

Bakersfield College 2018-2019 Comprehensive Program Review

Program Name: **Automotive 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

Program Mission Statement: The Automotive Technology faculty strives 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 automotive 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.

Describe how the program supports the Bakersfield College Mission: The Automotive Technology program at Bakersfield College provides training for automotive technicians, smog test technicians, engine repair technicians, engine machinists, transmissions repair technicians, alignments specialists, suspension specialists, brake systems specialists, tire service technicians, air conditioning technicians, electrical diagnostic specialists, onsite/field repair technicians, heavy duty equipment technicians, service writers and consultants, parts sales persons.

The Bakersfield College Automotive Department, as part of the California Community College system, provides CTE, transfer, and basic skills training to an average of 300 students each year. Our program successfully serves the CTE statewide goal for our discipline. In addition, we have participated in several of the strategic goals and initiatives of the college, including student success through our participation in the internship and job placement activities, and fiscal sustainability through our participation in the VTEA program and through donations the local new car dealership association and members of our advisory board. Our facilities and equipment are exemplary among similar programs in the State, and as such, they have contributed both to student success and a positive example of Bakersfield College's commitment to relevant technology and high wage, high-growth occupations within our service area.

Instructional Programs only:

- A. List of degrees and Certificates of Achievement the program offers
 - a. Automotive Technology AS Degree
 - b. Electrical and Electronic Systems COA
 - c. Engine Overhaul and Repair COA
 - d. Engine Performance COA
 - e. Light Duty Diesel Performance COA
 - f. Brakes COA
 - g. Suspension and Steering COA
 - h. Automatic Transmissions COA
 - i. Manual Drive Train and Axles COA
 - j. Automotive Management COA
 - k. Automotive Heating and Air Conditioning COA

- 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.

Progress on Program Goals, Future Goals, and Action Plans:

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:** Coordinate with local industry through the work of advisory boards and other collaborative efforts. This is a continued goal from previous years. Changes in curriculum are either made or proposed in response to feedback by advisors. Evaluation of changes take place each year

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

Student Learning, Student Progression and Completion, Facilities, Leadership and Engagement

Progress on goal achievement: Ongoing

Status Update – Action Plan and any link to Resource Requests: The Automotive Department is in constant communication with our industry partners to assess how we can best prepare our students for employment in our industry. In addition to this, over the past three years we have worked with local employers to create job placement opportunities for our graduating students. This continuous collaborative effort insures that our department is always in line with the needs of our industry and providing the best possible education and opportunities to our students. Our advisory committee involvement continues to set the standard for other programs on campus.

- 2. Program Goal:** Continue to address gaps in core indicators, particularly nontraditional student enrollment and completion.

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: Ongoing

Status Update – Action Plan and link to Resource Requests: Through outreach and marketing events, we seek to improve the image of the Automotive Program and increase awareness of the vastly diverse opportunities within our industry in our area. We have experienced consistent improvement in both non-tradition enrollment and completion. While we are still below the state negotiated goal in this area, our program consistently out preforms the state wide average in both non-traditional participation and completion. Please see supporting documents attached.

- 3. Program Goal:** Automotive Program/Curriculum Restructure – The Automotive Faculty invested two years of work to restructure classes, degrees and certificates to provide improved pathways to better serve the needs of our students and industry.

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: Completed summer 2017, new class offerings began in fall 2017

Status Update – Vast improvements in enrollment, certificate and degree issuance are showing up in our statistics

- B.** List the program’s goals for the next three years. Ensure that stated goals are specific and measurable. State how each program goal supports the College’s strategic goals. Each program must include an action plan.

- 1. Future Program Goal:** Update image of the program through facilities improvements, marketing and expansion of the Automotive Program into motorsports and alternative energy

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

This future goal will impact Student Learning, Student Progression and Competition, Facilities, Leadership and Engagement.

Action plan: Build a new Auto Lab, Paint and remodel existing buildings, Form a Motorsports team and construct a racecar for competition, Develop curriculum for motorsports dynamics class, Develop curriculum for Hybrid/Alternative Fuels class. **This can be seen in our Resource Requests**

Lead person for this goal: All Automotive Faculty

- 2. Future Program Goal:** Expansion of our internship/job placement program

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

This future goal will impact Student Learning, Student Progression and Competition, Facilities, Leadership and Engagement.

Action plan: We will continue to work with the job development office, under the management of Stephanie Baltazar, and our industry partners to expand our already successful internship program to also serve as a job placement avenue for our students as they conclude their training here at Bakersfield College.

Lead person for this goal: Vic Posey

3. **Future Program Goal: Factory Training Facility Partnership-** As our program expands, it has become evident that there is an extreme need to partner with automotive manufactures offering our students a second level of training that will extend beyond the ASE requirements and increase student success and outcomes. Resulting in a strong increase in employment within the automotive industry.

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

This future goal will impact Student Learning, Student Progression and Competition, Facilities, Leadership and Engagement.

Action plan:

This type of training in the automotive industry is often referred to as “Factory Training”. Bakersfield College has the faculty talent, skills, and knowledge to take advantage of and offer factory training. We want to be able to offer this type of training and expand our program in this manner. We would like to explore possible contracts between KCCD/Bakersfield College and various manufactures to offer this type of training to our students.

However, when reading the requirements of these programs we know that Bakersfield College does not have the space requirements to have these types of programs. In addition to pursuing Factory Training we will also need to address the lack of facilities, space and faculty.

Lead person for this goal: All Auto faculty

3 Year Program Analysis: (All programs will answer the following questions unless otherwise indicated)

Take a look at your trend data. Provide an analysis of program data throughout the last three years (all programs should have some form of data that is used to look at changes over time) and report:

1. Changes in student demographics (gender, age and ethnicity).
 1. No significant changes
2. Changes in enrollment (headcount, sections, course enrollment, and productivity). *Instructional only*
 1. 37% increase in enrollment, 18 additional sections offered, all courses are full and waitlisted, success and retention rates are up and continue to be higher than college wide stats, every Auto faculty member is working with an overload and cannot teach any additional courses.
3. Changes in achievement gap and disproportionate impact.
 - o 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](#).
 - o There are no significant gaps in achievement or disproportional impacts. We believe the newly instituted pre-requisites have improved this from years past.
4. Success and retention for face-to-face as well as online/distance courses. *Instructional only*
 1. Traditional Retention 95% / Success 83% Distance Ed Retention 78% / Success 60%
5. Any unplanned events that affected your program.
 1. No unplanned events but the new program structure has made it more evident that we are understaffed and need an additional full time faculty members.

6. Degrees and certificates awarded (three-year trend data for each degree and/or certificate awarded). *Instructional only*
 1. We have experienced a significant increase in completion awards which was expected with the new program structure. There were 96 degrees and certificate issued in 2017-18 compared to an average of 60 per year in the previous four years.
7. Reflect on any changes you would like to see in your program in the next 3 years.
 1. These changes can be seen in our future goals (above) and our resource requests (attached). The center around providing the best possible education for our current students, providing internship/job placement opportunities, improving the image of our program and expanding our program into new areas such as motorsports and alternative energy.
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 planning/doing to contribute to these efforts.
 1. We feel our recent restructure has, in many ways, set the standard for creating “Guided Pathways” for our students. In addition to the countless hours this has taken, the Automotive faculty were invited to participate in the Statewide CTE Pathways Institute to use our local curriculum model for 11th-14th grade Automotive instruction to create a CTE pathway template that can be implemented by any high school &/or college in the state.
9. Explain your role if you are involved in Dual Enrollment, Inmate Education, or Rural Initiatives.
 1. We have determined that pursuing and maintaining articulation agreements with the few schools that have automotive programs in our area is the best approach for our program and students.
10. List degrees and certificates awarded (three-year trend data for each degree and certificate awarded). Include targets (goal numbers) for the next three years. *Instructional only*

Full Name of Degree or Certificate	2015- 2016	2016- 2017	2017- 2018	2018- 2019	2019- 2020	2020- 2021
A.S. Degree Automotive Technology	4	9	6	7	8	9
Electrical and Electronic Systems COA	12	7	10	11	12	13
Engine Overhaul and Repair COA	17	13	7	12	13	14
Engine Performance COA	12	7	12	13	14	15
Light Duty Diesel Performance COA	NA	NA	NA	8	9	10
Brakes COA	7	8	13	13	14	15
Suspension and Steering COA	7	8	15	14	15	16
Automatic Transmissions COA	8	9	14	13	14	15
Manual Drive Train and Axles COA	8	9	13	12	13	14
Automotive Management COA	2	1	1	2	3	4
Automotive Heating and Air Conditioning COA	11	7	5	6	7	8
Basic and Advanced Clear Air Car Course State Certificate	3	11		8	9	10

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

Our requests are based on the fact that very little has been done in our facilities in the past several years. Only the most basic repair and maintenance has been performed

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 _____

Our requests are based on the fact that most of our technology requests are for industry specific diagnostic tools needed to train our students for today's Automotive workplace.

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.

Our requests are based on the need for industry tools and equipment needed to train our students for today's Automotive workplace.

Conclusions:

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 Comprehensive Review.

Collaborative Teaching

Over the past few years the culture of the Automotive Program has shifted to embrace a collaborative effort in educating our students. In years past we often worked independently in our own areas of specialty toward common goals. This sometimes resulted in mixed results. Through weekly meetings and discussions amongst our department we have consciously made the decision to work more cooperatively and transparently with each other. This

has led to many positive improvements within our department resulting in mutual benefits to the faculty and the students. As an example, the faculty recognized the logistical and financial burden placed on our students by using different texts and resources for every automotive course. The Automotive Faculty searched and found a single text book and online teaching resource that could be adopted by the majority of the instructors. The result has been more consistency of information being conveyed to the students and reduced cost to students. Another example is we have begun the process of cross training each other in other classes that have been traditionally taught by a single instructor. We have collaborated on efforts to support student internships, develop new curriculum and pursue grant funding. We are now much more supportive of sharing lab resources and equipment amongst each other which has resulted in reduced duplication and a more effective use of limited funding. We are all motivated to continue this effort as we work toward the improving our program.

Automotive Program Curriculum

The Automotive Department has developed a ground breaking, new curriculum model that has created a progressive student centered learning process. The new curriculum has been designed to provide students with up to date training and the opportunity to obtain Certificates of Achievement in the same areas as the Automotive Industry Automotive Service Excellence (ASE) certifications. We have added 10 new certificates of achievement and 10 new classes. Our progressive approach includes well defined, guided pathways and accelerated classes to improve the flow of students through the program and allow for more timely completion of specialized training for each student. Almost all of our classes are now offered as accelerated or short term 8 week classes. Research has shown that accelerated classes improve student success and persistence. We have also intentionally aligned our courses to other schools that offer Bachelorette Degrees to allow students a streamlined progression to higher education. This will lead to the need to offer more sections which will lead to the need for more instructional space.(a need documented in the Facilities category above) Curriculum has been technically focused and aligned throughout the courses to eliminate duplication of instruction. The majority of the courses will be using the same book, as an instructional resource, reducing costs for students while they are in our Automotive Program. Since implemented in the fall of 2017, we have seen in our 2018-19 Trend Data a powerful and positive impact for our students, our program, and the automotive industry in Bakersfield and the surrounding areas. We are confident that this will prove to be a long term solution that will allow growth to our automotive program, increasing persistence and completion rates, improving core indicators, and increasing degrees and certificates.

Automotive Internships

During the summer of 2016, with the help and organization of Stephanie Baltazar, the Automotive faculty launched an internship program that placed 8 students in 5 different shops and dealerships. Each year since, we have doubled that number of participating students. During the internship the students were able to apply the skills they had obtained in the BC Automotive program in a “real life” working environment working alongside seasoned professionals in our industry. The students gain confidence in their skills, valuable work experience and professional trade connections. With these experiences the students are able to build their resume with contacts, letters of recommendation and be able to show on the job work experience. At the conclusion of the program the faculty received accolades from the employers for preparing the students so well and raving reviews of the students’ performance on the job. Almost all of the students were given job offers at the conclusion of the internship. It was considered a huge success by the participating employers, the BC Automotive faculty and students. The internship program has become a core connection between our students and industry.

The Automotive Department is operating at maximum capacity with the current faculty. While there is huge potential for growth in the program with new subject offerings, such as motorsports and hybrid technology, the addition of new faculty positions will be necessary to accommodate this. Instead the focus of the current faculty is to maintain success and retention rates which are higher than the college wide statistic. Students continue to come to our classes under-prepared academically and challenged by our rigorous coursework in this program. We need to adapt our teaching strategies and add teaching resources, such as informational technology, to promote continued growth in retention and success rates of our students. Although growth of sections has been limited in the recent past due to budget cuts, we anticipate growth in sections and FTES from this year on. Course sections have typically been full and waitlisted in our program.

It will continue to be a challenge to meet the expectations of industry (greater breadth of knowledge required for the average technical employee) while meeting the expectations of our College program (productivity, number of sections allowed and scheduling issues) with the current limitations of our facilities and upcoming faculty retirements. However, The Bakersfield College Automotive Program is prepared with a new curricular structure and instructional strategies to overcome these challenges and grow the program to a level not yet seen before. Facilities, Technology, Equipment, Faculty and Administration support will be necessary, but with this support we can raise our program to a level to be revered at the state level, intended to be an example for other college Automotive programs.