

Bakersfield College 2018-2019 Program Review – Annual Update

Program Name: Industrial Technology

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 AS Industrial technology (General) provides students a variety of fields that will enable them to apply their knowledge in an array of situations.

Instructional Programs only:

- A. List the degrees and Certificates of Achievement the program offers
AS in Industrial Technology (General)
- B. If your program offers both an A.A. and an A.S. degree in the same subject, please explain the rationale for offering both and the difference between the two.
- C. If your program offers a local degree in addition to the ADT degree, please explain the rationale for offering both.

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. Please provide an action plan for each goal that gives the steps to completing the goal and the timeline.

1. Program Goal:

Program Deletion since very few of these degrees have ever been awarded and that the degree does not support any specific career pathway.

List the institutional goals from the Bakersfield College Strategic Plan that will be advanced upon completion of this goal?

Not Applicable

Progress on goal achievement: Delayed.

Status Update – Action Plan and any link to Resource Requests:

2. Program Goal:

List the institutional goals from the Bakersfield College Strategic Plan that will be advanced upon completion of this goal?

(1. Student Learning, 2. Student Progression and Completion, 3. Facilities, 4. Leadership and Engagement)

Progress on goal achievement:

Status Update – Action Plan and link to Resource Requests

B. List new or revised goals (if applicable)

1. Program Goal:

Submitting a proposal to revise the AS program to meet the current and projected need for industrial maintenance technicians. The AS degree has been the BC catalog in its current form since the early 1990's. It is a composite of courses from various programs in the Industrial Technology and the Engineering & systems departments. The catalog description states that in this degree program students “will acquire information, skills, and training in a variety of fields that will enable them to apply their knowledge in an array of situations”. However, the program is not aligned with any specific career pathway or SOC code – typically making relevant LMI a challenge for the Program Review process. The current program is:

	Required Courses	Units
MFGT B1AB	Machine Tool Processes	3
ELET B1	Basic Electronics (DC and AC)	4
INDR B12	Introduction to Drafting and CAD	3
INDR B20A	Computer Aided Drafting and Design	3
INDT B10	Occupational Readiness	3
WELD B1A	Introduction to Oxygen Acetylene Welding and Cutting	2
WELD B1B	Introduction to the Welding Processes	2
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	<u>Electives (3 units) - Choose One</u>	
INDR B20B	Computer Aided Drafting and Design (CAD)	
MFGT B2	CNC Lathe Programming & Operation	
WOOD B2	Furniture and Cabinetmaking	
AUTO B1AB	Introduction to Automotive Technology	
CNST B1	Introduction to Construction	
COMP B5	Introduction to Microsoft Office	

A study of labor market information for Southwest Bakersfield, Delano, and Arvin show a strong need for SOC codes related to industrial maintenance mechanics (49-9041 Industrial Machinery Mechanics, 49-9043 Maintenance Workers-Machinery, 49-9069 Precision Instrument and Equipment Repairers, and 49-9071 Maintenance and Repair Workers). Included with this program review is a PDF of the O*Net description of 49-9071. Welding and basic electronics have been offered at the Delano Center for years with the intention of supporting each of these programs independently. Revising the AS Industrial Technology program in alignment with the Maintenance and Repair Worker description could package these courses together, along with some industrial safety classes, to better meet the training needs of local industry and create employment opportunities. The proposed revised program would consist of these courses:

AS Industrial Technology		Units
BSAD B5	MS Office	3
ELET B1A	DC Circuits	3
ELET B1B	AC Circuits	3
ELET B70	Mechanical Systems	3
OSRM B10	Occupational Safety	3
OSRM B20	Environmental Health & Hazardous Materials	3
WELD B1A	Introduction to Oxygen Acetylene Welding and Cutting	2
WELD B1B	Introduction to the Welding Processes	2
WELD B53A	Shielded Metal Arc Welding	3
WELD B54A	Blueprint Reading for Welders & Machinists	3
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The proposed new program EMSI labor market information for the above SOC codes for 2013-18 and 2018-23 are included with this Annual Update. Growth and wage information are listed in tables below.

Growth				
	4,602	4,790	188	4.1%
	2018 Jobs	2023 Jobs	Change (2018-2023)	% Change (2018-2023)
Occupation	2018 Jobs	2023 Jobs	Change	% Change
Industrial Machinery Mechanics (49-9041)	1,197	1,207	10	1%
Maintenance Workers, Machinery (49-9043)	356	366	10	3%
Precision Instrument and Equipment Repairers, All Other (49-9069)	29	29	0	0%
Maintenance and Repair Workers, General (49-9071)	3,019	3,187	168	6%

Percentile Earnings			
	\$15.42	\$21.59	\$28.70
	25th Percentile Earnings	Median Earnings	75th Percentile Earnings
Occupation	25th Percentile Earnings	Median Earnings	75th Percentile Earnings
Industrial Machinery Mechanics (49-9041)	\$21.89	\$28.20	\$34.54
Maintenance Workers, Machinery (49-9043)	\$14.29	\$21.54	\$27.76
Precision Instrument and Equipment Repairers, All Other (49-9069)	\$27.28	\$32.81	\$38.82
Maintenance and Repair Workers, General (49-9071)	\$13.82	\$18.83	\$25.73

List the institutional goals from the Bakersfield College Strategic Plan that will be advanced upon completion of this goal?
 (Student Learning and Student Progression and Completion)

Progress on goal achievement: New Goal

Status Update – Action Plan and link to Resource Requests:

2. Program Goal: Develop a new Maintenance Mechanic Certificate of Achievement.

This program would be stackable into the revised AS Industrial Technology. The proposed program would possibly consist of the following courses:

Maintenance Mechanic CA (New)		Units
ELET B70	Mechanical Systems	3
OSRM B10	Occupational Safety	3
WELD B1A	Introduction to Oxygen Acetylene Welding and Cutting	2
WELD B1B	Introduction to the Welding Processes	2
WELD B53A	Shielded Metal Arc Welding	3
WELD B54A	Blueprint Reading	3
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List the institutional goals from the Bakersfield College Strategic Plan that will be advanced upon completion of this goal?

(Student Learning and Student Progression and Completion)

Program Analysis:

Take a look at your trend data (all programs should have some form of data that is used to look at changes over time). *All programs will answer the following questions unless otherwise indicated.*

1. Please report on any unexpected changes or challenges that your program encountered this cycle:
None to report.
2. How does your trend data (or other data your area collects) impact your decision-making process for your program?

The trend data reflects enrollments in individual courses such as INDT B10 “Occupational Readiness” and the program-specific independent project courses (INDT B271-INDT B275).

3. Evidence of Department Dialog of data
 - o If you have had time to review and discuss your program’s data with members of your department, attach documentation of your discussion. Documentation can come in the form of minutes from meetings or retreats, email dialog or any other ways that show substantive discussion.
4. Were there any changes to student demographics (age, gender, or ethnicity) for the past cycle?
No
5. Were there any changes to student success and retention rates for face-to-face and online courses? (instructional only)
There are no online courses in this program.

6. Equity gaps

- Please look for large differences, or gaps, between top performing groups and others. Consider how you could identify the reasons behind these gaps, and if there changes that could be made to reduce them. For in depth review of equity issues, and on changes that are being made campus-wide, please refer to the current [Bakersfield College Student Equity Plan](#).

The success and retention for all groups closely follows that of the whole college.

7. Please describe any recent achievements of your department, including but not limited to faculty who have won awards or distinctions, new projects your department has implemented, professional development work, professional conference presentations or recently published work.
8. The college has embarked on significant efforts such as **Guided Pathways**, **affinity groups** and **completion coaching communities** to improve the success and completion rates of our students. Please describe what your program/department/office is doing to contribute to these efforts.

INDT B10 “Careers in Industrial Technology” improves success and completion rates by equipping students with knowledge and tools to set educational and professional goals.

The AS program is part of the Industrial & Transportation Technology (ITT) Pathway. Revising the program as proposed in the Goals section above would provide an additional segment to the ITT Pathway that could be offered at the Main Campus and Rural locations.

9. Explain your role if you are involved in Dual Enrollment, Inmate Education, or Rural Initiatives.

Analysis of Received Resources from Previous Cycle

Discuss the type of resources you received and their Impact on program effectiveness?

Facilities:

If your program received a building remodel or renovation, additional furniture or beyond routine maintenance, please explain how this request or requests impacts your program and helps contribute to student success.

- 1: Space Allocation
- 2: Renovation
- 3: Furniture
- 4: Other
- 5: Beyond Routine Maintenance

Technology:

If your program received technology (audio/visual – projectors, TV’s, document cameras) and computers, how does the technology impact your program and help contribute to student success?

- 1: Replacement Technology
- 2: New Technology
- 3: Software
- 4: Other_____

Other Equipment

If your program received equipment that is not considered audio/visual or computer equipment technology, please explain how these resources impact your program and help contribute to student success.

Conclusion:

Present any conclusions and findings about the program. This is an opportunity to provide a brief abstract or synopsis of your program's current circumstances and needs. Consider this a snapshot of your program if someone were to only read this portion of your annual program review.

As discussed in previous sections this program is in need of revising to meet a specific industry need.