**Bakersfield College**

**Program Review – Annual Update**

**I. Program Information:**

Program Name: Automotive Technology

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 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 Program, as part of the California Community College system, provides CTE, transfer, and basic skills training to an average of 250 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.

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.

**II. 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.

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| **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. Coordinate with local industry through the work of advisory boards and other collaborative efforts.  Continued goal from previous years. 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 Learning  2: Student Progression and Completion  3: Facilities  4: Oversight and Accountability  5: Leadership and Engagement | Completed: \_\_\_\_\_\_\_\_\_\_ (Date)  Revised: \_\_\_\_\_\_\_\_\_\_ (Date)  Ongoing: \_\_\_\_\_\_\_\_\_\_ (Date) | The Automotive Program 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 year we have worked 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. Continue to address gaps in core indicators, particularly nontraditional student (female) enrollment. | 1: Student Learning  2: Student Progression and Completion  3: Facilities  4: Oversight and Accountability  5: Leadership and Engagement | Completed: \_\_\_\_\_\_\_\_\_\_ (Date)  Revised: \_\_\_\_\_\_\_\_\_\_ (Date)  Ongoing: \_\_\_\_\_\_\_\_\_\_ (Date) | In our area, females are the non-traditional student. Through outreach events, such as host an all-female tour of the Bakersfield College EIT department for all local high schools, we have experience consistent improvement in both non-tradition enrollment and competition. 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.Automotive Program/Curriculum Restructure | 1: Student Learning  2: Student Progression and Completion  3: Facilities  4: Oversight and Accountability  5: Leadership and Engagement | Completed: \_\_\_\_\_\_\_\_\_\_ (Date)  Revised: \_\_\_\_\_\_\_\_\_\_ (Date)  Ongoing: \_\_\_\_\_\_\_\_\_\_ (Date) | Over a year and a half ago, the Automotive faculty began a complete restructure of all classes and curriculum to create a more fluid, direct path for students to follow in route to degree and certificate competition. The design has since become a model for other departments to consider in make dedicated pathways foe their students. The curriculum was delayed in the approval process but is due to be approved and implemented in the 2017-2018 school year. Please see supporting documents attached. |
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1. List new or revised goals (if applicable)

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| **New/Replacement Program Goal** | **Which institutional goals will be advanced upon completion of this goal? (select all that apply)** | **Anticipated Results** |
|  | 1: Student Learning  2: Student Progression and Completion  3: Facilities  4: Oversight and Accountability  5: Leadership and Engagement |  |

**III. 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).

* Over the last 5 years we have seen a slight decrease in the number of white students (-9%) and a slight increase in the number of Hispanic students (+16%). The success and completion rates for our program during this same time period have not changed substantially so we do not believe any changes are necessary at this time.

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

* No substantial changes. We expect an improvement in both headcount and productivity when the new class structure is implemented in fall 2017. This will require additional sections being offered which means our program will require additional instructional space and faculty. This need is documented below and in the attached documentation.

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

* Continued improvement in both areas areas. Automotive continues to out preform the college wide statistics.

1. Other program-specific data that reflects significant changes *(please specify or attach).*

* We have seen a significant improvement in the number of our students who have completed an Ed Plan and are Fully Matriculated. We believe this helps explain the continued improvement in success and retention rates of our students.

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

Use attached **Assessment Report Form AU Tab**

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

* Enrollment continues to be very strong. The addition of prerequisites for some of our upper level classes has resulted in better quality of incoming students as well as making the order in which the students take the classes more efficient. 81% of our students have completed the Matriculation process and over the past 5 years the average of students on campus that have declared Automotive as a Major has quadrupled with 163 students claiming Automotive as their major in Fall of 2016. Success and Retention rates in Automotive continue to outperform college wide statistics with Retention at 88% and Success at 74%. Degree & Certificate issuance continues to increase over the past 5 years. We are proud to note that 4 Associates Degrees were issued by the Automotive Program in 2015-16 with a total of 25 AS degrees being awarded over the past 5 years. Also during the 2015-16 year, 59 different Automotive Certificates were issued. That’s the highest number of certificates awarded in a single year on record. But most encouraging is the fact that roughly 85% of our students are working in some sector of the Automotive industry, some while continuing their education.

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

* In our area, the non-traditional student is female. In spite of outreach events, such as hosting an all female tour of the Bakersfield College EIT department for all local high schools and open house events for our feeder schools, we continue to fall short of the negotiated state goal in female enrollment. Over the past 5 years we have seen consistent growth in enrollment for our non-traditional students. However, as of last year, female enrollment has dipped to 10%. That is 2% less than the previous year but is still 4% higher than 5 years ago.

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

* The drastic reduction in available VTEA funds has dramatically affected the ability of the Automotive Program to add additional/new equipment and send the four (4) Automotive Professors to mandated training. We are also expected to hold biannual advisory meetings and host outreach events, all on an annual budget of $11,000. In years past our program had received well over $100,000 from the over $600,000 that Bakersfield College receives every year. We are convinced this drastic reduction in funding is having a dramatically negative impact on the instruction of our students. The Automotive staff is aggressively searching for other funding sources.
* One example of this is; Mr. Haney, on behalf of the automotive faculty, has pursued a grant through San Diego Community College, ATRE, and the California Energy Commission. We are seeking $200,000.00 from this grant that will be used to update and acquire new equipment needed for the BC Automotive Technology program. The project will bring Bakersfield College and its current automotive training programs up to current industry standards and in line with recent improvements at other college automotive technical training programs. BC will update and modernize training equipment and curriculum to match current, and future Alternative Fuel, and Electric Vehicle standards. This grant award will provide resources needed to bring the existing programs into current industry standards.

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**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>

1. Human Resources and Professional Development:
2. 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.

The Automotive Program is seeking the following additional positions;

**Lab Technician** – This is an *existing position* that will be vacated in December 2016 by Tom Moehnke, who is retiring. Tom has filled this position for many years. His duties include making repairs to the lab facilities and equipment for all of the Industrial technology programs. Specifically to Automotive, Tom has being vital in making sure that all equipment and lab resources are in working order and ready for student instruction. We cannot sustain or continue to grow our program without this position being fill upon Tom’s retirement. Please see the attached documentation for further details.

**Automotive Faculty** – This is an *existing position* that will be vacated by Dan Johnson in May 2017. Mr. Johnson is retiring after many years of teaching Transmissions, Brakes, Suspension and alignment. This subject matter is a core component in the education of our students and required to be taught be our accrediting agency, NATEF. Please see the attached documentation for further details.

**Automotive Faculty** - The new Automotive curriculum model, due to launch in Fall 2017, will add a new Diesel class that our advisory committee has be requesting for many years. The new model will also streamline the pathways for student success and make it possible for more students to be in the pipeline than ever before. The addition of the new class, additional head count and threat of a bottle neck in the program, combined with the fact that current head count requires the use of an adjunct and that 3 of the 4 current automotive faculty have to regularly teach overload, deems this new automotive faculty position necessary to meet the demands of our students and industry.

1. Professional Development:
2. 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.

Mr. Flint attended the California Auto Teachers conference, a Hybrid Technology seminar at the CARQUEST Technical Institute, competed annual BAR updates required by the state of California, recertified in six different ASE areas and earned three new ASE certificates that he had not previously held. Mr. Haney attended the California Auto Teachers conference, attended seminars at both the CARQUEST Technical Institute and Bosch’s training facility as well as recertified in three ASE areas. Mr. Posey earned ASE certificates in 4 areas he had not previously been certified in and is currently pursuing a new Master Engine Machinist Certificate from the Automotive Engine Rebuilders Association. Mr. Johnson and Mr. Posey each also attended conferences, SEMA and ATRA, in Las Vegas in their areas of specialty, Transmissions and Engine machining/repair. The professional development received by each instructor keeps us abreast of current industry issues and enables us to more effectively train our students for current industry working conditions. It also provides invaluable networking opportunities which allow us to be better connected to and supported by our industry partners.

1. What professional development opportunities and contributions can your program make to the college in the future?

Bakersfield College Automotive Program is a nationally recognized NATEF accredited training facility which makes us eligible for support directly from all vehicle manufacturers. NATEF requires that all instructors at NATEF certified schools attend a minimum of 20 hours of professional training each year. The professional development received by each instructor keeps us abreast of current industry issues and enables us to more effectively train our students for current industry working conditions. It also provides invaluable networking opportunities which allow us to be better connected to and supported by our industry partners. In the coming year the automotive faculty intend on pursuing further training at the CAT (California Auto Teachers) conference, the NACAT (National Association of Auto Teachers) Conference, SEMA, ATRA, Bosch and CTI (CARQUEST Technical Institute)

We intend to host automotive industry technical training from outside venders at Bakersfield College. In the past, technical training has

been hosted at the college but at the current time it is not cost effective for training groups to use Bakersfield College as a training venue.

Training events are being held in Bakersfield but not at Bakersfield College. We would love to see that change for the better. If

Bakersfield College was to incentivize training groups to bring the venue back to BC this would provide numerous opportunities and benefits. We believe that this is a very valuable resource that would benefit our automotive program, our students and Bakersfield College as a whole.

The Automotive faculty would love to take the opportunity to talk about the Science Technology Engineering Math (STEM) subjects as they are taught in the context of our classes. The STEM subjects are woven throughout the automotive industry and are covered in every single automotive class, each in many ways. We would like to offer examples of how we present STEM topics in practical applications in our labs and lectures in a context that most of our students can understand and apply because of their passion for working on automobiles. We would like to encourage our colleges to look for opportunities to convey STEM information to our students along through its relevance to the practical skills that we are already teaching our students.

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

The requests range from safety concerns to the preservation of current instructional resources. A safe working environment as well as operational equipment is a must to effectively instruct our students. Be believe student success is directly affected by the instructional environment. When the environment is clean, organized, focused and up to date leanring in facilitated through the focus and encouragement of the students. When the instructional environment is in disrepair the students are distracted and discouraged which leads to poor retention and low academic performance. Some examples of disrepair in our area right now are poor lighting, poor heating/cooling, equipment in need of repair/service, pigeons that have nested and drop feces on our lab areas, storage facilities for instructional resources and more. Please see attached forms for more information.

1. How will your Facilities Request for next year contribute to student success?

The highest priority of the Automotive Faculty is to create a safe learning environment for our students that is efficient and duplicates the professional working environment that our students will enter after completing their training here at Bakersfield College. The next priority the Automotive faculty has is the preservation of the teaching resources our program has painstakingly acquired. All of our Facilities Requests will be centered on these objectives.

An upcoming issue with facilities will be the implementation of our new curriculum model which will take effect Fall 2017. The new model will facilitate many improvements to our program mainly made possible by using 8 week class structures which will put more students in the pipeline. This will lead to the need to offer more sections which will lead to the need for more instructional space. Lab and classroom space is already at a premium in the Automotive Program which means it’s being used very efficiently already. The Automotive faculty will work carful with the new class schedule to maximize the efficiency of the existing instructional space, but more space will be necessary. Specifically, a lecture hall to handle a minimum of 60 students, ideally 80+, will be needed to accommodate the Introduction to Automotive lecture class. Lab space and storage space will be needed as well. Please see attached forms for more information.

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?

Many of the computers in our classrooms and labs are outdated but functional. Having slower computes does affect our face to face time with students since it takes the computer longer to process information thus using up the students time while completing an assignment or looking up information. In the automotive industry we use extensive databases that store comprehensive information about every vehicle including every year, make and model of passenger vehicle from 1976 to current vehicles.

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

Newer technology will improve efficiency in classroom and lab activities which will improve the learning environment. It will also enable the use of larger databases and more effective software commonly used in our industry.

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

College goal of training students for technical careers applies to our program. Currently there are 200+ automotive openings in our local market every year.

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

Current technology resources are outdated in many ways and fall below the needs for instruction for today’s students. Technology budget request will improve student success by empowering the students to work more efficiently and allow faculty to convey information in a visual, graphic format that today’s students are accustom to.

In addition to the requests noted in #1 of this category, the Automotive faculty would like to have support developing a website specifically for the Automotive Program. We have learned from polling our current students that the overwhelming majority of them learn of our classes from the internet. A better presence on the internet would draw a higher quality incoming student as well as serve current and former students with features such as a job placement board, networking opportunities and allow faculty better follow-up with former students’ success.

**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.

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. During the 8 week 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 revues 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 is scheduled to run again in the spring and summer of 2016.

New Automotive Program Curriculum

The Automotive Program has spent over a year developing new curriculum that will implement 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 will include 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 now will be 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 eliminated 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. We are very excited to see these changes implemented in the fall of 2017. We know that this will have 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.

Collaborative Teaching

In the last year 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 used of limited funding. We are all motivated to continue this effort as we work toward the improving our program.

The Automotive Program 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 diesel 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 Automotve programs.