial Automation.
- ✓ Assisted in securing \$500,000 from Aera Energy to build the Aera STEM Success Center and worked with Facilities to design the center.
- ✓ Supported and encouraged curricular redesign.
  - Alignment of engineering courses to the state C-IDs. This included significant redesign of some engineering courses and addition of one course.
  - Alignment of biology and chemistry C-IDs in preparation for developing AS-T degrees to align with recently approved TMCs.
  - Redesigned Engineering Technology A.S. Degree for technicians rather than transfer.
  - Electronics curriculum was redesigned for hybrid delivery.
  - Beginning stages of developing an accelerated algebra prerequisite course to statistics.
- ✓ Supported the successful implementation of an Industrial Technology program at the Delano Campus including a wide range of welding, electronics and engineering courses.
- ✓ Collaborated with industry and other academic organizations.

- Worked with Chevron to expand funding for STEM areas to include Planetarium program support and a summer Project Lead the Way Middle School Camp.
  - Participated with KCCD and KHSD in the development of grant activities for the Career Pathways Trust Grant which was recently funded.
- ✓ As the HSI STEM Grant Project Director, provided leadership in the development of the Chemistry STEM “Showcase Labs” and the 3D Computational Lab.
- ✓ Served on the Strategic Directions Core Team to develop the Strategic Direction document for the next three years.

**Work Plan**  
**July 2015 to June 2016**  
**Academic Affairs**  
*Prepared by Liz Rozell*

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- ✓ Implement the Baccalaureate degree in Industrial Automation
  - Complete curriculum development
  - Develop admittance procedures and data collection
  - Coordinate student support services
  - Determine equipment needs and plan facilities renovation
  - AND so much more...
- ✓ Facilitate program redesigns in EIT
  - Automotive programs streamlined and aligned better with ASE
  - Integrated program plan for Construction, Architecture, and Woodworking
  - Support the implementation of the Engineering Model Curricula into the curricular infrastructure of the engineering program
  - Integrated program plan for Manufacturing and Welding
  - Expansion of welding and electronics at Delano
- ✓ Utilize the CCPT2 Grant to form strong CTE pathways with the high schools.
  - Aggressively pursue dual enrollment opportunities and collaborate with KHSD
- ✓ Continue monitoring the final year of the STEM Grant
- ✓ Continue to serve on the Strategic Directions Core Team
- ✓ Provide support in the construction phase of the Aera STEM Success Center
- ✓ Support collaborative initiatives with community partners
  - Serve on the Kern County Science Foundation Board
  - Attend American Society of Civil Engineers local meetings and events.
  - Serve on the PLTW Advisory Board at Frontier HS
  - Network with academic partners from CSUB, Cal Poly San Luis Obispo and the Engineering Liaison Council
  - Attend EIT Advisory Board meetings
  - Attend KEDC events and work with the local WIB
  - Collaborate with industry partners on student success projects, such as Chevron (PLTW activities, scholarship support, Week Zero, etc.)

**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: \_\_\_\_\_