Educational Master Plan

Building upon more than 100 years of excellence, Bakersfield College continues to contribute to the intellectual, cultural, and economic vitality of the communities it serves.

Spring 2017

BAKERSFIELD COLLEGE

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I. Message from the President

Bakersfield College (BC) started in 1913 as *a vision and a plan* for educational opportunity and community service with 13 students in a borrowed classroom on the Kern High School campus. From that hopeful start, BC now provides approximately 30,000 students a year with educational opportunity, serves as a cultural center for its community, and trains the workforce for a vibrant community of industry partners.

BC's Vision today remains true to that founding vision:
"Building upon more than 100 years of excellence, Bakersfield College continues to contribute to the intellectual, cultural, and economic vitality of the communities it serves."

The visionaries of 1913 could not have imagined the growth or rapidly changing society, however, they would instantly recognize the individuals today who tirelessly help our students (many still first in their families to go to college) attain their dreams. It is the shared work of college faculty, staff, and administrators, and our community.

BC's Mission Statement affirms diversity and a commitment to meeting diverse needs. It frames the fundamental work of providing the skills and academic preparation, certificates, and both associates and baccalaureate degrees that lift our students and fuel our economy.

"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." (Approved May 7, 2015.)

BC's Core Values make visible the importance of *Learning, Integrity, Wellness, Diversity, Community, and Sustainability* that this college community embodies in its daily work.

BC's 2017-2020 Educational Master Plan embarks on a systematic *Guided Pathways* redesign of how we guide students to complete their educational goals. *Guided Pathways* is built on four pillars:

1. *Clarifying educational pathways* for both Career Technical Pathways and Transfer Pathways.
2. *Getting students on the path* starts by getting 9th grade students to see college in their futures.
3. *Keeping students on the path* calls us to ensure that every precaution is taken to keep students on their educational pathway to degree completion.

FOUR PILLARS OF GUIDED PATHWAYS

CLARIFY THE PATH · ENTER THE PATH · STAY ON THE PATH · ENSURE LEARNING

4. ***Ensuring learning*** invites as to develop a quick learning environment both in and out of the classroom to create adaptive learners who can communicate effectively, think critically, demonstrate competencies, and engage with their communities.

The 2017-2020 Educational Master Plan calls for an approach that better serves BC's 30,000 students by grouping them into 18 completion communities – 10 meta-majors and 8 affinity groups, which include the identified underrepresented groups in BC's Equity Plan. Each meta-major and affinity group will be surrounded by *completion coaches* ranging from 10 to 20 faculty and staff that will form a safety net around their cohort of students. The ***high-touch***, personalized approach of these *completion coaching communities* combined a with the ***high-tech*** data analytics will help coaches to monitor progress and target student communications. For more details, see Chapter IV.

I am very proud of this work, led by our Dean of Institutional Effectiveness and a small, dedicated steering committee. For a more complete listing of those involved, see the Acknowledgements section. The work was comprehensive and inclusive. The committee gathered documents that analyzed academic areas of study for all students, including grant proposals and updates, new initiatives, instructional program reviews, and multiple sources of national, state, county and local data. The committee conducted interviews and focus groups with various faculty and staff representing Career and Technical Education, transfer, basic skills, and technology. The interviews explored how to best serve students in alignment with the college's Strategic Directions Plan, which is linked to the Program Review process and resource allocation.

Draft versions of the EMP were distributed to college-wide committees, and to specialized areas for review. Faculty, staff, administrators, and students carefully reviewed the content, and implications of this document during the spring semester of 2017.

The *2017-2020 EMP* was reviewed in draft and final forms in all of the governance committees and posted to the college website at http://www.bakersfieldcollege.edu/emp to provide accessibility to all stakeholders. The EMP was approved by the BC Academic Senate on April 5, 2017, by BC College Council on April 7, 2017, and by the KCCD Board of Trustees on August 10, 2017.

Bakersfield College began with a vision and a plan. Planning is the work that makes vision a reality, and those who contributed with hard work and dedication on this new *2017-2020 Educational Master Plan* have helped ensure the success of our collective, shared vision well into the future.

With much Renegade Pride and Collegiality,

Dr. Sonya Christian,
President, Bakersfield College
Follow my blog: https://sonyachristianblog.com/
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II. History and Overview

Bakersfield College is proud of its long heritage. It was founded in 1913 and is one of the nation's oldest continually operating community colleges. BC is one of the few community colleges with an active Archive where historical and key artifacts are cataloged and preserved for the future. The College is accredited by the Accrediting Commission for Community and Junior Colleges (ACCJC) and was reaffirmed on the basis of a comprehensive evaluation in 2012. The College will have a comprehensive visit again in Fall 2018.

The college serves approx. 30,000 students[1] on the 153-acre main campus in northeast Bakersfield, at the Weill Institute in downtown Bakersfield, and at the Delano Center 35 miles north of Bakersfield. The college offers programs to help students earn a bachelor's degree in Industrial Automation, a variety of associate degrees and associate degrees for transfer, preparation for transfer to a four-year institution, gain new job skills or explore lifelong learning opportunities. Bakersfield College is the largest of the three colleges in the Kern Community College District. The Kern Community College District serves nearly 32,647 square miles in California in parts of Kern, Tulare, Inyo, Mono, and San Bernardino counties.[2]

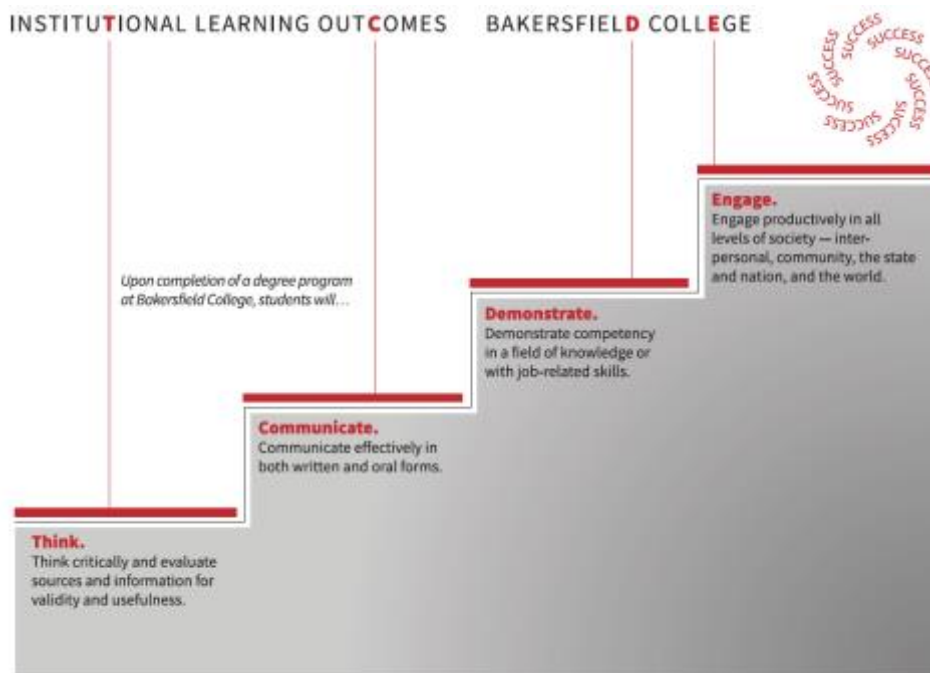[1] CCCCO Datamart http://datamart.cccco.edu/Students/Student_Term_Annual_Count.aspx
[2] Bakersfield College Institutional Effectiveness Office GIS data analysis March 23, 2017.

Classes are offered on a traditional 16-week semester calendar as well as in a variety of non-traditional scheduling options: evenings, weekends, short-term vocational programs and online. Some classes are offered in accelerated, stacked or combined, and compressed format

How does Bakersfield College continue to meet the growing needs of a community characterized by many students that live between financial and educational resource gaps? How does the college maintain rigor yet address timely completion, valuing each student's goals and life challenges? This blueprint has been adjusted over the years, influenced by many forces. The role of this Plan is to describe, evaluate and focus that work.

Institutional Learning at Bakersfield College
In 2013, Bakersfield College adopted the following Institutional Learning Outcomes (ILOs). Each ILO is mapped to the programs and courses. ILO success, as an aggregate of program and course success, is reported in the annual program review updates. This process has been improved with each version of the program review report since 2013. ILOs are also assessed by aggregate tools for the college as a whole and reviewed to provide improvement of the institutional learning process. For example, in 2014, an assessment on Critical Thinking provided reshaping of the student support services delivery.[3] In 2016, a survey of student working on campus sampled all four ILOs with a goal to shape peer mentor training and assesses how well students meet these outcomes. A unique assessment was implemented in Fall 2016 to examine student worker perceptions of improved institutional learning outcomes competencies. These ILO results along with course and program outcomes are available at the Assessment Committee website.[4]

INSTITUTIONAL LEARNING OUTCOMES   BAKERSFIELD COLLEGE

Upon completion of a degree program at Bakersfield College, students will...

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 — inter-personal, community, the state and nation, and the world.

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[3]https://www.bakersfieldcollege.edu/sites/bakersfieldcollege.edu/files/Outcomes%20Institutional%20Plan.pdf
[4] Assessment Committee Website https://committees.kccd.edu/bc/committee/assessment

Bakersfield College Fiscal Sustainability

BC and the KCCD have to established fiscal prudence to support stability and innovation. Bakersfield College has a strong compliance with the 50% law, guaranteeing funding in the classroom and the 75-25 ratio guaranteeing funding in classrooms and for full-time faculty to do the work. The data trends for the last four years show strong budget growth as well as increased restricted categorical and grant program allocations. Over this same time frame, college reserves have gradually increased to provide stability.

	Fiscal Period			
Category[5]	2013-14	2014-15	2015-16	2016-17
Total GU001 Budget	$68,122,615	$74,983,068	$83,600,477	$92,452,895
Reserves	$1,957,271	$4,108,342	$5,849,905	$6,566,038
Restricted	$9,491,453	$9,398,048	$11,931,995	$16,899,264

Categorical programs, which allow for innovation and implementation of new initiatives, have been increasing. These categorical programs are integrated into the college through strategic planning and are re-evaluated with an eye towards institutionalization. No grant or restricted funding source is *just another initiative*; rather, a strategic opportunity for college-wide rethinking of how BC approaches the work of student success. However, the effects of these funding sources may be a challenge to on-going planning. Examples of large funding sources with restricted applications include the SSSP (Student Success and Support Program) and Equity (Student Equity Plan) Funding.

SSSP and Equity funding from the CCCCO have been driving forces; influencing college activities, hiring, and institutional processes at BC since the last Educational Master Plan. Numerous program managers, educational advisors and other new positions were funded. The increase in SSSP allocation (P1) for 2013-14 of $864,858[6] and 2016-17 $ 4,231,081[7] infused more $3,366,223 into student services and matriculation over the period of the last Master Plan. This has transformed BC's strategies, contact with high schools and services to new students, but was not included in the visioning of the last plan. (Please see Appendix 1 for Budget amounts and sources).

Additional funding anticipated in the near future includes Guided Pathways and additional Strong Workforce funding. Implementation and planning are in progress as details are provided by the state.
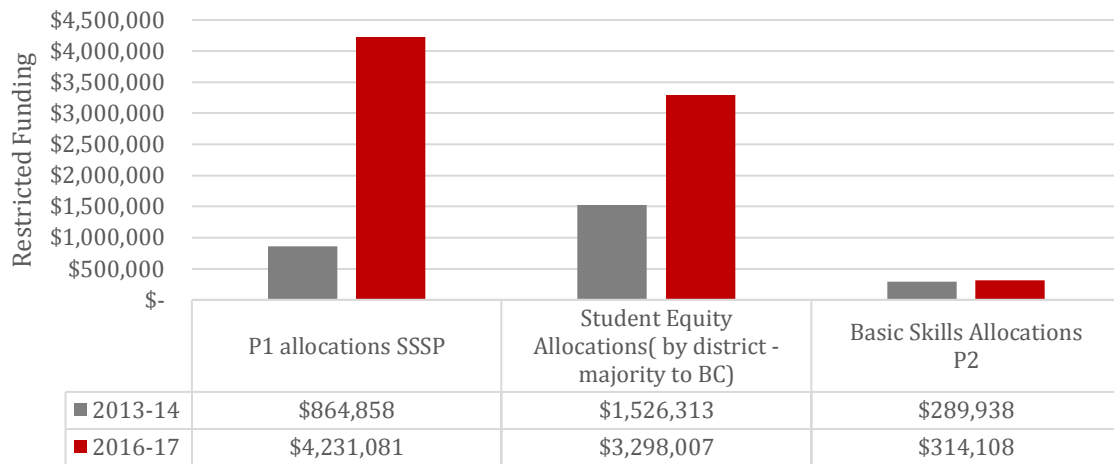
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[5] Kern Community College District, Business Services. *Adopted Budget Reports*
[6] http://extranet.cccco.edu/Portals/1/SSSP/Matriculation/Allocations/SSSP_2013_14_Credit_Allocations_for_P1-9-20-13.pdf
[7] http://extranet.cccco.edu/Portals/1/SSSP/Matriculation/Allocations/REVISED%20SSSP%202016-17%20SSSP%20Credit%20Allocations%20P1%20Hybrid.pdf

Comparison of SSSP, Student Equity and Basic Skills Funding 2013-14 and 2016-17

Restricted Funding	P1 allocations SSSP	Student Equity Allocations(by district - majority to BC)	Basic Skills Allocations P2
■ 2013-14	$864,858	$1,526,313	$289,938
■ 2016-17	$4,231,081	$3,298,007	$314,108

BC is laser-focused on improving outcomes for students across the educational spectrum, having invested substantial resources in improved placement practices, restructured support services, dual enrollment and alignment with high school and university partners. This is evidenced through Bakersfield College's designation as a leader college in Achieving the Dream, history of securing highly competitive grants and awards, and demonstrated through faculty and staff leadership in statewide initiatives. Many of these efforts were initially funded through categorical dollars. In 2013-14, BC reported $9,491,453 in restricted funds and now $***16,899,264*** integrated campus-wide to advance the student success and equity agenda[8]. Each of the initiatives is used as an integrated resource within the guided pathways framework.

Measure J

With the support of the local Bakersfield community and their phenomenal efforts, Bakersfield College and the KCCD have secured funding for college facilities, technology, and infrastructure for the next thirty years through the historic passing of Measure J on November 8, 2016. Measure J is the continuation of a vision to meet the needs of students and equip our learning spaces with the necessary tools to educate and prepare the 21st century workforce. Measure J will give generations a strong foundation upon which dreams are obtainable and our community can live out the quality of life we all want for our friends, family, neighbors, and coworkers.

The college and Bakersfield community partnered closely with business, industry, political, and community leaders to resoundingly pass a $503 million dollar bond measure for the Kern Community College District. This was directly in response to the 2013 Facilities Master Plan and the 2015 Bakersfield College Strategic Directions. These both specifically call out the campus facility needs while addressing an aging campus, primary infrastructure

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[8] Further discussion of the various funding sources will be itemized in the appendices for the Institutional Effectiveness chapter.

needs, student body growth and influx of traffic on campus, and expanding satellite locations to better serve the community. The Strategic Directions also reinforce the commitment to improve and maintain our facilities for the future generations.

Legislation Driving Programming
Senate Bill (SB) 850 enabled Bakersfield College to implement the Industrial Automation Bachelor's program. In the future the College will leverage support for additional legislation to expand Baccalaureate Degrees in CCCs. Current pending legislation includes:

- SB 769 - allowing community colleges to offer more than one Baccalaureate Degree through innovative initiative.[9]
- SB 577 - authorizing community college districts to offer a teacher credentialing programs in consultation with the CSU and UC systems. The bill would require a district offering a teacher credentialing program of professional preparation to identify and document unmet teaching workforce needs in the local community or region of the district design the program to meet those needs. [10]
- AB (Assembly Bill) 405 – authorizing community college districts to offer baccalaureate degrees in cyber security pilot programs in consultation with the CSU and UC systems.[11]

The College prides itself on evaluating and quickly responding to opportunities with data driven direction, human, financial and technological resources as exemplified by the Student Equity and SSSP planning and implementation. The ability to sustain this activity will depend upon a keen vision of the future, evaluation of opportunity and integration of leading edge opportunities into the college structure. The Guided Pathways foundation represents a structure for evaluating and implementing these leading edge opportunities; institutional effectiveness practices of annual program review and evaluation of strategic directions provide integration of the many California initiatives and funding opportunities.

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[9] http://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB769
[10] http://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB577
[11] https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB405

III. Guided Pathways System (GPS)

Historically, two thirds of Bakersfield College's students have not completed a degree or transfer. Of the more than 27,000 students at BC, 21.9% were from areas of high poverty, a rate that has increased from 18.1% in 2007 (California rate 15.3%). Kern County educational attainment is low, only 15.2%; less than half of the statewide figure (15.2% vs. 31%). This formula of low education and high poverty is responsible for low employment rates and lack of regional economic resiliency[19]. Approximately 80% of BC's students (roughly 19,000) come from first-generation and/or under-represented student populations lacking clarity, support and resources for the challenges of college and about 14,000 were the first in their family to set foot on a college campus.[20] These factors create multiple difficulties students must overcome on a daily basis to be successful. Primary among them are unintentional institutional barriers and lack of pathway clarity.

In the last three years, Bakersfield College has directed its focus to meeting each student where they are in their educational journey, and giving them the personal assistance and support that they need in order to reach their educational goal in the shortest time possible. Bakersfield College has also expanded outreach efforts, developing programs to connect with high school students through dual enrollment, CTE programs and other outreach efforts. In Spring 2016, Bakersfield College was one of 30 colleges in the U.S. to be selected to participate in the American Association of Community Colleges (AACC) Pathways Project, which paved the way for the transformation of the college's work through the adoption of the Guided Pathways Framework. Additionally, Bakersfield College played a leadership role in bringing Guided Pathways to California, as well as writing the initial $4 million grant to fund 20 colleges to pilot Guided Pathways in the state. The president of BC is the chair of the state Guided Pathways committee and has worked with the Chancellor's Office to support the $150 million Pathways initiative in the state budget.

FOUR PILLARS OF GUIDED PATHWAYS

CLARIFY THE PATH · ENTER THE PATH · STAY ON THE PATH · ENSURE LEARNING

The Guided Pathways Framework represents a monumental shift in the organization of the work of the college, using the following four pillars as a guide:

I. **Clarifying the Path**
II. **Enter the Path**
III. **Stay on the Path**
IV. **Ensuring Learning**

Pillar I: Clarify the Path

The work of Bakersfield College has focused on the development of clear and streamlined transfer pathways and career and technical education pathways, including basic skills pathways as a means of "onboarding" students to both transfer and career and technical

education pathways. This work has included the reduction of over 100 programs to 72 programs, including both local CTE programs and transfer programs.

In the next three years, Bakersfield College will focus their work in the following areas related to the Clarity pillar:

Refining Transfer Pathways – This work will focus on coordination with CSU Bakersfield as a primary partner in the development of clear, reliable transfer pathways that will ensure acceptance with junior status for any BC student completing a transfer degree with 60 units. Additionally, Bakersfield College will work with selected campuses from the University of California, including UC Davis and UCLA, to ensure smooth transfer pathways to those institutions.

Career and Technical Education Development – Bakersfield College will continue the work of developing stackable certificates which will allow for both workforce development and a path to transfer for those students who want to continue their education. The Bachelor of Science degree in Industrial Automation is a fully accredited completion program. Bakersfield College will continue to partner with regional community colleges to facilitate transfer into this program.

Refinement of Meta Major Definitions – Using student data and curricular patterns, Bakersfield College will continuously update and refine the meta major definitions to optimize support structures for students in each major. The curriculum committee will work to enhance their process to better coordinate and support program pathways and connections between programs in each meta major.

Strengthen Technological Support Structures – Bakersfield College will strengthen technological support structures that will facilitate clarity of the path for students, including the Starfish Degree Planner and the development of advanced pathways visualization tools that will help students understand their own pathway and its relation to the meta major and courses in their major.

Pillar II: Enter the Path

The focus of the second pillar of Guided Pathways at Bakersfield College is on helping students discover the best pathway for them, and giving them the strongest start possible in terms of completion. Bakersfield College had addressed this pillar through the creation of a dynamic and effective Outreach program, which includes a systematic process on local high school campuses to have students complete the matriculation steps at their high school campuses, as well as events like *Registration Rocks*, which invites new BC students to the Bakersfield College campus for a single day, end-to-end registration event.

The work focusing on the Enter the Path pillar will take the following forms in the next three years:

Dual Enrollment – The ability for high school students to begin the completion of college credit while still in high school, by taking college classes on their own campus and within their normal high school schedule, allows high school students to gain a significant advantage. By entering the pathway toward college completion earlier, students are significantly improving their odds of completing their educational goals in two years or less.

Matriculation in High School – Bakersfield College will continue the work of enabling student matriculation in the local high schools, removing additional barriers to enrollment at BC. Through broad implementation of multiple measures assessment, the early development of student education plans, and the leveraging of our Summer Bridge program, Bakersfield College will streamline the onboarding process for first time students, ensuring that more students begin their time at BC with well-defined educational goals and appropriate placement on the path to success.

Financial Aid Beginning in High School – Work toward higher completion rates of initial financial aid paperwork for student who are still in high school will continue. This is another critical aspect of our onboarding strategy that will ease the transition from high school to college for first time students.

Pillar III: Stay on the Path

Bakersfield College's 30,000 students represent a multitude of individual goals and needs. With a student to counselor ratio of approximately 1000:1, the Guided Pathways structure prompts the development of Completion Coaching Communities, which are the mechanism for ensuring that the individual student needs are more effectively met within the context of meta majors. By assigning a fully-equipped support team to each of 10 meta majors, Bakersfield College is able to address the specific needs of each meta major in a more personalized, more relevant way. Further, the college has identified eight affinity groups where additional personalized support exist, and has developed completion coaching communities around those groups as well, providing another layer of support and personal resources for students. Through the development of these structures, Bakersfield College has developed a strategy for applying a very personal, case management approach to helping our 30,000 students stay on the path to success.

The work associated with this pillar will focus on the following in the next three years:

Full Implementation and Supports of Completion Coaching Communities –
Completion Coaching Communities will focus their work on supporting students in their progress toward critical milestones in the journey to successful, timely completion:
- Completion of 12 to 15 credits in their first semester of college.
- Completing both college-level Math and English in the first year.
- Completion of 30 credits in the appropriate pathway in the first year.
- Completion of 60 credits in the span of two years.

It is the primary responsibility of the completion coaching communities to ensure that each student obtain the academic, planning and personal support resources they need to achieve these milestones.

Implementation of Technological Support Tools – Bakersfield College is in the process of refining, integrating and launching multiple technologies which will target this third pillar. Starfish will begin a phased launch this fall with early alert and notification functions that will facilitate communication between coaching communities, support services and students. Implementation of other components of the Starfish platform will continue throughout 2018, with the inclusion of a degree planning component that will aid students in planning their path to completion and implementing that plan. Additionally, Bakersfield College is in the early stages of the development of a web-based pathways visualization tool, which will allow students to see their own path, and understand the important milestones using a badge-based recognition of accomplishment designed to improve motivation specific to the student milestones for successful completion.

Pillar IV: Ensuring Learning

Bakersfield College is focused on the quality and rigor of the learning environment as the final pillar in the Guided Pathways System. This pillar is important because it is here that the depth and quality of our students' learning is demonstrated. The integration of assessment with teaching and learning, best practices in the classroom and meaningful integration of technology tools all contribute to the strength of this pillar within the framework.

For the next three years, our work in this area will focus on:

Assessment Integration with Teaching and Learning – The assessment committee will lead the college in the adoption and implementation of best practices and data-backed assessment techniques at the course, program and institutional level to improve the effectiveness of the teaching and learning environment for students. Bakersfield College has also been granted Institutional Effectiveness Partnership Initiative (IEPI) support for the improvement of the effectiveness and the integration of our assessment tools and platforms, including Canvas, eLumen, and Banner. The enhancement and greater connectivity among these tools will allow us to more effectively gather data and provide faculty the necessary reports they need to make changes in practice to improve teaching and learning.

Enhancement of Pedagogy and Teaching Practices – Professional Development efforts, including the Faculty Chairs Institute, the Adjunct Faculty Orientations, and the New Faculty Seminar series will all be leveraged alongside regular professional development offerings to deepen faculty members' knowledge base around effective teaching practices, bringing contemporary methodologies and ideas into classroom practices. Our co-curricular activities will be coordinated and leveraged to enhance both the Bakersfield College community and to support the effectiveness of the classroom experience.

Widespread Integration of Technological Tools – The Academic Technology department will champion the widespread use of technology to enhance the learning environment. Canvas will be used as a standardized learning platform across the college, with the goal of 100% faculty participation at minimum levels and more meaningful integration with teaching beyond that. Faculty will have access to lecture capture for online and flipped classroom use, as well as a maker space for faculty use to support teaching and learning projects. The integration of Starfish with classroom practice and student support services will ensure that students have the support they need to succeed.

Distance Education – The expansion of course offerings into distance education modalities will continue to support the state initiatives supporting distance education as a means of accessibility for students who wish to pursue higher education. The expansion of online student services will support the expansion of course offerings via distance education, while also paving the way for participation in the state Online Education Initiative (OEI) course exchange, which will benefit Bakersfield College as an institution as well as BC students. In the next three years, Bakersfield College will launch 10 fully online degree programs, extending critical transfer and CTE opportunities to students who are unable to complete their education via traditional classes.

IV. External Environmental Scan

Higher Education Policy and Trends as Context
Several broad trends characterize contemporary higher education policy in California and to some extent the nation. (Appendix A.1 Policy Summery)

1. Accessing higher education.[12],[13]
2. Increasing the numbers of students who are successful and complete their programs of study. [14]
3. Doing what matters for the state economy. [15]
4. Stretching the community college system to reach more vulnerable citizens.
5. Redesigning community colleges to provide more guided pathways for students.[16]

Economy and Employment
Kern County is the southern anchor to the great San Joaquin of California that consists of eight counties. Research about the area, by the California Partnership for the San Joaquin Valley, identified seven industrial clusters as economic drivers. A cluster is a geographic concentration of firms and industries that do business with each other and have common needs for talent, technology, and infrastructure. (Appendix B.1. - Industry Clusters)

Kern County is associated with agriculture production and energy generation, primarily oil and gas extraction. Kern, Tulare, and Freson counties lead the region in the share of employment in the agriculture cluster. Kern is the leading petroleum production and processing county in California but more recently has seen substantial development of wind power resources, Kern's largest single wind energy source.[17]

The agriculture cluster is a mix of commodity producers and food processors plus a wide variety of related support businesses, logistics and transportation systems, and research or business activity in water technology, energy, and other related manufacturing. The San Joaquin Valley accounts for 70% of the state's agriculture output. The industry cluster is changing as illustrated in the food processing sub-cluster of businesses that has embraced technological transformation and are increasingly seeking employees who can be quality control specialists, operate specialized manufacturing equipment, and master the ubiquitous programmable logic control devices.[18]

The Kern County concentration of jobs in the energy cluster is nearly twice the state average. Since December 2014 employment in Kern oil fields has shrunk by at least 3,600 jobs or 30%.

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[12] *Mind the Gap: Delivering on California's Promise for Higher Education.* California Competes, December 2015.

[13] Johnson, Hans, et. al. *Addressing California's Skills Gap.* Public Policy Institute of California, April 2016

[14] California Community Colleges Student Success Task Force. *Advancing Student Success in the California Community Colleges.* January 2012

[15] California Community College System Board of Governors. *Task Force on Workforce, Job Creation, and a Strong Economy: Report and Recommendations.* November 2015

[16] Bailey, Thomas R. et. al. *Redesigning America's Community Colleges: A Clearer Path to Student Success.* Harvard University Press, 2015.

[17] California Partnership for the San Joaquin Valley. *Regional Industry Cluster Analysis and Action Plan.* September 2012.

[18] Klowden, Kevin and Hamilton, Priscilla. *Local Harvest.* Milken Institute, April 2014

Almost all segments of the oil and gas industry pay higher wages than the Kern County average because roughly 65% of the jobs require technical or advanced degrees.[19] Apart from oil and gas, Kern County is the home of the largest wind farm in the United States (Alta Wind Energy Center) and will soon house the largest solar power plant (MidAmerican Energy Holding Company's Solar Star Project) in the world.

Six key industries were identified due to their importance to Kern County (output and employment share), level of specialization, and growth prospects. While agriculture employs almost one-fourth of the county workforce, many jobs are low-paying and seasonal. The County faces challenges to find sufficient numbers of medical professionals and resources to serve the growing County population. Logistics, distribution, and tourism are rapidly growing industries in Kern County.[20]

From 2009 to 2015 gross domestic product created in Kern County has increased by almost $4 million. The Kern County Economic Development Corporation has targeted five industries to promote further economic development: (1) aerospace and defense; (2) energy and natural resources; (3) health care services; (4) transportation, logistics, and advanced manufacturing; and (5) value-added agriculture. In 2008, the Kern Economic Development Foundation developed a high school mentoring program with special emphasis on STEM disciplines, promoting soft skill and work ethic development, and fostering self-confidence and independence. [21] (Appendix B.2.)

The Employment Development Department's (EDD) employment projections by industry indicates that the greatest growth will be in the private education, health care and social assistance industry followed by the trade, transportation, and utilities industry. The top five industries expected to grow the most account for 75% of the new jobs. (Appendix B.3.)

Population Served: Bakersfield College
Geographically, the Kern Community College District covers 32,647 square miles. The service area assigned to Bakersfield College (BC) is not the largest geographically, but it is the most densely populated. Although the College's *assigned service area* includes 38 zip codes, the College has been attracting students from a wider area. From fall 2012 to fall 2016 97 percent of the student headcount came from the zip codes that are *inside* the *Bakersfield College assigned service* area.

Assigned Service Area
Twenty-three zip code areas were used to develop the demographic and economic profile. Excluded from the analysis are 15 zip code areas that are lightly populated or are associated with mailboxes. (Appendix B.5. – Zip code)

The population growth between the years 2010 and 2021for the BC service area is estimated to be 13%. The projected annual rate of population growth in the next 5 years, 2016 to 2021, is projected at 1.14%. Individual locations within the College's *assigned service area* have

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[19] Kern Economic Development Foundation. *The Economic Contribution of the Oil and Gas Industry in Kern County*, 2014. Michieka, Nyakundi. "Oil Prices and Employment in Various Sectors of Kern County," *Kern Economic Journal.* V. 17(3) 2015. Cox, John. "Oil Producers Pleased With $50 Oil But Still Not Hiring," *The Bakersfield Californian.* May 18, 2016

[20] Hamilton, Priscilla et. al. *An Economic Road Map for Kern County.* Milken Institute, March 2015

[21] Kern Economic Development Corporation. *Market Overview and Investor Directory.* 2016

different rates of growth with the cities of McFarland, Shafter, Bakersfield, and Wasco growing most rapidly.

The median age, in the low 30s, will remain relatively young. Out to 2021, the combined career choice (ages 15-24) and career start (ages 25-34) groups are projected to *increase by 1.3%* throughout the BC assigned service area and will continue to represent a substantial proportion of the overall population. Across the State, participation rates in the community college system are traditionally the highest among the younger adults, ages 18 to 24. In recent years 66% of the enrolled students at the College fall into the traditional college-age range of 18 to 24 years of age. The size of that group within the effective service area is critical to future enrollments.

The percentage of service area residents who have high school diploma or less is 55%. Students who are the first generation in the family to attend college face a very daunting task. The first generation are student who generally do not have a high level of familiarity with the higher education system and few role models to provide advice. The process of earning a degree and transferring involves navigating both the community college and the receiving four-year institution as well as knowing course articulations and requirements for transfers into a specific major. All of these factors stand as impediments for a large share of prospective college students.[22]

Over a fourteen-year period of time, 1996 to 2010, the College annually enrolled 50 or more recent graduates from 15 high schools that were the primary source of students and 10 to 49 students from five additional high schools. From fall 2011 to 2015 the average yield rates by district are shown in Appendix B.5. Of the districts sending high school graduates to the College in fall 2015, the average yield, portion of graduates attending the College, was only 23%.

The largest racial group in the College's *assigned service areas* has been White. But, the portion of the self-reported White group is expected to shrink 1.1% by 2021 while the portion of the self-reported Some Other group is anticipated to increase 0.9% by 2021. Hispanic ethnic residents currently constitute 54.5% of the population. The Hispanic ethnic group is estimated to continue increasing and will become 61.3% by 2021.

Across the State, participation in the community college system varies among ethnic and racial groups. However, young people of African-American and Hispanic heritage have historically participated in higher education *less* than Asian and White groups. Some community-specific participation rates are found in Appendix R.5.

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[22] Johnson, Hans and Sengupta, Ria. *Closing the Gap: Meeting California's Need for College Graduates.* Public Policy Institute of California. April 2009.

V. Internal Environmental Scan

Enrollment and FTES Trends
From fall 2011 to fall 2015 the unduplicated student headcount at Bakersfield College saw an annual *increase* of 3.2%. Between those fall terms the College has had a total *increase* of 2,772 students. Neighboring California community districts throughout the Central Valley, except for Fresno City College, experienced a decline in annual FTES after 2010-11. The details are found in Appendix C.1.

Bakersfield College Fall Term Unduplicated Student Headcount

Fall Term Headcounts							Absolute		Annual
2011	2012	2013	2014	2015	2016	Average	Change	%Change	% Change
17,157	17,040	17,408	18,321	19,929	21,955	17,971	4,798	28%	5.65

Source: California Community Colleges Chancellor's Office, Data Mart; analysis by Cambridge West Partnership, LLC

From fall 2011 to fall 2016 the Full-time Equivalent Students (FTES) increased by 1,390 FTES or 24%. Fall term FTES trends by locations where the College offered classes from 2011-12 to 2015-16 are found in Appendix C.2.

Current Program of Instruction
The current program of instruction was used to define the needs for instructional and student support space. The available instructional space determines the institution's capacity to produce weekly student contact hours (WSCH). The fall 2016 term was the baseline from which future needs for space would be determined. The detailed analysis of the projected program of instruction is located in the Projections for Future Growth chapter of this Plan.

The College offers a robust variety of instructional programs. Duplication in programs of study (AA and AS or AD-T and either AA or AS degrees in the same discipline) has been eliminated and highly specialized courses have been kept to a minimum. A listing of the programs of study offered and an accounting of awards granted from 2013-14 to 2015-16 is available at Appendix D. At the start of the 2016-17 academic year, the College was one of 15 community colleges authorized to offer a Bachelor's Degree program of study. Bakersfield is offering a Baccalaureate of Science in Industrial Automation. The degree is designed to support technical management, industrial safety, quality assurance, and other industry positions requiring more than the associate degree or a two-year certificate of achievement. In spring 2017 SB 769 was introduced as an opportunity to remove the 2023 sunset date from the current authorization for 15 pilot Bachelor's degree programs and to expand the authorization to another 15 programs. A link to the legislative language and additional context is found in Appendix A.1. SB 577 was also introduced to address the critical shortage of credentialed public school teachers. It would authorize the community colleges to develop teacher-credentialing programs. If enacted these two measures create additional opportunities for the College.

Time and cost to complete a degree is a primary concern the college is trying to address with guided pathways. In the past, students who graduated from the College had accumulated, on average, 85 credit hours or units, 25 more than the 60 required to earn the associate degree. In 2014-15 that excess credit accumulation represented approximately $1,049,000 in excess tuition payments, a potential crippling debt for students, and wasted taxpayer dollars.[23] The College has introduced nine meta-majors in order to reduce the accumulation of unnecessary units

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[23] Bakersfield College. *State of the College 2016-17.*

students commonly acquired and to help students choose a program of study path early in the college experience. The meta-major is a collection of academic programs that have related content and share requirements that will allow students to explore the broad field of interest without collecting excess units. They give students a sense of identity with the subject area and create greater motivation for students to make a commitment without having to select a narrow major in the first semester of college. The meta-major also enables faculty to do the necessary curricular work to clarify skills needed in advanced courses and eventual careers and to engage in cross-discipline discussions to clarify the general education courses needed in the programs of study. A listing of the meta-majors is found in Appendix E.

As of spring 2017 Bakersfield College had established twenty-seven Associate Degrees for Transfer (AD-T) and submitted another two proposals for the Chancellor's Office approval for a total of twenty-nine. Some 334 courses were identified in those twenty-seven transfer degrees as required or named as restricted electives. These courses must be offered at least once in a two-year cycle. Most courses were identified in only one transfer degree program; however, a limited number of courses were identified in more than two AD-Ts. MATH B22, Elementary Probability and Statistics, which is equivalent to PSYCH B5, Elementary Statistics for the Behavioral and Social Sciences, was named in nine AD-Ts. The complete analysis is in Appendix C.3.

The fall 2015 program of instruction consisted of 1,662 sections with at least one enrollment at census. Most (74%) of the sections were offered at the main campus or at the Delano Center (8%). However, another 7% of the sections were delivered as online instruction classes. Of the 478 courses offered in the fall 2015 term at all locations, 36 of them account for 50% of all enrollments in the term. Of the 69 subjects offered in that term, 10 accounted for 50% of all enrollments. There were more than 4,000 enrollments in each of these subjects- MATH, ENGL, and ACDV. The career and technical education divisions offered the widest range of courses. Details are found in Appendix C.3.

Scheduling classes at a large, complex institution such as Bakersfield College is a significant juggling act to balance facilities, faculty, weeks-duration, days, and time slots. It is particularly challenging to orchestrate coordinated time periods for classes with different numbers of contact hours and classes that run for different numbers of weeks. Also, some classes are offered to address the needs of cohorts of learners in special programs and others are offered off site and not on the main campus. Many of the conflicts identified at the main campus in the tables at Appendix C.3 flow from conflicts among these variables.

An analysis of the instructional periods used in the fall 2015 schedule indicated that there were six primary instructional periods related to the common two-days-a-week scheduling pattern (starting before 4:30 pm). Each primary instructional period lasted 85 minutes. However, there were a number of classes that were scheduled at starting and ending times or day patterns that conflicted with these primary instructional periods. Some of this potential conflict may have arisen from the differences in contact time required by courses with different units of credit and different combinations of lecture and laboratory modes of instruction. The tables in Appendix C.3 illustrate the fall 2015 term patterns and potential conflicts for classes scheduled to last the entire semester. One-fourth of the multi-day pattern of class meetings _did not_ conform to the dominant instructional periods. In addition, 104 classes were scheduled to meet only one-day a week during the prime morning hours. These instructional patterns can create potential conflicts in the efficient use of instructional space and block students from enrolling in classes needed to accomplish educational goals in a timely manner. Evening classes are those starting at 4:30 pm

or later. Evening classes primarily start at 6:00 pm but have various ending times. Details of the day and evening class schedule pattern analysis are in Appendix C.3

Students Who Attend the College
Students enroll in the College with hopes and dreams to pursue their goals in life. Sometimes those goals are not well-formulated or adequately informed at the start of their college experience, the matriculation process is intended to assist students to navigate the curriculum as they traverse through higher education.

A review of the initial goals reported on the application for admission to Bakersfield College from students who subsequently enrolled in the fall 2012-2015 semesters reveals that the majority of the students were interested in earning a Bachelor's degree, either without and after completing an associate degree. Students who attended for vocational education in general were mostly preparing for a new career. That segment of students interested in a vocational goal declined significantly from 2012 to 2015 as the economy improved. Those seeking basic skills curriculum or to complete high school credits also declined as the economy improved. The details of the student goal declarations are found in Appendix F.

The attributes of the students who attended in the fall terms 2011 to 2015 are summarized as follows. The details of these trends are found in Appendix F.

- The gender balance in the student body had not substantially changed over the fall 2011 to 2015 terms. As is the case in most of higher education, there are more females attending than males.
- The student population at the College is relatively youthful in that 66% of those who attended are under 24 years of age. The group that has grown the most from 2011 to 2015 is the recent high school graduate.
- The dominant ethnic group attending the College is Hispanic followed by the White racial group. Compared to 2011, the Hispanic group had grown the most by 2015.

The general time of day when students attend and the units in which they enroll are summarized as follows. The details of these trends are found in Appendix F.

- Most students attend classes during the day (classes starting before 4:30 pm) and that portion has been increasing at the expense of evening offerings from 2011 to 2015.
- On average two-thirds of the students attend part-time by enrolling in fewer than 12 credit hours. That is a common pattern in community colleges.

The most popular meta-majors are Health Sciences; Science, Technology, Engineering, and Math; and Social/Behavioral Sciences and Human Services. The disaggregation of students by ethnicities across the meta-majors is found in Appendix C.4.

From academic years 2012-13 to 2014-15 there has been an increase in the numbers of degrees and certificates awarded to Asian, Hispanic, and students who declared two or more races as their identity. Because they constitute the majority of students at the College, the Hispanic group has received between 50% and 58% of the awards in each of those academic years. However, when the proportion of awards is compared to the proportion of students by ethnic group, the Hispanic student group is under represented. Additional details are in Appendix D.1.

Future issues to consider from the internal scan include:

- Analyze class start and end patterns if different from primary instructional periods to determine costs and benefits.

- Evaluate trend of increasing day classes (classes starting before 4:30 pm) at the expense of evening offerings from 2011 to 2015.

- Examine reasons why the majority of BC students attend part time (fewer than 12 units) to rule out institutional barriers, enrollment management issues or other unintended obstacles to completion.

- Analyze scheduling conflicts within pathways.

- Consider scheduling innovations such as Reg365 light of pathway needs to reduce time to completion

VI. Institutional Effectiveness

The Bakersfield College mission and vision must align with mission and vision of the statewide system established through legislation. The mission of the California Community College System has evolved and expanded over time in response to the changing needs of students, communities and the state (See Appendix IE.1). The Colleges provide:

- Associate degrees and certificates shown to increase earnings and enable students to move forward in their professional development
- Transfer education to public and private colleges and universities;
- Basic skills and English language proficiency for increasing numbers of students;
- Economic and workforce development to meet the ever-increasing demands of career-oriented young people, adult learners and incumbent workers; and
- With adequate funding, lifelong learning and educational opportunities for all Californians.

The California Community College vision presents the preferred future of the Colleges: California's Community Colleges provide upward social and economic mobility through a commitment to open access and student success by delivering high quality, affordable and comprehensive higher education.

This document will cover institutional effectiveness organized by the very broad mission of the California Community Colleges: Basic Skills and English Language Proficiency, Transfer, and Economic and Workforce Development -Career Technical Education (CTE) and BC's Rural Initiatives**.**

Institutional Effectiveness Department
In September 2016 BC's current Institutional Effectiveness department was established to provide data and evaluation of the college's work in order to support effective use of resources. Prior to that date the typical institutional effectiveness tasks were distributed across a variety of leadership areas and the KCCD Institutional Research department. KCCD IR provides essential analysis for Equity, Achieve the Dream (ATD), CCC Scorecard, IEPI and other reporting requirements. KCCD IR prepares a comprehensive and disaggregated cohort report called Elements of Student Success (ESS) that integrates important data required for many reporting and decision-making functions. KCCD IR also prepares an annual Program Review dataset that is extensively used by programs for preparation of annual program review, technology, budget and personnel requests.

The general function of Institutional Effectiveness is to provide data to evaluate the effectiveness of activities and strategies for visioning and planning activities. This work should ensure efficient and effective allocation of resources in a way that optimizes student success. (See functional flowchart in Appendix IE.3).

Institutional Effectiveness Interventions
Over the last three years, several areas have been the focus of increased institutional effectiveness; each one has equity integrated within the analysis and goals, not as an after-thought:
- Pathways Clarification for Completion & Equity
- Multiple Measures Placement & Equity

- Remedial Education and Accelerated Coursework & Equity
- Student Services and Matriculation & Equity
- Dual Enrollment & Equity
- Coordination and Alignment with Transfer Colleges & Equity
- Coordination and Alignment with Career and Industry Outcomes & Equity

Guided Pathways as a Framework for Interventions

The Guide Pathways framework at BC, consists of four areas of focused efforts: 1) clarifying student pathways; 2) reforming students' transition to college; 3) creating supports to keep students on their selected academic path; and 4) assuring that students are learning skills, knowledge, and abilities to prepare them for employment or transfer.

Pillar 1: Clarifying Pathways

Data reported in the KCCD Elements of Student Success clearly shows completion of SEPs (Student Education Plans) as being predictive of degree and transfer completion. The completion of SEPs has gradually increased each year. Data on the trends for SEP completion within disciplines is included in Appendix IE.4. Equity also focused on the number of SEPs completed by the identified student groups (African American, Hispanic, Foster Youth and Veterans). Program managers and Educational Advisors created specific strategies to complete SEPs with these groups. By Fall 2016 the rate completed SEPs for African American students had surpassed the college average. These gains in SEP completion should increase clarity and completion of pathways.

Percent of Completed Student Ed Plans
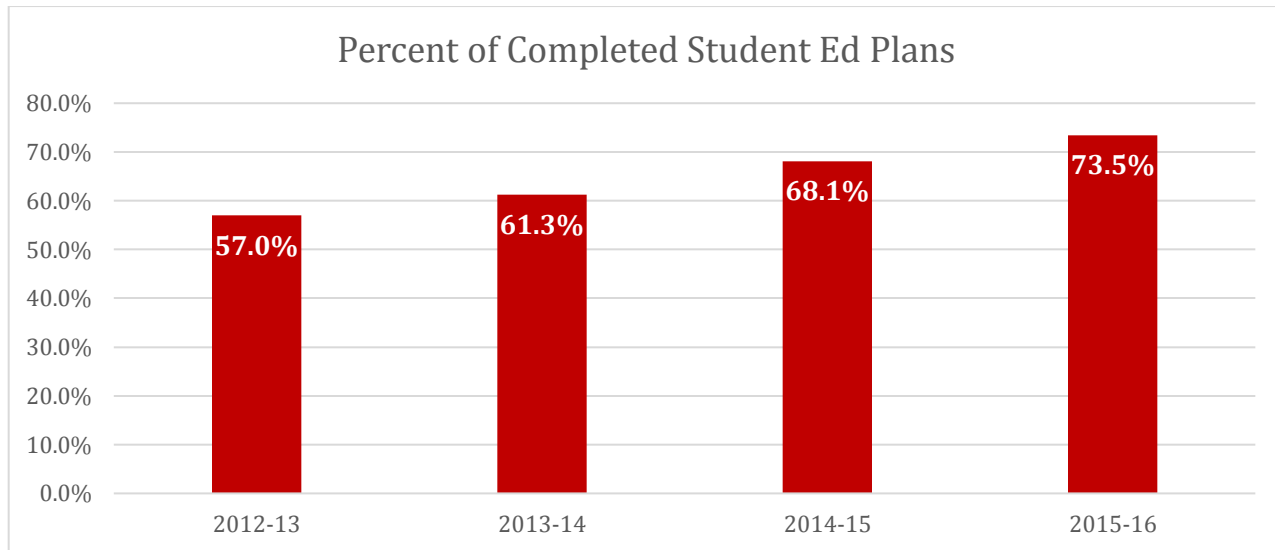
The clarifying pathways work, particularly alignment of transfer degrees, has been significant with an impressive college-wide effort. AD-Ts are valuable because the degrees carry legislated power (SB1440) to guarantee that every course counts as a package; students value these degrees and are selecting them in increasing numbers. BC began with just 3 Associate Degrees for Transfer (AD-T) in 2011 but saw the approval of the 27th unique AD-T in 2017 and received a statewide award for this phenomenal increase in degrees and the work it involved.

Bakersfield is currently working with CSUB and other CSUs to try and make the transfer of ADTs seamless. Several meetings with the CSUB Provost, Dr. Jenny Zorn and the Associate Vice President, Dr. Jaqueline Mimms, along with discipline faculty discussions have clarified issues and gaps in transfer and curricular alignment. The work will be on-going with data sharing and admissions and counseling co-laboring between the institutions with attention on the SB 1440 guarantees.

Number of ADTs 2012-13 to 2015-16
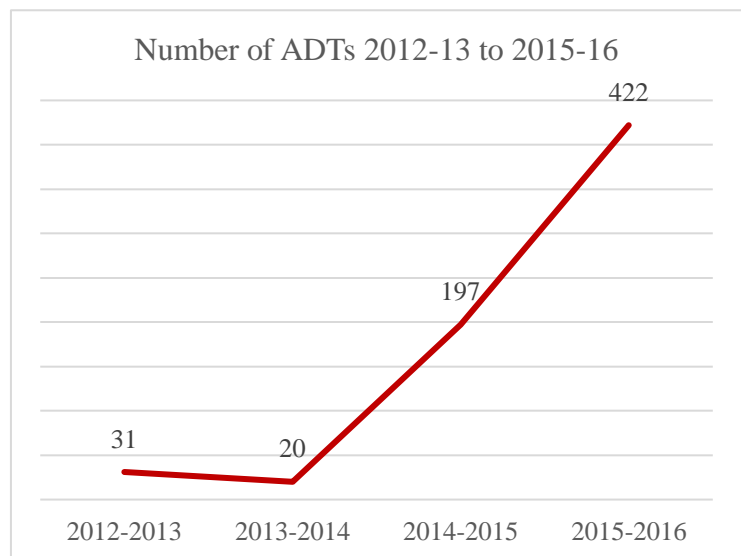
Figure 1. Trend in Number of Associate Degrees for Transfer Awarded at Bakersfield College
Source: Bakersfield College. Office of Institutional Effectiveness

Additionally, BC has scaled up from 68 to 164 C-ID[24] courses in the past three years, which guarantee course-to-course articulation and transfer to CSU or UC institutions. The outcomes of BC's clarified pathways efforts paid off with increases in transfer degree awards and the largest jump in CSU transfers ever recorded for BC. Overall high-level completion outcomes (degrees, certificates and transfer) are increasing as a result of clearer pathways and student educational planning.

Bakersfield College Outcome Trends[25]

Academic Year	Associate Degrees for Transfer Awarded	Overall Awards	Transfers to CSU, UC and Private Colleges
2012-13	31	1,822	1,022
2013-14	20	2,040	975
2014-15	197	1,967	1,125
2015-16	422	2,263	1,050

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[24] https://c-id.net/course_compare.html
[25] Bakersfield College. Office of Institutional Effectiveness

BC Hispanic Student Transfers to CSU's
2001-06 to 2014-15

	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
Series1	87	118	112	109	104	124	126	112	132	379

Although the rate of Hispanic transfers still exhibits a gap, that gap is being mitigated and a valuable strategy was developed. Additional information on transfers, including transfer institutions and majors is available in the Appendix T.3.
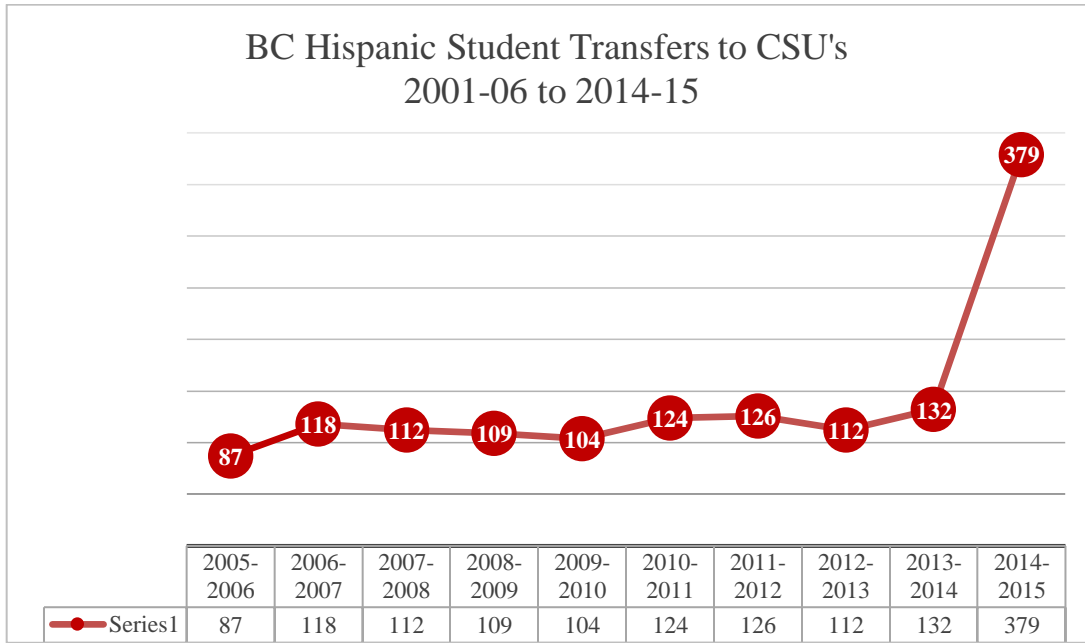
Pillar 2: Getting on the Path

BC has utilized several innovative strategies for increasing student success, reducing the time to completion, and more effectively using institutional resources.

Re-designed Matriculation Interventions

BC works with 41high schools in Kern County, including the Kern High School District, Wasco Union High School District, Delano Union School District, and the McFarland Union School District, to provide on-site matriculation visits. High school counselors partner to provide assessment testing and orientation. Because of these strong partnerships with the high schools, the college has seen an improvement in both the quality and quantity of students who are fully matriculated prior to the start of their first academic year.

Workshop[26]	# Workshops	# Students Served
Step 1 – Application	34	1502
Step 2 – Orientation	44	1784
Step 3 – Assessment	59	2390
Step 3 – Assessment	34	744
Step 4- NSW & ASEP	81	2114
Step 5 – Registration	13	NA
Totals:	**265**	**8534**

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[26] Bakersfield College. Office of Institutional Effectiveness

Student Services

Greater integration of student services and instruction has increased student completion and achievement, and has also served as the foundation for our greater pathways work. Operationally, matriculation and equity grants have funded the hiring of over 20 additional counselor and educational advisors. Program managers and directors to address specifically identified populations with disproportionate impact have directed resources to Dreamers, Rural Initiatives, African American students, Foster youth, Veterans, Inmates and others. As evidence of the improved delivery of services, the Student Services Support Program (SSSP) grant, which provides funding for matriculation services and is based upon student service outcomes contacts, increased by 22% from $3,473,756 to $4,231,081[27] from 2015-16 to 2016-17.

Welcome Center

The Welcome Center is the Bakersfield College hub for all new and continuing students and visitors. With the assistance of the Student Ambassadors, the Welcome Center provides a one-stop location for information regarding Student Services such as Admissions & Records, Counseling, Assessment, Financial Aid, and general questions. Laptops are available to apply to the college, register for classes, check holds, print class schedules, and much more. Campus Tours are also conducted by our Student Ambassadors. Students' first impression of BC is now significantly more positive due to immediate access to assistance in the Welcome Center. Institutional changes have guaranteed that BC goes the extra mile to engage students and help them get on the path of completing college.

Multiple Measures Placement

Historically, 80-84% of incoming students were placed into remedial coursework where success completing the remedial sequence was very low and few made it through the entire sequence to college-level gateway courses. More accurate placement using high school GPA has shown improved success and sequence completion for thousands of students. This success occurs not only where the students are placed, but also in subsequent college-level coursework. Data below shows the increased number of students placed into college-level Reading, English and Math.

Placement into College-Level Coursework				
	2013	2014	2015	2016
Reading	60%	59%	N/A (technical issues)	65%
English	29%	31%	N/A (technical issues)	54%
Math	3%	12%	N/A (technical issues)	29%

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[27] Funding is determined by student services specifically provided for Orientation, Assessment, Student Education Planning (SEP) and Counseling.

TRADITIONAL VS ACCELERATED SUCCESS

Figure 3. Course Success

Figure 3. Course Success
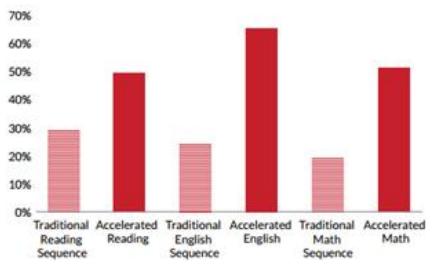
Accelerated and Re-Designed Remedial Coursework

In addition to multiple measure placements, which are able to effectively place more students at higher levels of Math, English and Reading, accelerated coursework also results in greater success and completion, relative to traditional remedial sequences. These improvements in student placement and velocity translate to efficiency and savings for the student and the taxpayer.

Summer Bridge

BC also expanded its Summer Bridge, an extended orientation program for incoming freshmen, from serving 70 students in 2014 to over 400 students in summer of 2016. Students participating in this summer orientation are more successful in their first semester than students who do not have this preparation. BC is continuing to scale this strategy up each summer. For more information, see the Basic Skills and English Language Proficiency chapter of this Plan.

Dual Enrollment

Collaboration with high schools to help students increase completion by gaining units and college experience through dual enrollment has expanded. A program manager was hired through additional funding. The program is benefitting many students but began without adequate oversight and coordination. A senate taskforce addressed many issues and continued work is important to success. More about dual enrollment is in the Basic Skills Chapter.

Pillar 3: Stay on the Path
Creating Supports to Keep Students on their Path

Academic support programs are designed with the characteristics of BC's current and potential students in mind. BC students are primarily first generation and from low-income families. Thirty-three percent of those living in the rural communities of Kern County are living below the poverty line. Lack of access to technology further reduces their ability to study and be successful on their path to attaining transfer, a college degree or certificate. To compensate for these factors, BC has used grant funding to innovate academic support services as follows:

- The student success lab, a self-paced computer-based practice lab
- Supplemental instruction (SI) providing student-led study groups outside of class
- Tutoring providing one-on –one peer tutoring
- Writing center support providing specialists on focused writing guidance
- The 'Extended Classroom' pilot program for writing and math courses in which faculty and SI leaders meet with students directly after class to work on assignments

Ultimately, this increased support results in more success and more students completing gateway English and Math courses within a shorter period of time.

Success in Math Gateway Course

African American gap is being closed

Hispanic gap is being closed

	ALL	AFRICAN AMERICAN	HISPANIC
2009-10 to 2012-13	60%	44%	57%
2011-12 to 2013-14	69%	55%	68%

Success in English Gateway Course

Gaps are being mitigated as success increases

	ALL	AFRICAN AMERICAN	HISPANIC
2009-10 to 2012-13	69%	57%	64%
2011-12 to 2013-14	77%	77%	73%
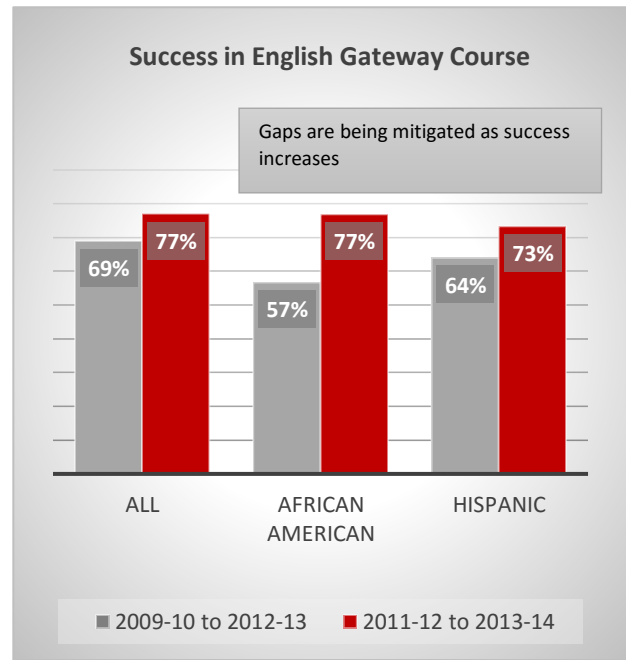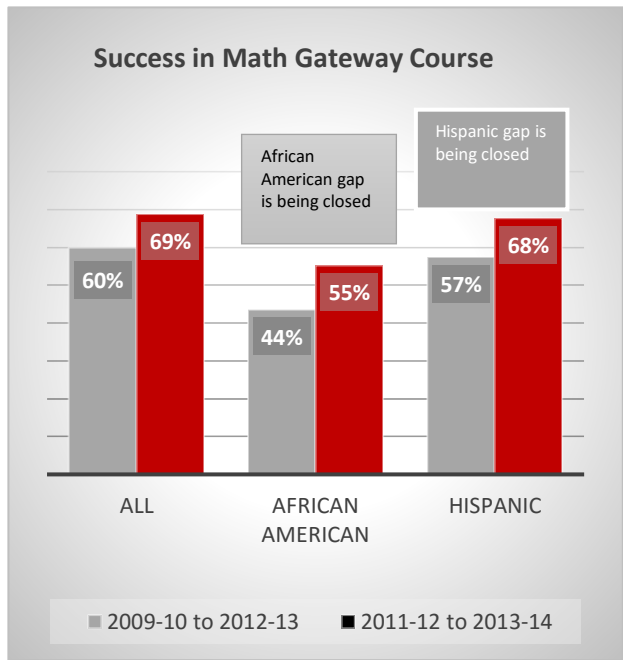
Source: Bakersfield College. Office of Institutional Effectiveness

Pillar 4: Ensuring Learning

Bakersfield College has been strategic in its review of data to determine which programs to enhance, revitalize or develop. Factors in making decisions include review of program outcomes, core indicators, local, regional and state employment data and job market trends. The focus is on building and enhancing programs that will provide a sustainable living wage for program graduates. Examples of new programs include Commercial Music, Health Information Technology, Media Arts and the Paramedic Program. Programs that are being enhanced or revitalized include Electronics, Automotive Technology and Construction.

The ultimate purpose for Guided Pathways is to assure that students benefit from their education. Within the region, more than half of the students earning awards in Radiologic Technology, Manufacturing, and EMS come from Bakersfield College; with even higher percentages for Architecture (71%), Nutrition (75%), Drafting (78%), and Constructions Crafts (89%). More than 40% of the skills-builders within the region who experienced a wage gain came from Bakersfield College, typically by earning credits in architecture, drafting, fire technology, and nutrition. Nearly all CTE program areas exceed the college's average success rate of 66%. Some highlights in the data include the high course success rates found in the following areas: Nursing (89%); Health professions (89%); Human services (90% compared to 64% in the region); EMS (10 percentage points higher than the region's average).

Other Important Academic Affairs Initiatives**:** BC has committed to establish a 'college going culture' in Kern County. The Kern County educational attainment rates of 15 bachelor's degrees per 100 residents is less than half the average attainment for California which is 32 BAs per 100 residents.

To this end, BC is collaborating with community partners and strategically developing resources to address this major goal. Prime examples of effective strategies that have been implemented over the past three years are the summer programs for middle school students

2017-2020 Educational Master Plan

supported by industry partners, Chevron and the Wonderful Company. *Project Lead the Way* and *Ag Camp* are designed to encourage and develop interests in science, technology, engineering, and math and careers in agriculture. Projects like BC's ASTEP, an Umoja community, combines an academic focus that is culturally responsive to African American students with co-curricular activities and mentor support outside of the classroom.

The Promise ensures that 65 local "promise" students will have a smooth journey from high school through the completion of this Bachelor's Degree.

The dual enroll program partnerships with Kern High School and Delano High School Districts are designed to promote more Kern County students entering college and earning a degree or certificate. Although the project has been resource intensive in its initial form, the second year of this program is showing positive results that could be replicated. Dual enrollment partnership with Kern High School District expanded to over 130 sections of college level courses in 2016-17. The program now includes a partnership with Delano Joint Union High School (see Rural Initiatives). Dual Enrollment is an integrated element of 5 special funded projects: Ag Pathways (CCPT1), CTE Pathways (CCPT2), Health Programs (Cal Endowment), 1+1+2 = Game Changer at Arvin High School (Board of Supervisors) and College Futures.

These collective, innovative approaches are necessary in order for Bakersfield College to significantly impact educational attainment rates in Kern County and improve the county's economic future.

Processes to Implement and Track Institutional Effectiveness

The Bakersfield College Education Master Plan (EMP incorporates the Mission, Vision and Goals and in the development of a 3-year review and visioning for the next 3 years. A flow chart describing the integration of college plans, allocation of resources and reporting to close the loop, is found in Appendix IE.5. Implementation of the EMP is directed by the work of the Committee[28] that determines specific college initiatives in five areas:

- Student Learning
- Student Progression and Completion
- Facilities (and Equipment)
- Oversight and Accountability
- Leadership and Engagement (which includes Decision-Making and Governance as well as present and future planning)

These areas represent the organization of the Renegade Scorecard, which posts important institutional data in a public location. Bakersfield College adopted a three-year cycle for developing, implementing, and evaluating its goals and strategic plan. Two Strategic Focus documents served as annual updates to the original plan. Now in the third year of the cycle it is time to evaluate the 2012-13—2014-15 work and develop goals and Strategic Directions to shape the work of the College for the next three years. The visual of the integrated planning and budgeting at BC is located at Appendix IE.5.

The granular work done to fulfill the strategic directions within departments and programs is integrated within the Program Review Process. This process occurs annually as the Annual Program Review Update, in order to tie to budget and resource needs. An additional layer of

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[28] Strategic Directions https://committees.kccd.edu/committee/strategic-directions

program review called the Comprehensive Review (in comparison to the Annual Update) occurs in a more wide-ranging format every three years, rotating among the programs[29]. Program Reviews are posted on the website and cover instructional, student service and administrative areas. The webpage provides information on the training and mentoring to complete this process.

STRATEGIC GOALS	STRATEGIC INITATIVES	BENCHMARKS DATA STRANDS
Student Success Become an exemplary model of student success by developing and implementing best practices	**Student Learning** A commitment to provide a holistic education that develops curiosity, inquiry, and empowered learners	**SLOs/Assessment**
Professional Development Provide relevant, timely professional growth opportunities to enhance the effectiveness of our employees and institution	**Student Progression & Completion** A commitment to reduce the time for students to complete educational goals	**ARCC**
Communication Enhance collaboration, consultation, and communications within the college and with external constituents	**Collaboration & Partnerships** A commitment to engage in college-wide and community activities	**Operational Data**
FACILITIES, Infrastructure, &Technology Improve maintenance of college facilities and infrastructure	**Fiscal Sustainability** A commitment to incorporate 21st century technologies and processes to strengthen the long-term fiscal sustainability	**Perception Surveys/CCSSE**
Oversight & Accountability Improve oversight, accountability, sustainability, and transparency in all college processes	**Engagement, Peer Learning, &Study Series** A commitment to creating a learning organization dedicated to advancing our individual and institutional knowledge and creativity.	
Integration Implement and evaluate existing major planning processes		

Source: Bakersfield College. Office of Institutional Effectiveness

Each program review aligns program work with the strategic directions creating a linkage between goals and action. The Appendices CTE.6, G.1, and PRE.1 include a summary of various program review goals by programs. Governance committees responsible for carrying out or tracking initiatives complete a report biannually. Strategic Directions reviews progress and evaluates each of the initiatives twice annually in the Fall and in the Spring regarding completion, ongoing perpetual work or needing attention.

The Strategic Directions work implements the EMP goals and allows program areas to see how they further Institutional goals. Program review is an inward look to evaluate program effectiveness. The closing the loop document produced twice a year by the president, describes how the budgeting and resource allocation (including hiring) fulfilled the priorities identified from Program Review, Strategic Directions and the EMP.

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[29] Program Review https://committees.kccd.edu/bc/committee/programreview

VII. Basic Skills

Connecting with Students Early and Often –School Relations and Outreach In 2013 Bakersfield College began two significant institution-transforming strategies related to the second pillar of Guided Pathways - Entering the Path:

- Outreach and School Relations department was created
- Early adoption of an expanded multiple measures placement model

The Outreach and School Relations Department works directly with 41 high schools in Kern County including Kern High School District, Wasco Union High School District, Delano Joint Union School District, and the McFarland Union School District. Strong partnerships with these districts have produced improvement in both quality and quantity of students who are fully matriculated prior to their first semester in college.

This proactive approach at the high school sites by School Relations, Counseling, and Assessment staff provides area seniors with the core services of matriculation: Orientation, Assessment, Counseling/Advising and an Abbreviated Education Plan. These visits began with 8 high schools in 2013-14 and expanded to all 41 public high schools in 2015-16. BC has provided 265 matriculation workshops and served 8,534 high school students. A close working relationship with high school staff facilitates the visits. Staff are also trained as assessment proctors. SSSP funded the expansion of counseling and advising staff. College research shows that completion of these core matriculation steps contributes to student success. (Appendix PRE.1 and PRE.2 – Matriculation Data).

Bakersfield College[30]	Fall 2014 Service Received	Fall 2015 Service Received	Fall 2016 Service Received	Change Fall 2014-Fall 2016
Totals	22,488	34,855	37,114	**65%**
Academic/Progress Probation Services	348	887	1,039	**199%**
Counseling/Advisement Services	8,158	10,783	12,594	**54%**
Education Plan Services	4,837	6,600	6,552	**35%**
Initial Assessment Services Placement	1,743	2,312	2,163	**24%**
Initial Orientation Services	1,891	4,928	4,773	**152%**
Other Services	5,511	9,345	9,993	**81%**

Over a three-year period, these factors contributed to a 14% FTES increase and a 13.3% increase in Headcount to 27,627.[31]

Basic Skills Re-Design Placement and Coursework Innovations
In 2014, the college initiated the Making it Happen (MIH) project. Basic skills faculty redesigned the First-Year Student Success course, ACADV B55. This course became the

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[30] CCCCO Datamart; Matriculation Services Summary Report
http://datamart.cccco.edu/Services/Student_Success.aspx accessed 3/12/2017
[31] CCCCO Datamart http://datamart.cccco.edu/Students/Student_Term_Annual_Count.aspx

foundation of the Summer Bridge Program, which brings incoming freshman to the campus before the fall semester begins. Basic Skills education at Bakersfield College has significantly changed in terms of coursework and success data since 2014. BC re-engineered Basic Skills education in the way students are assessed and placed into course work, the coursework is delivered, and how students are supported. The comparison of placement and course redesign are illustrated below.

Developmental education processes	2013-2014 Status	2016- 2017 Status	Vision
ACDV B55 morphing into Summer Bridge*	3 sections; 95 students; 77% success rate	18 sections; 467 students; 88% success rate	All entering high school students
Student Placement	Transfer-Level Reading 60% English 29% Math 13% Int. Alg. &↑ Transfer Math 3%	Transfer-Level Reading 65% English 54% Math 40% Int. Alg. ↑ Transfer Math 29%	Use HS GPA, AP, CLEP, EAP, Dual enrollment, and military credit for highest placement increasing completion.
Testing Placement Methodology	Students move up one level from assessment test based upon high school GPA & local BC GPA & HS courses	Students placed at highest level based upon assessment test and high school GPA	Students placed at highest level using best variables with greatest success outcomes.
Reading Coursework	Courses begin at four levels below	Courses begin at two levels below; Integrated Reading & Writing	Contextualized.
English Coursework	Courses begin at Three Levels Below	Courses begin at two levels below & are accelerated	Pathways contextualized English
Math Coursework	Courses begin at Four Levels Below two buckets for college level math	Courses accelerated levels 4 & 3 below New accelerated statistics pathways	Math integrated with pathways and majors

Implementation of multiple measures for placement has transitioned over the last three years and currently follows the placement patterns validated by the state Multiple Measures workgroup. This has significantly shifted students into college level courses.

	Before 2013-14	Current
Transfer-Level Reading	60%	65%
English	29%	54%
Math Intermediate Algebra and higher	13%	40%
Transfer Math	Transfer Math 3%	29%

The 2016 multiple measures placement model resulted in some students moving up one, two, three or four levels. This supports the questioning of the reliability of a single, high-stakes test as the placement measure. The additional innovation of redesigning curriculum and the new

accelerated coursework in Reading, English and Math saved additional time and money. Academic Development, English, and Math have redesigned most pre-collegiate courses. Courses are also offered through compression scheduling or curricular redesign of levels. Faculty in the English for Multilingual department are developing two non-credit courses and certificates.

The effect of the current multiple measures placement model is extensive. It is based on various measures and it is possible that students can move multiple levels beyond the assessment test placement. The table below shows the significant number of shifts and illustrates the effect of multiple measures placement in terms of time and money.

Discipline[32]	Moved 1 level	Moved 2 levels	Moved 3 levels	Moved 4 levels	Total levels changed	Average Units Saved	Approx. cost in units
Reading n=3805	642	100	41	0	965	3036 units	$139,656
English n=2952	1141	177	17	21	1630	6184 units	$284,464
Math n=3903	665	404	209	1	2104	9696 units	$446,016
Totals	2448	681	267	22	4699	18,910	$870,136

Expanded development of accelerated coursework and compressed scheduling saves additional time and money. Compressed coursework, two 8 week courses in one semester saves students time but costs the same. (Appendix PRE.1 - Placement and course changes)

Student Success in Remedial Education

Placing students in higher levels has a significant impact on progression through the basic skills pathway. Dr. Peter Rile Bahr, conducted an external analysis to examine the overall basic skill pathway. Prior to prior to 2013, the problem within basic skills was not course success but rather loss of students as they progressed through the levels. For instance, in Math between 11% and 24% of students, who were in a course, never took the next course; in English between 9% and 20% of successful students never registered for the next course. This resulted, students who would attrition out or wither away within the elongated pathway. Placing students in the appropriate level, accelerating and compressing coursework proved to significantly increase progression through the basic skills pathway. (Peter Bahr Report, 2016).

However, placing better students at higher levels resulted in slightly decreasing student success in the Basic Skills courses. The previous success rates were artificially higher because students who were succeeding belonged in higher-level courses. In 2013, 13,363 students completed Basic Skills at a 62% success rate; however in 2015-2016, 14,298 students in Basic Skills courses had a 57% success rate[33]. Progress through Basic Skills and successful completion of English transfer rates increased regardless of a student's starting level. Math remained at a fairly constant success rate for all levels. Reading success rates increased there were 119 more successful completions to transfer level English. This is significant considering many more students were multiple measured into transfer level Reading during this time period. (Appendix PRE.2 - Data).

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[32] Bakersfield College. Office of Institutional Effectiveness
[33] CCCCO Datamart Basic Skills Outcomes http://datamart.cccco.edu/Outcomes/Course_Ret_Success.aspx

It should be noted that the success rate in transfer coursework has remained stable at 69%. But that data includes 13,058 more enrollments in 2015-16 than in 2013-14. There was also an additional 9120 successful course completions.[34] These results indicate that the new multiple measure placement for students was warranted and resulted in no fewer success rates. It may point to the need for further curriculum revision in order to reverse assumptions made about levels and rigor from previously incorrect placement of students with higher-level skills.

In order to help those students who were appropriately placed in the basic skills, and support those who placed higher, innovations in academic student support services became an increasingly important strategy. Student focus groups indicate that the leap from high school to college level courses is significant and difficult.

First Semester Course Success for Summer Bridge Students
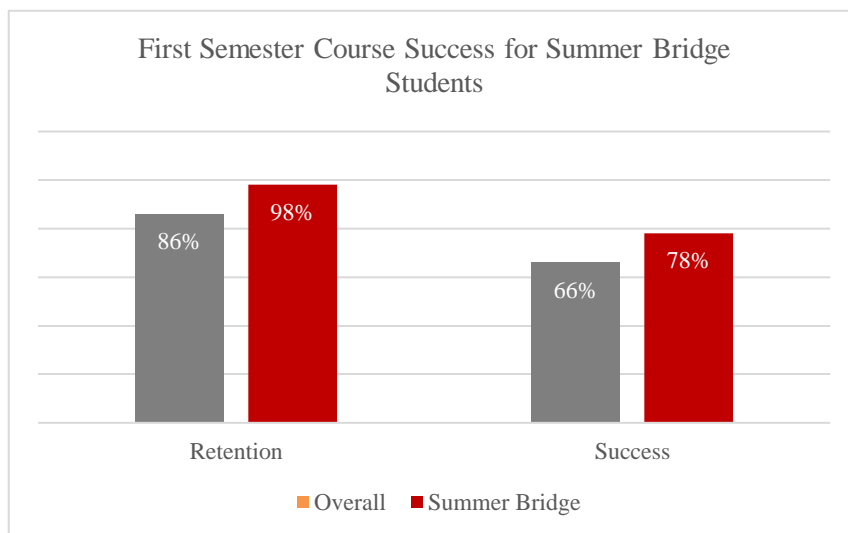
Study skills and college level sophistication represent important ongoing challenges for incoming freshmen. The College goal is to have all incoming freshman attend Summer Bridge.

Basic Skills Programs

1. Expand the use of multiple measures (advanced placement exam scores, military service, College Level Examination Program or CLEP) to inform course placements.
2. Strengthen Academic Support Services for Basic Skills students
3. Increase the numbers of high school students who complete the CSU Expository Reading and Writing course (ERWC).
4. Create a homegrown math course similar to the ERWC as an alternative math pathway to college level math.
5. Expand opportunities for dual enrollment
6. Incorporate completion of the Free Application Federal Student Aid (FAFSA) at high schools to increase number of students receive early approval for financial aid
7. Program reviews for basic skills disciplines identified future goals to advance their instructional programs. (Appendix PRE.3) – Goals)

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[34] CCCCO Datamart Transfer outcomes http://datamart.cccco.edu/Outcomes/Course_Ret_Success.aspx

VIII. Transfer Pathways

Public Policy and Initiatives – Associate Degrees for Transfer and C-ID

Transfer is a fundamental part of the Bakersfield College mission and Guided Pathways. Public policy has encouraged more transfer activity and the College has aggressively developed Associate Degrees for Transfer (ADTs) and twenty-eight have received state approval. In the last three years, the number of students completing ADTs has increased from 20 to 422. While not legislated, the University of California recently (UC) took steps to clarify transfer requirements by articulating specific pathways for its 21 most popular majors. The clear pathways established by the ADTs and the selected UC majors improves the ability of Bakersfield College students to seamlessly transfer. (Appendix T.1 – public policy and transfer; Appendix D – ADT awards; Appendix T.2.- ADT alignments)

California now has a system to facilitate articulation of individual courses across public higher education systems. C-ID (Course Identification Number) status is given to community college and CSU common courses. C-ID designation benefits transferring students who may not have a guaranteed transfer with an ADT. Bakersfield College faculty have scaled up their efforts and now have 164 courses that qualify for C-ID status, an increase of 96 courses.

Curricular changes were made in order to provide students with the ADT guaranteed transfer option and to reduce the time to transfer. Faculty developed new courses and revised curriculum. To stay within the 60 unit limit, some general education courses were reduced by a unit: English B1A - Composition, MATH B22 - Elementary Probability and Statistics- Psychology B5 - Elementary Statistics for the Behavioral and Social Sciences, and Philosophy B9 - Thinking and Advanced Composition. These changes have provided additional ADT options for BC Students. To reduce time to completion of math transfer requirements, a math course for non-STEM majors has been developed. Math B65 - Intermediate Algebra for Statistics, shows promising results in reducing progression time. The College continues to review programs of study to ensure alignment with transfer institution requirements and career relevance.

Collaboration with Industry Partners, KHSD and CSUB

The College has worked closely with industry partners like Chevron and KHSD to increase the number of students who transfer. Chevron's support of Project Lead the Way, led to the development of summer STEM camps, for middle and high school age students. Project Lead the Way targets students who are under-represented and underserved student in higher education. These students who also represent the majority of BC's student population. The pilot for the summer camps has been so successful that last year the program expanded to seven academies. It is anticipated that more students will attend college and become STEM majors as a result of this early outreach and education.

BC and CSUB science faculty have collaborated on numerous NSF grants over the years. More recently CSUB secured National Science Foundation grant to support the CSUB electrical power engineering program. BC will collaborate by creating an electrical power course. This will provide a clear pathway and a local option for transfer. The grant funded a Program Manager to facilitate broader-based articulation efforts with CSUB and provide leadership for Project Lead the Way.

Pre-Law Transfer Pathway

The College is one of 24 California community colleges with a formal agreement that provides greater transfer access to six California law schools: University of Southern California, University of San Francisco, Santa Clara University, Loyola Marymount University, U.C. Davis, and U.C. Irvine.

This agreement was an outcome of the State Bar of California's Council on Access and Fairness, led to the Community Colleges Pathway to Law School Initiative. In just two years, forty-nine students have enrolled. Bakersfield College has created a student club, pre-law society and assigned an educational advisor to the program. A Pre-Law Advisory Council, comprised of 12 lawyers and judges, is very engaged in supporting the program and its students. BC hosts an annual Law Day Conference. Future goals include scaling up recruitment and providing access to internship opportunities.

Transfer Center Services

The Transfer Center Services support prospective transfer students through direct counseling, transfer institution selection and requirements, educational planning. Workshops and events include university on-site admissions and workshops to help with the transfer application process.

BC hosts a well-established CSUB Satellite Transfer Center, that provides on-site advisors to facilitate seamless transfer. This on-site service works particularly well for Engineering and RN students where clear pathways are established. CSUB's advisors have been engaged in the discussions about creating seamless transfer pathways for all of BC's Associate Degrees for Transfer and improving processes.

University of California Berkeley, UCLA, Davis, and Irvine are all recruiting students from rural community colleges. Bakersfield College students will benefit from this recruitment. Currently, an admissions representative from UCLA visits the Panorama campus every month. Once the program is fully implemented, BC students and counselors will also participate in field trips to UCLA.

Transfer Data

Most Bakersfield College students transfer to the CSU system, in particular, CSU, Bakersfield. The top transfer destination in the UC system is UC, Davis. Private college transfers are between 25% and 34%, although this percentage has decreased the last two years. During this same time the rate of transfers to CSUs increased. Transfers to private colleges that offer online delivery has increased; the most popular out-of-state institution is University of Phoenix. Fresno Pacific University (FPU), has the most transfers for a private in-state institution. FPU primarily serves students seeking teaching careers in public schools. Appendix T.3 –Detailed transfer data)

On average 39.3% of Bakersfield College students, who indicated their intention to transfer, completed the transfer process within six years of entering Bakersfield College. A detailed longitudinal analysis of transfer enrollments shows that over 50% of students who expressed an intent to transfer, did eventually transfer. (Appendix T.3 – Transfer Velocity)

Guided Pathways and Kern Promise

Guided Pathways is one of BC's signature approaches to increasing degree completion and transfers. Preparation for these approaches led to extensive research about the transfer process, in particular to CSUs. This research identified problems with the transfer institution's acceptance of ADTs, specific courses within ADTs and a requirement to have general education certified to receive full credit. Changes in curriculum at the receiving institution led to a misalignment of the ADT and loss of the guaranteed transfer. CSUB and BC faculty and administrators have initiated a dialogue and will established a timeline to validate further alignment of ADTs. (Appendix T.2. – Supporting data and ADT alignment)

Kern Promise

The College launched the *Bakersfield Renegade Promise*, in fall, 2016. The Promise is another signature approach to increasing degree completion and transfer. The Promise ensures that students can earn an Associate Degree for Transfer (ADT) and transfer with junior status to a CSU within only two instructional years. The pilot developed into the *Kern Promise* and is now supported by a

$750,000 state grant and the Bakersfield College Foundation. Students are provided with structured support and priority access to courses. The first Kern Promise students are registered for the fall 2017 semester. Criteria for the program includes: a high school 2.6 GPA; placement into college-level English and Math English; a major with an associate transfer degree; completion of financial aid applications and a full time student and maintaining a 2.0 GPA. The Kern Promise is designed to engage students in a holistic educational experience through a mutual responsibility model where students commit to uphold certain academic standards while the College commits to provide quality student and academic support services necessary for a timely completion of their degree or transfer.

STEM Transfer
Engineering faculty and instructional administrators are developing a clear pathway for engineering, based on the State Engineering Model Curriculum. Fundamental core courses
have been identified and a petroleum option has been a consideration given the county's expansive oil industry. A collaboration with Montana Tech of the University of Montana expands transfer options. The new associate degree for engineering will specify core engineering courses and a limited general education pattern. Elective engineering course options cover the specialties of civil, electrical, computer science and mechanical
/aerospace /manufacturing. Mechanical engineering has been identified as a high local need.

Science faculty and instructional administrators have developed a STEM meta-major pathway to help students explore options in these disciplines and to increase transfer and degree completion. Future plans for STEM programs include the construction of a new, state of the art, Science and Engineering Building, funded by Measure J. This building will include science labs and a 3-D computational computer lab. Science faculty are also exploring options to develop a new specialized science associate degree or certificate.

Transfer - Science, Technology, Engineering and Math (STEM), MESA and ASEM
The College has secured multiple grants to promote student interest and success in the STEM disciplines of biology, chemistry, physics, engineering, math, physical science, and computer science. BC has been strategic in working with industry partners to grow a better prepared technical workforce. Aera Energy Corporation donated $500,000 to support BC's STEM programs and students and in fall 2016, the $1.6 Aera STEM Success Center opened. The Center is home to STEM, MESA, and ASEM students, all preparing to transfer after leaving BC. The Center features a collaborative study environment with a lending library, plotting devices, and design labs. Staff provide educational planning, counseling, and information about internships and employment opportunities. BC's MESA program is for first generation, economically disadvantaged students who are majoring in STEM disciplines and seek to transfer. ASEM is for STEM students who may not educational and economic criteria but can benefit from the MESA learning culture. The Aera STEM Success Center is now an integral part of supporting transfer students.

Annual program review reports show that transfer-oriented disciplines have established goals to advance their instructional programs. (Appendix G – Program Transfer Goals)

Transfer Work
- Establish structured alignments and clear ADT pathways with CSUB
- Establish transfer pathways with UCs
- Secure articulation agreements for key programs
- Promote articulation agreement with California Health Sciences University
- Develop additional Associate Degrees for Transfer
- Develop additional Bachelor Degrees

- Increase Hispanic transfer rate
- Increase opportunities for transfer to Historically Black Colleges and Universities (HBCUs)

IX. Career and Technical Education Pathways

Bakersfield College (BC) has a distinguished Career and Technical Education (CTE) tradition of preparing students for immediate employment. The state is now investing significantly in workforce development through the Strong Workforce funding for colleges and regions. This influx of funds coupled with the federal Workforce Innovation and Opportunity Act, and the state Adult Education Block Grant gives a renewed focus to that tradition. The College is also leveraging grant and categorical funding sources to maximize program development and support. BC is developing new programs, enhancing and strengthening existing programs that prepare students to earn a livable wage. The College's CTE programs are organized into nine meta-majors that encompass California's 15 established industry sectors. The College systematically reviews data and makes funding decisions based on program outcomes, core indicators, local, regional and state employment data and job market trends. Recently developed credit programs include Health Information Technology, Paramedic Program, Media Arts, and Commercial Music. Programs that are being enhanced or revitalized include: Electronics, Automotive Technology, and Construction. (Appendix CTE.0 – Public policy, (Appendix E & D - Programs of study & Awards granted)

Tracking Outcomes
Chancellor's Office collaborated with the Employment Development Department (EDD), to develop a wage tracking system that documents the median wages earned by students 3 years after they leave community college. Data is available is for program graduates from 2002-03 to 2009-10. In addition, the system has the capability to track students who take courses with the intent of improving employment skills or increasing pay-scale opportunities but not necessarily to earn a certificate or degree. Having a mechanism to track these 'Skills Builder" students is important for the college. Students who legitimately earn higher wages after taking a few courses have received 'value added' from the college. Overall, Bakersfield College students leaving from 2008-2014-averaged a 19% wage gain. (Appendix CTE.1 – Wage gains, Appendix CTE.2 – Employment areas, Appendix D.1-Awards disaggregated by ethnicity)

Starting Early: Partnerships with High Schools
The College has vigorously pursued strategies to promote a college-going culture. The strategies are outline in the Student Equity Plan and in this Plan. Earning College credit while in high school is an established strategy to encourage high school students to continue their education. With articulated courses students are able to enter College with credit, reducing time and saving money. The articulation process starts with faculty reviewing course outlines to determine common learning outcomes, content and assessment measures. Articulation agreements and alignment of high school and college curriculum supports a clear path, one that outlines program requirements. CTE Pathways are part of BC's commitment to meet the growing demand for skilled workers in agriculture, automation and advanced technology. Up and coming employment opportunities include positions in manufacturing, packaging, water systems and controlling water use according to the 2014 policy report, *Local Harvest: Developing the Central Valley Workforce for California's Future Agriculture.* (Appendix CTE.3 – Articulation agreements)

Continuous Quality Improvement
Carl Perkins programs use a standard accountability standard, core indicators, that determine program quality. At BC, 22 out of the 34 core indicators are at our above the negotiated performance level. This is a significant increase from 14 out of 34 successful indicators in the last reporting period. Perkins funds have supported equipment upgrades in electronics, commercial music, digital media, and also staff to support job development. Labor market information is used to strengthen CTE programs:
- Curricular changes in the automotive technology increases access and incorporates diesel
- Short-term workforce training is being launched in response to adult education needs
- Several disciplines are being adjusted to facilitate student transition to the Bachelor's of

Science, Industrial Automation
- Colleges within the region are aligning their programs to allow students to transition into the bachelor's degree (Appendix CTE.7 – Regional projects)

CCPTII supports eight program pathways, the purchase of equipment and improvement of facilities over a two-year period. CTE Program Enhancement funds were dedicated to purchase equipment for Agriculture, Welding, Health, Computer Science, Digital Media, Commercial Music and Electronics programs. Strong Workforce funds have been used to modernize industrial automation, culinary arts and commercial music programs and a computer lab for the automotive technology program. (Appendix CTE.6 - CTE Goals)

CTE Pathways within Guided Pathways
Two pieces of legislation have created additional educational opportunities for BC students. BC was one of 15 community colleges selected to offer a bachelor's degree. SB 769 extends the sunset date for the first 15 degrees and will authorize another 15 bachelor's degrees. SB577 if passed will authorize community colleges to develop teacher-credentialing programs. In Kern County, there is a shortage of qualified teachers especially in small rural communities.

Guided Pathways focus on careers and the model BC has developed has integrated CTE programs across nine Meta-Majors:

Agriculture, Nutrition and Culinary
Agriculture is a major industry in Kern County. Two ADTs, Animal Science, Agriculture Business have been established to increase transfer options. Faculty worked closely with CSUB to develop the new Ag Business Bachelor's degree. The College will use Measure J funding for the renovation of a much needed Agriculture facility. Improving and possibly expanding the college farm is part of the planning process. New programs including pest control advisor certification and agriculture education. are being considered.
Nutrition and Culinary is developing work experience or internships and placement of student with campus food services will provide students with relevant learning experiences. The addition of a hospitality management program is under consideration.

Arts, Humanities, and Design Pathway
The American Sign Language (ASL) program has developed an ASL interpreter certificate program that will start in fall 2017. This is in response for the high demand for interpreting services. The Spanish program is assessing the need for a Spanish interpreter certificate program. Certificates of Achievement have been approved for Commercial Music and Graphic Design.

Business Pathway
The Bakersfield College Retail Management Certificate was designed to prepare students for career opportunities and upward mobility in the retail industry. It is endorsed by the Western Association of Food Chains and Food Marketing Institute and has aligned learning outcomes and retail course content advocated by the National Retail Federation.

Health Sciences Pathway
BC has plans to work with KHSD and develop a health pathway for medical assistant and pharmacy technician careers. A new Paramedic AS degree and Certificate of Achievement (COA) is expanding to offer online courses to better meet community demand. The College is developing an AS degree in Health Information Technology, (HEIT) with stackable certificates to educate health information technicians The program will be accredited by the American Health Information Management Association (AHIMA) and offered online. New Health Sciences programs under consideration include: Medical Lab Technician, Respiratory Therapy, Medical Assisting and a Community Health Care Worker/Patient Navigator Certificate of Achievement. Current health

sciences programs are impacted due to very limited clinical locations that are required for clinical hours in nursing and radiologic technology. To address this limitation and continue to grow to meet industry demands, the College plans to maximize the use of simulators in regional hospitals and at the College while continuing to pursue additional clinical facilities.

The new Public Health Sciences AS-T degree has shown strong enrollment in its first year and with plans for expansion. The connection between public health and technology will be a strong influence in future Health Science programs.

The Radiologic Technician program has national accreditation from the Joint Review Committee on Education in Radiologic Technology (JRCERT). Expansion of the program may include computed tomography (CT), which requires special x-ray equipment. A cost analysis will need to be completed.

The Health and Physical Education is developing a Certificate of Achievement in Athletic Trainer/Coaching as a part of the Kinesiology program.

The College has recently allocated a full time faculty position to the Veterinary Program. The College has an articulation agreement with the ROC and will create a pathway for those students. The ROC is building a new facility for their animal science, registered veterinary technician programs. BC will seek to use the facility in the evenings.

Industrial and Transportation Technology Pathway
CTE is expanding to Rural Communities, both on the campus and at high schools.
BC's has partnered with DJUHSD on the development of programs for the proposed high school in Earlimart. Agriculture and industrial automation programs will transition students into the College's Industrial Automation Bachelor's program and Agriculture ADT programs. In 2017-2018, Strong Workforce funds are being used to strengthen the electronics curriculum and expand it to the Delano campus. An instructor has been hired to revitalize the Heating, Ventilation, Air Conditioning (HVAC) program in order to meet local labor market needs for residential and industrial cold storage facilities in the area. The curriculum will be developed in regional collaboration with West Hills College. As programs are developed in Delano, the college will be able to utilize more classroom space at the recently donated facilities at the Randolph campus. (Appendix CTE.4 – Careers and titles)

Future plans include synthesizing HVAC with manufacturing/fabrication to build the crossover between these two fields.

Industry leaders in the service area have contacted the College about developing a logistics program. The college is determining the scope of the program and determining how an emphasis on the technical aspects of logistics, can lead into the Industrial Automation bachelor's degree.

The new Occupational Safety and Risk Management program has multiple areas of emphasis for careers in health, food fire, etc. The program will establish an associate science degree and several stackable certificates in the program.

The Manufacturing program will develop three new industrial maintenance courses that emphasize troubleshooting and repair. These courses, when paired with existing courses, will form an Industrial Maintenance Certificate. The certificate will provide an introduction to the disciplines of electronics, welding, and mechanical systems. A small new program is also being developed by integrating electronics and biomedical curriculum to meets the needs of local hospitals.

The Welding program has developed a mobile welding laboratory is and considering adding a field experience component. Cross-disciplinary work with the Art program is being also being considered. A need to provide training in basic tungsten inert gas (TIG) and advanced TIG welding for stainless steel and non-ferrous metals has been identified.

Emerging technologies in Kern County will reshape the industrial technology program. Fabrication instruction, machining and welding have been focused on oil industry needs. Although oil remains an important, other industries are changing. However, other industries like large manufacturing companies now use laser technology to cut steel for massive fabrication work. BC's programs will diversify to meet current industry training needs.

The Architectural program is refocusing the program on employment preparation. rather than transfer. The need for a certificate in industrial design is being assessed. Industrial drawing curriculum will have an emphasis on design. To support this programmatic change, a Design Center is being proposed that could be utilized by the visual arts, industrial technology and STEM disciplines.

The Construction program has implemented a major redesign to provide a streamlined pathway that is focused more on construction management.

The Automotive Technology program has implemented a major redesign of the curriculum to increase access and completion and a streamlined pathway for students. Scheduling of accelerated and compressed courses also will support future program plans. Grant funding has secured the purchase of diagnostic equipment and the program's first all-electric car, a Chevrolet Bolt. These acquisitions will introduce alternative fuel technologies curriculum to the program. Future plans include developing a capstone course that focuses on 'real-world', problem solving skills and the development of an Original Equipment Manufacturing (OEM) Partnership with Toyota or Chrysler.

Public Safety and Emergency Management Pathway
The paramedic certificate linked to the paramedic services for the fire technology paramedic services may address the need identified by the Kern County Fire Department to have personnel trained beyond emergency medical technicians (EMT). The College currently provides an Emergency Medical Responder Academy, which is considered as one level below EMT. Future plans include the working with the California Ambulance Association to expand the paramedic program to online offerings.

Bakersfield College in partnership with the Bakersfield Police Department has re-established the Basic Police Academy in Bakersfield. The lecture courses are taught at the Weill Institute and fitness and self-defense courses are on the Panorama campus. Plans are being considered to reinstate a cross-section of in-service courses for the BPD.
As the Public Safety and Emergency Management programs have grown, there is a need to organize them under one area of supervision to gain efficiencies.

Science, Technology, Engineering, and Math (STEM) Pathway
The Computer Science program plans to develop a Cyber Security program that prepares graduates for information security assurance positions. Cyber Security curriculum will align with existing industry certificates (A+, Net+, security +, and server +). Some KHSD high schools' sites have CTE programs for video gaming software development. These programs offer an opportunity for curriculum alignment and new pathways.

Social and Behavior Sciences and Human Services Pathway
The College has hired an instructor to develop a Substance Abuse Certificate of Achievement program in partnership with the Kern County Mental Health Department. Kern County has a significant meth addiction problem and currently no substance abuse counselor training programs. Once the certificate is developed, the College will seek accreditation from the California Association

for Alcohol and Drug Educators (CAADE).

The College is developing a Job Placement Center that will integrate student employment on and off campus, work experience, and internships. This approach will also provide support services for students and industry training for resume building, interviewing techniques, and developing workplace soft skills. It will also support the College's need to more efficiently track graduate employment a requirement for Workforce and CTE funding.

Career and Technical Education Future Plans
- Collaborate with high school partners to increase articulated courses and facilitate successful dual enrollment agreements - Clarify CTE academic pathways
- Increase visibility of CTE programs through outreach and recruitment events with an emphasis on Career Advising and Orientation. - Help students chose a path in college:
- Increase interventions and targeted advising though CTE completion coaching - Encourage students to stay on the path and complete college:
- Further developing of a culture of assessment, communicating course, program and institutional assessment. - Promulgate effective learning
- Leverage funding sources to strengthen programs and meet community needs
- Evaluate facility needs for expanded and new programs
- Fully integrate CTE into Guided Pathways and track Pathway completion
    - Identify emerging needs for new program in the service area and region

X. Rural Initiatives Opportunities for the Future Plan

Challenges to the Service Area and Rural Communities

Much of Kern County, outside of the Bakersfield City limits, is rural and primarily driven by either agriculture or energy production Many of the occupations in the agriculture industry are low-wage or seasonal jobs. The decline in the price per barrel for oil has left scores of workers unemployed. Both of these circumstances contribute to the ongoing circumstances of poverty and unemployment that have plagued Kern County for many years. Historic unemployment rates for Kern County are found in Appendix A.2 and additional contextual material about the County is in Appendix R.1.

Educational attainment is linked to employment opportunities and income levels; Public Policy Institute of California (PPIC) research has shown that college graduates do far better in the labor market than individuals with less education.[58] The proportion of adults in Kern County who have a bachelor's degree or higher is 15.4% compared to the state, at 31.4%.[59]

The extent to which these Kern's rural communities are isolated cannot be easily illustrated. Limited public transportation often makes it impossible for residents interested in pursuing postsecondary education to travel to the College's Panorama or Delano Campuses. A table of the key socio-economic attributes of the residents in selected communities and a more comprehensive community profile is found in Appendix R.1.

The College has launched a series of Rural Initiatives, primarily career technical education, but also general education coursework. This work targets the small, rural, isolated communities in Kern County. These initiatives are also part of the Guided Pathways System (GPS) the College is implementing that requires a comprehensive change both at the College and in the community. Intensive and substantive work has already been done with community partners, local high schools, industries, and four-year institutions. A well-connected network of organizations has a shared vision for economic development, workforce preparation, and education. Participants' roles, interconnections, and alignment with past initiatives are found in Appendix R.1.1.

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[58] Johnson, Hans et. al. *Student Debt and the Value of a College Degree.* Public Policy Institute of California. June 2013.
[59] U.S. Census Bureau, American Fact Finder, *2015 American Community Survey*. Retrieved January 9, 2017

Promoting a College-Going Culture

Bakersfield College is collaborating with community partners to equip more residents with marketable skills through a college education. Prime examples of effective strategies implemented since 2013 are the summer programs for middle school students supported by industry partners Chevron's Project Lead the Way and the Wonderful Company's Summer Ag Camps. These strategies promote healthier communities and are designed to encourage and develop interests in math, science, technology, engineering, and careers in health fields and agriculture. These strategies also provide important opportunities and access to many students who are socioeconomically disadvantaged and underserved.

Dual Enrollment

Career technical education and general education college courses are offered in six rural high school locations. Dual enrollment partnerships began with the Wonderful Academy, then the Paramount Academy. With the addition of Kern High School District and the Delano Joint Union High School District, dual enrollment program has been brought to scale. The College has promoted college-bound thinking and behavior and career pathways for students. A matrix listing of the districts, high schools and courses offered is found in Appendix R.4.

California Career Pathway Trust I (CCPT1)/Wonderful Academy

Bakersfield College Delano partnered with Paramount Agriculture Career Academy (PACA) and, more recently, Wasco High School which offer college classes to high school students at their high school sites. In May 2014, a $9.9 million grant was awarded to PACA to offer dual enrollment college-level courses in the agriculture business pathway. Upon graduation from high school, the students are prepared to secure jobs in local thriving industries, enter degree programs offered by Bakersfield College, or transfer.

Bakersfield College and Wonderful Company developed one-week-long summer agriculture camps to reach middle-school students the summer before they enter high school. These residence-camps started in 2014 and introduce students to the diverse career pathways in the field of agriculture. Held on the Panorama campus, the focus is on agricultural business and sets the stage for students to attend college. Summer camp students are introduced to the agriculture industry, go on field trips, and participate in agriculture career exploration that includes salaries and required educational preparation. In 2016, a Wasco High School camp was initiated that focus on agriculture business and mechanics.

California Career Pathway Trust II (CCPTII)

Kern Community College District and West Kern Community College District joined with Kern High School District, Delano Joint Union High School District, Kern County

Superintendent of Schools, McFarland Union School District, affiliated adult schools, Westside Regional Occupational Program, and 23 businesses to create a consortium. The consortium work is supported by a $9.5 million grant from the California Department of Education as part of the California Career Pathway Trust program. The consortium offers high school students cohesive programs of study and support services to assist in developing academic and technical skills, career readiness, establish smooth transitions from high school to college, and finally transition to the workplace. With industry input, courses are designed to meet industry needs and are aligned with short and long-term Kern County workforce needs. The nine pathways are: Agriculture Mechanics, Business Management, IT-Networking, Residential/Commercial Construction, Energy and Power Technology, Electronics (B.S. Industrial Automation) and Engineering Technology, Health Careers, Logistics, and Welding and Materials Joining.

The Bakersfield College Pathways to Success plan builds upon preexisting local efforts. The program includes partnerships with local industry sectors to provide internship opportunities and aligns more courses from high school to college. Dual enrollment courses provide simultaneous high school and college credit further streamlining the educational process. A classroom-based, comprehensive guidance program, 'Get Focused… Stay Focused,' starts in the ninth grade with the development of a skills-based, long-term career and education plan. Students enroll in Student Development B3 3-unit course for Career, Life and Educational Planning.

Bakersfield College is working with high school districts to establish career pathways that link to the career and technical education programs offered by the College. The Kern High School District began six new programs and enhanced or expanded 33 existing programs. A matrix of the school districts, high schools, industry sectors/pathways and the corresponding college career pathways is in Appendix R.3.

California Endowment
Based on a comprehensive regional assessment by California Endowment's Building Healthy Communities (BHC) program, South Kern County is making strategic investments in regional infrastructure that will strengthen and accelerate student-centered pathway programs for grades 7-16. Bakersfield College is collaborating with BHC and Arvin High School to encourage young people, especially men of color to pursue jobs in the health field. Bakersfield College has assigned staff at Arvin High to provide counseling and financial aid support is available. College staff assists students with education planning, financial aid application preparation, and information about college opportunities. In 2013, Bakersfield College and BHC partnered to sponsor parent signing college night at Arvin High School. This event helped parents understand college opportunities and costs. The success of the parent night led to similar events at all three high schools in the Delano District.

McFarland High School District

McFarland High Schools Early College

McFarland is a city about seven miles south of our Bakersfield College Delano Campus. The college participation rate is the lowest in our county and the community is in desperate need of structured support. Bakersfield College is partnering with the McFarland Union School District to bring higher education to the community. The partnership includes establishing a career decision-making and education planning program that will involve the K-12 programs. In addition, Bakersfield College will leverage dual enrollment to provide early college education at the high school. College courses with Bakersfield College instructors will be added to the high school's 8th period to allow students to take additional college courses on site. The goal is for students to have a full year of college when they graduate high school. The goal for the next three years is fifty percent of McFarland High School (MHS) graduates will have at least a semester of college at graduation and have selected a program of study with an established 10-year plan.

McFarland Elementary School Career Exploration

McFarland Elementary School (MES) will partner with Bakersfield College to build a transition program that will lead to Bakersfield College's career and education planning program offered to all MHS freshman. The program will allow all MES students to participate in a transition program to prepare for high school and career exploration. Bakersfield College will partner with MHS to provide learning experiences in career exploration, study skills, and transition to high school.

Wasco Union High School District

Wasco High School/Bakersfield College Career Pathways

Wasco High School will continue the partnership with Bakersfield College in the Business Agriculture and Mechanic Agriculture career pathway programs. The CCPT1 grant program expires this year, but Bakersfield College remains committed to continue the program by leveraging dual enrollment and after school college courses. The partnership will allow partners to share resources and thereby provide sustainability for years to come. BC is also committed to continuing student support services such as tutoring, counseling and supplemental instruction. Full-Time Enrolled Students (FTES) generated by the program allows Bakersfield College to commit support for the life of this plan.

Wasco Independence High School Outreach

Bakersfield College will expand course offerings at Wasco Independence High School (WIHS) as part of the Adult Education Block Grant plan. The program includes Career and Education planning to support adults returning to further their education. We currently support about 200 of the 900 Wasco residents attending Bakersfield College. The goal is to increase enrollment of adults, 24 years and older, to improve employability and reduce the high poverty rate in the city. Bakersfield College has expanded course offerings at WIHS from three courses in 2015 to over 24 course offerings this year. Course offerings meet IGETC and UC transfer requirements. The goal is for students to meet these requirements

in Wasco and continue at the Delano or Panorama campuses. Structured student support services will provide onsite guidance for students desiring to transfer or establish a career.

Shafter Education Partnership

Shafter Outreach
Bakersfield College offers 14-15 college courses each year at the Shafter High School and Shafter Learning Center. The city of Shafter has established a tutoring service at the learning center for all students K-16. Bakersfield College will supplement this support with tutors and supplemental instructors. Course offerings are limited because of the lack of space. Shafter city government and Bakersfield College are establishing a partnership to plan improved availability of classroom resources. Shafter Education Partnership will coordinate these plans.

Arvin/Lamont:

Measure J
The approval of Measure J includes a $25 million dollar facility for the city of Arvin. This much needed facility will support over 40,000 residents in the South Kern region. This impoverished region is in desperate need of reliable higher education. The new facility will allow for more Bakersfield College course offerings, student support services and administrative support for over 1,700 Arvin/Lamont students each semester.

1+1+2= Game Changer
Arvin High School's 1+1+2=Game Changer Program provides students with general education, career and technical education courses and career counseling starting at the freshman level. The program is supported through the Kern County Board of Supervisors' "Pathways to Processing" initiative. One year of college-level instruction is offered while students are enrolled in high school and a second year of lower-division courses are offered at Bakersfield College after high school graduation.

Arvin High School Early College Project
The Early College Project is designed to provide Arvin High School students an additional pathway towards higher education attainment. More importantly, the project will leverage the resources of three participating partners (private-public-public) to create a strong foundation and support system to ensure student success. This project will include adding student services such as tutoring, supplemental instruction, and counseling/education advising that will guide students along the path to success.

Rural Initiative Distance Education

Bakersfield College's Rural Initiative Distance Education program, (RIDE), provides interactive broadcasts and smart classrooms at high school sites to extend capacity and college course availability for high school students. A college faculty will be the lead instructor with high school faculty providing onsite facilitation and supplemental instruction. A broadcast room is located at the Bakersfield College Panorama campus and there is a room at the Delano Campus. Arvin High School and the three Delano high schools will have classrooms capable of interactive broadcasts. Once operational, classroom instruction can be broadcast to multiple

sites. The program will address the shortage of faculty who meet minimum qualifications to teach college courses.

The Delano Campus

The Delano campus was established in 1972 with only 20 course offerings and about 300-400 students. By 1981 the course offerings reached 100 courses and 600-800 students. A new period of growth started with the move to a new campus site and the construction of the Science and Technology Building. Today, courses are scheduled at the campus or other rural sites. The schedule of courses provides students with the option of completing the pattern for general education degrees, California State University Breadth general education, or the University of California, Intersegmental General Education Transfer Curriculum (IGETC). The career and technical programs at the Delano Campus have been expanded to include a welding certificate program that is supported through a joint use agreement with Delano High School District to share facilities. Joint-use facilities also provide large lecture halls and exercise rooms at Robert F. Kennedy High School.

Early College High School Programs

The proposed Delano Joint Union High School District (DJUHSD) high school in Earlimart, five miles north of the Delano Campus, and college personnel worked together to design facilities to accommodate career and technical education programs. These programs will align with Bakersfield College programs and, in particular, with the new Bachelor of Science degree in Industrial Automation.

Student Services Outreach to Rural/Isolated Areas

High school students who complete an education plan and have access to an advisor are more likely to successfully navigate the college experience.[60] The College Student Success and Support Program (SSSP) ensures that all students, regardless of their location, have access to counseling and advising assistance. Bakersfield College has formed a counseling community of practice to include high school and college counselors who meet once per term to discuss challenges and find solutions.[61] Because of these strong partnerships with the high schools, Bakersfield College has experienced an improvement in both the quality and quantity of students who are fully matriculated prior to their first academic year.[62]

Adult Education

The College is participating in the Adult Education Block Grant with North Kern Districts and Kern High School District (KHSD) to the south. This grant addresses the needs of adult learners over 25, whom did not graduate from high school and lack basic skills for employment. Bakersfield College and Adult Schools are working with community organizations to streamline options, fill training gaps for rural communities and provide a seamless transition from adult school to college. Grant objectives and recent accomplishments are outlined in Appendix R.3.1.

Inmate and Re-Entry Education

Bakersfield College's Inmate Education Program, 'Inmate Scholars,' was established to address the large underserved population of incarcerated adults in Kern County. This effort aligns with the mission of Bakersfield College and its values for equitable access. Bakersfield College first offered courses at five prisons in fall, 2016. Currently the program is at eight prisons and fourteen individual yards. By fall 2017, the program will be at ten prisons, eight in the service area and two in Corcoran. It is now the largest inmate education program in the nation.

The effort is currently supported by a three-year, Opportunity Institute grant. Bakersfield College partners with the Prison University Project and the Anti-Recidivism Coalition. Bakersfield College provides matriculation services at the Kern County Lerdo Jail, Kennemer Center, and Turning Point, both re-entry facilities in Bakersfield. All enrolled students are college ready and the program emphasizes transfer courses following the CSU or IGETC general education patterns. Students also can earn a certificate in communication that is designed to improve their communication skills and job interview skills. The most commonly requested program is Business Administration. Bakersfield College offers a Culinary program at the McFarland Female Community Reentry Facility.

All faculty members teaching in the Inmate Scholars Program receive training about the prison system, its culture, and the prison teaching environment. Faculty must wear protective gear and check-in all personal items upon entering the classroom.

Incarcerated students are included in the data for Kern County. With these enrollments growing, college-going participation rates increased and educational attainment rates for adults are elevated. Details by city are found in Appendix R.5.

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[60] Kern Community College District, Institutional Research and Reporting. *Bakersfield College Elements of Student Success.* March 2016
[61] Bakersfield College. *President's Breakfast Presentations.* 2014, 2015.
[62] Lesley Bonds, et. al. *Our Students: Developing and Implementing a Shared Responsibility for Student Success.* Slide presentation at the Strengthening Student Success Conference, October 2016.

XI. Technology Opportunities for the Future Plan

The College has a long history of using instructional technology through hybrid, interactive television classes, and online classes. Since 2013 the college has established as a strategic priority the use of 21st century technology.

The College Technology Plan (2014) strategic objectives articulate a commitment to support student services with technology, support instruction and learning through technology, and improve support for online education. The Plan addresses an updated student communications system for student success, infrastructure development, effective professional development for faculty and staff, and improved support for distance learning. Student success is a primary driver for many of the technology initiatives and the student success theme runs throughout the technology plan. Bakersfield College prides itself in providing innovative and leading technology to prepare students for the workforce or additional education. Technologies such as 3D printing, simulation mannequins in the nursing skills labs, computer-assisted drawing, and electronics labs provide students with hands-on opportunities and real-world experience.

Bring Your Own Device is also a focus of the technology plan to balance user functionality and security. A key infrastructure goal is to provide complete wireless coverage on the Bakersfield College campuses so that students can utilize their mobile devices in a way that ensures student success. The Delano Campus has 100% wireless coverage, and the Panorama Campus has more than 65% wireless coverage with the goal of 100% wireless coverage. Support to finish this project will come from the fall 2016-approved bond initiative money. Technology infrastructure is continually being improved to provide more, and faster, wireless coverage. At any given time during a semester, there are between 6,000 and 8,000 wireless connected devices and this number is expected to rise.

Matriculation and Student Services Support
Numerous programs to track and nudge students will be implemented in the next 3 years. Execution and integration of Starfish through the EPI initiative summer 2017 will be essential and require coordination with KCCD and the Banner team; training for users will be key. Updating of the DegreeWorks or alternative planning software will be essential. *Campus Logic* to track financial aid will be another key technology need for student success.

Distance Education
For a long time, the College has offered either instructional television or more recently online classes to reach students who cannot attend instruction on the campus or at a location where face-to-face instruction is offered in the communities. Due to overcrowding on the main campus more course sections have been offered through distance education as online or hybrid classes. College data indicate that one-fourth of the students in 2015-16 were enrolled in at least one distance education class. Those students who took some online

courses were twice as likely to complete a degree or transfer.[35] Details regarding the estimated credit FTES generated by each discipline 2011-12 to 2015-16 are found in Appendix TEC.1. Hiring an Instructional Technologist in fall 2015 was an initial step in the development of a better structure to support distance education and the use of technology in face-to-face offerings. An online instruction community of practice was revived for the purpose of creating a forum where faculty members could exchange ideas and tips, hear about new and upcoming technologies, and participate in training seminars for online instruction.

The College has established an online technical support center for students enrolled in distance education classes. The Habits of Mind web resource is linked to the online education web page, as is a series of study skills resources. The College has converted to the State-recommended Canvas Learning Management System (LMS) associated with the statewide Online Education Initiative (OEI). A pilot effort to use Canvas was launched in summer 2016 with full implementation in spring 2017. The Instructional Technology support staff developed multiple types of training to meet the diverse needs of faculty. A new Dean of Instruction for Academic Technology was added in spring 2017 to oversee the development of Distance Education, Professional Development and other areas related to the support and development of instructional technology on campus.

A working group has investigated the possibility of offering entire programs of study using free Open Educational Resource (OER) materials in lieu of traditional textbooks. While the short-term goal is to reduce costs for student textbooks and to accelerate progress through college, a longer-term objective is to change the culture of institutions so that they create systems and structures to better connect curriculum and pedagogy with updated student learning outcomes. The College is intending to re-apply for a three-year OER grant to fund development of the program. This initiative will not only help the students living in the more rural and isolated communities but will also help students attending at the main campus.

Supporting the Student Experience Through Technology
The College, like many other higher education institutions, has embraced the use of technology to help provide more holistic support to students and to keep them on track to graduation. Integrated planning and advising for student success is an approach to technology-mediated student advising that uses technology to promote, support, and sustain long-term, intrusive advising relationships. The goal is to approach student support as a teaching function, touch students on a regular basis, and connect students to the information and services they need when they need them.

In a pilot effort faculty members teaching Math 60 (Beginning Algebra) and English 53 (Reading, Reasoning, and Writing) established an expectation that students would spend at least four total hours in the support center during the term. Technology was used to track the students' attendance and activities. Those students who actively participated were more successful. Completion of transfer level English increased from 18 to 27% and math completion increased from 17% to 23%. Students in the EOP&S program for economically

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[35] Kern Community College District, Institutional Research and Reporting. *Elements of Student Success*

disadvantaged, first generation students experienced even greater success, achieving 42% in English and 36% in math.[36]

Some basic skills math faculty have adopted the practice of referring students who earned less than a B grade on a quiz to the support center to get assistance with the concepts and procedures of the quiz and retake the exam. Some basic skills English faculty members have adopted a similar approach by referring students to the Writing Center. In addition to these strategies students in the basic skills sections are required to develop a paper weekly schedule at the point of entry into the course and provide weekly paper reports of activity to the faculty members teaching the student. In time, the weekly schedule and weekly reports will be automated with the assistance of technology.[37]

Along with commercial products the College intends to use resources from the state Educational Planning Initiative, Online Education Initiative, and Open Educational Resources to provide online resources and intrusive messaging to students. A description of the commercial software products implemented or being evaluated is found in Appendix TEC.2. To varying degrees, the software packages being considered are designed to implement the research findings of social psychologists and behavior economists who have pioneered inquiry into the power of a "nudge" on student behavior and performance. The researchers are exploring the cognitive, emotional, and social factors that keep students from following through on their intentions.[38]

Academic Technology Plan

A. Academic Technology Department

Bakersfield College has recently taken significant steps toward the advancement of academic technology in our work. These steps are coordinated within the Academic Technology (AT) Department, which is charged with strategic and instructional leadership of technology and professional development efforts on campus. The department includes the following components, coordinated by the Dean of Academic Technology:

1. **Distance Education** – AT is the primary point of contact for campus distance education efforts, including online classes and other distance education modalities, student support for online learning, professional development, and the development of tools for online instructors.

2. **Professional Development** – Professional Development (PD) operates under the umbrella of AT, to better facilitate the essential functions of technology learning within the context of technology initiatives across campus.

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[36] Bakersfield College. *California Department of Finance Awards for Innovation in Higher Education Application.* February 2, 2017

[37] Bakersfield College, *Guided Pathways Innovation Grant Presentation*. February 8, 2017

[38] Supiano, Beckie. "Why 'Nudges' to Help Students Succeed Are Catching On," *The Chronicle of Higher Education.* January 29, 2016 and Castleman, Ben. *Knowing When to Nudge in Education.* Brookings Institute. Retrieved August 6, 2015 from https://www.brookings.edu/blog/brown-center-chalkboard

3. **Center for Professional Development –** The Center (CPD) will occupy the space currently allocated to the Faculty Development Lab (L160). Currently used as a space for faculty to access basic technology tools, this lab will be transformed in the summer of 2017 to a state-of-the-art learning space which will include a mobile device equipped, flexible learning space, interactive video capabilities with full lecture capture ability, as well as a maker space for faculty use. This will become the hub for faculty technology training and use on campus.

4. **Instructional Technology Staff –** The AT department is equipped with both faculty Instructional Technologists and classified Instructional Media Specialists who take on training and development roles to support campus wide and departmental technology initiatives.

B. *Student Learning Technology*

The support and development of the direct instructional tools for student learning is a primary focus of the AT Department. These efforts materialize in three major areas:

1. **Canvas Learning Management System (LMS) –** Canvas is the web-based learning platform for all online courses, and the platform of choice for online materials to support classes in all delivery modes. Additionally, this platform is a critical component in the college-wide assessment of disaggregated SLO data.

2. **Online Education Initiative (OEI) –** The state-sponsored OEI has provided California Community Colleges with numerous resources, including Canvas, at reduced or no cost. The College is engaged with these, and will be focused on making participation in the OEI Course Exchange to BC courses and programs.

3. **Open Educational Resources (OER) –** The use of OER allows students to access high quality course materials at little or no cost, benefitting students who have financial challenges. There is a college-wide movement toward more significant OER use, heavily supported by the AT Department.

C. *Student Support Technology*

1. **Starfish –** The college currently uses DegreeWorks, which is a degree audit platform. We are in the process of moving to Starfish, which includes this functionality but also introduces communications to students and several other key student support services.

2. **Educational Planning Initiative (EPI) –** Under the EPI, Starfish is paired with an enterprise level online student portal that facilitates targeted messaging and communication that will significantly impact student success. The college is connected with this initiative, and evaluating the potential for these services to become a part of our student support ecosystem.

3. **Orientation for Online Students –** Combining resources from the OEI with action-based assessment of student technical abilities, our Orientation for Online Students helps students learn to be successful in their online classes, while making their assessment data available to their instructors so they are equipped to teach online.

4. **Online Tutoring –** Through the discounted services and platforms offered by the OEI, the college is implementing online tutoring for all students, expanding the reach and availability of our services to students.

5. **Financial Aid TV –** The Financial Aid Department releases short videos to share financial aid tips and information with our students, expanding the reach of FA communications.

D. *Academic Support Technology*

1. **eLumen –** This platform will provide the tools for managing our assessment, curriculum management and approval, and program review efforts. Implementation will be completed in Fall of 2017.

2. **AccuSQL –** This platform provides detailed data, tracking student usage of several student support services across campus, and enabling evaluation of those services on a disaggregated, by student basis.

3. **Data Platforms / Advanced Analytics –** As the College implements various platforms and services, we continue to be mindful of the bigger picture as it relates to data and analytics. The college will continue to move toward an integrated approach to the analysis and use of the many data streams in our environment.

E. *Academic Technology Strategic Goals*

1. **Increase Online Success and Retention –** The College will continue to strengthen our online courses, student support, instructor training and support with the goal of success and retention rates that surpass those in our traditional modes of delivery.

2. **Increase Institutional Capacity for Online Learning, Including Degrees –** The College will strategically pursue the addition of online classes and programs to increase access and meet the needs of our student population. Where beneficial, resources like the OEI Course Exchange will be leveraged to accomplish this goal.

3. **Strengthen Relationship and Responsiveness to Data Related to Online –** Data will be heavily employed in the support, revision and strengthening of our online classes and programs. This data will come from student success metrics, as well as detailed analysis of our online-available student support services.

Visioning the Future for Distance Education and Technology

The **first** major direction for the future of distance education is the involvement in the State OEI and OER initiatives. The College intends to take advantage of the resources offered by those initiatives and to link to larger patterns in distance education. The College has initiated a four-point plan to improve the distance learning experience.

1. Development of an online student orientation system that better prepares students for online courses with the overall goal of increasing their success in those courses.
2. Development of a student signal alert system that would inform students of their current course progress and refer them to appropriate helpful resources.
3. Development of an online tutoring program to increase students' ability to succeed in an online course.
4. Development of additional pedagogical training and support for online faculty.

The **second** major direction for the future of distance education is to continue building capacity to deliver high quality courses and to establish some standards for course design and professional development along the lines of those provided by the State OEI effort.

The **third** major direction for the future of distance education is to create a stronger relationship between distance education planning and the data the College has that would inform what courses the college offers and how the institution supports the online student.

The most common emerging uses of technology are tools to help students make suitable and accurate course selection decisions as a part of degree planning, better connect students to services and support by coaching and career advising, provide early alerts, and use predictive analytics to provide timely information to advisors, students and others when a student is at risk of veering off track to graduation. Performing these functions concurrently enables colleges to provide better sustained, strategic, intrusive and integrated, and personalized student support.[39] The College is ready to join the State Education Planning Initiative (EPI) to replace the homegrown student portal, access the Starfish software that may replace DegreeWorks, and take advantage of the student "nudging" system built into the EPI design.

The College intends to develop procedures to capture and analyze student behaviors and course-taking patterns to identify patterns and trends that are associated with successful learning experiences. It is thought that the analysis and predictive analytic work may lead to the development of additional interventions or predictive messaging and marketing of support services that will result in more students being successful. The long term goal is to use "machine learning" in order to inform student services and to create early warning messaging within the institution for any area that could provide support, guidance, or other necessary interventions to help sustain and guide the students' efforts. Interventions related to these key points will be identified and tracked in order to create a college guidance system accessible perhaps through a smartphone application. The guidance system will

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[39] Fletcher, Jeffrey, et. al. *Integrated Planning and Advising for Student Success (iPASS): State of the Literature.* Community College Research Center, Teachers College, Columbia University, Working Paper No. 90, October 2016

message students via email and text in order to provide real-time, relevant guidance on a regular basis.[40]

The College will also have a priority of providing technology-related professional development, especially for any new systems brought online. This includes training on existing products so faculty and staff members can use the tools more effectively.

Finally, the College adheres to a strategy of providing long-term sustainable technology as well as evaluating and utilizing green initiatives.

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[40] Bakersfield College. *Technology Plan 2014.*

XII. Projections for Future Growth

A. Future Capacity for the Growth

Dynamics of Future Capacities

Linking the Educational Master Plan's internal and external analysis to Weekly Student Contact Hours (WSCH) and space quantification completes the process of planning for future instructional capacity. It balances a comprehensive program of campus development with the current curriculum, instructional delivery modes, learning environment, and necessary support structures. The extent and direction of future curriculum development is uncertain, but the visions of future curriculum, the needs of the labor market, interests of prospective students, opportunities provided by the four-year transfer institutions, the College's mission, and priorities and financial resources of the College are all factors to be considered when charting the future direction of the College.

Although the economic drivers of oil and gas as well as agriculture have been depressed for the past two years, the current and immediate future economic indicators are improving. The number of new student enrollments is expected to continue to increase. Therefore, planning must involve developing a long-term vision as well as meeting short-term goals.

As a dynamic process, educational planning involves a mixture of methods and a variety of assessments. Looking to the future, a master plan must strive to:
- assure sufficient facilities to accommodate higher enrollment numbers;
- improve the teaching/learning environment;
- address new program development;
- integrate the latest technological innovations; and,
- provide adequate space configuration that permits flexible teaching methods.

By considering the expected economic and fiscal factors out to 2030, a growth projection for WSCH was projected for the College at an average annual rate of 3%. While modest, this growth represents a reasonable forecast for this College at this time. In any planning cycle, the projected WSCH is time specific and addresses future needs for increased capacity that may or may not materialize exactly at the times projected. The strategic goal is to plan sufficiently for facilities that are flexible enough to accommodate additional enrollments when they do materialize.

B. Baseline Term Analysis

The fall 2016 program of instruction provided a snapshot in time that served as a baseline for this EMP. A planning model was created to address the capacities for the future and provided the foundation from which a future program of instruction could be projected. Additional details, by major instructional area and discipline, are found in Appendix X.1 (main campus) and Appendix X.2 (off campus).

C. WSCH Projections and the Future Program of Instruction

A projection of future WSCH in the benchmark years of 2021, 2026, and 2031 was prepared and is provided in Appendix Y.1 (Main Campus), Appendix Y.2 (Weill Institute and Arvin/Lamont), and Appendix Y.3 (Delano Campus). Both the summary and the detailed projections *include* the online offerings.

D. Space Projections

State standards for construction and renovation of facilities basically focus on capacity. Capacity, as discussed in the Facilities Planning Manual, is correlated with the production of WSCH. WSCH represents the average number of hours of student instruction in a week per class, i.e., 30 students enrolled in a class that meets 3 hours per week is 90 WSCH. This WSCH is then transformed into instructional space or assignable square feet (ASF). Each WSCH type, lecture vs. laboratory, generates an "appropriate" instructional space addressed as ASF. While these calculations are established through State standards, other factors are considered in planning facilities. An additional factor in all facility planning is adequacy. Adequacy in this context considers both sufficient and suitable capacity to provide for an effective learning environment.

As assessment of the current facilities includes the capacity of the facilities to meet instructional programmatic needs, it reviews the condition of facilities and it addresses their adequacy to provide for an effective learning environment. The WSCH and space projections are not intended to dictate curricular content but rather to provide a perspective of what the current curriculum would look like if extended forward. The most important outcome of the forecasting process is to ensure that when a certain level of WSCH is achieved, the College will have in place designated and/or newly constructed facilities to meet demands of both academic and support services.

Two things result directly from this declaration. One is the need for a very detailed assessment of space needs for growth. Second is the opportunity to plan for facilities that may better serve the instructional and support services programs at the College. It is an opportunity for overall improvement of services at the College. It is an opportunity for overall improvement of services at the College. Measure J and state bonds provide an opportunity for good planning and adequate facilities to meet Kern counties future.

The current comprehensive analysis of projected space needs, by major instructional area and discipline, can be found in Appendix Z.1 (main campus) and Appendix Z.2 (Weill Institute) of this EMP. The campus may also need renovations and adjustments to existing space to make areas more suitable for the delivery of services and instruction. The analysis takes into account the current and planned capital construction and applies the State's space standards to the projected WSCH.

XIII. Acknowledgements

The lead for the project was Dr. Janet Fulks, Dean of Institutional Effectiveness who worked closely with Cambridge West and the campus community.

The planning process relied heavily on questionnaire responses and follow up interviews with groups and individuals associated with the academic programs and student support services of Bakersfield College. The results and findings from these inputs provided a foundation upon which the EMP was constructed.

The following groups and individuals contributed to this document.

Project Steering Committee
- Nan Gomez-Heitzeberg, Vice President, Instruction
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- Kate Pluta, Dean, Instruction
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- Cindy Collier, Dean, Instruction

Projections for Future Growth
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- Ben Raymond, Regional Planner, Kern Council of Governments
- Hayward Cox, Community Development Coordinator, Planning Department, City of Bakersfield

Career and Technical Education
- Cindy Collier, Instructional Dean
- Liz Rozell, Instructional Dean
- Andrew Haney, Automotive Technology Faculty
- Nancy Perkins, Faculty Chair, Radiologic Technology
- Jeremy Staat, Welding Faculty
- Jennifer Johnson, Faculty Chair, Allied Health
- Lynn Krausse, Faculty Chair, Business

Community Development
- Richard McCrow, Director, Delano Campus and Rural Initiatives
- Gustavo Enriquez, Program Manager, Student Success & Rural Initiatives
- Chelsea Esquibias, Program Manager, Inmate Education
- Abel Guzman Representative, AEBG

Institutional Effectiveness
- Reese Weltman, Program Manager, Professional Development
- Janet Fulks, Dean, Institutional Effectiveness
- Kim Nickell, Coordinator, Student Success Lab, Faculty Co-chair, Program Review Committee, Academic Development Faculty

- Craig Hayward, Institutional Researcher
- Karen Snow, Analyst

Dual Enrollment
- Anna Laven, Program Manager, Dual Enrollment
- Cindy Collier, Dean, Instruction

Technology
- Bill Moseley, Dean, Instruction, Academic Technology
- Todd Coston, Director, Information Technology

Transfer
- Kate Pluta, Dean, Instruction
- Steve Holmes, President, Academic Senate, Political Science Faculty
- Marisa Marquez, Director, Transfer Center and Articulation Officer
- Liz Rozell, Dean, Instruction
- Consuelo Gonzalez, Program Manager, MESA
- Kathy Rosellini, Faculty Chair, Counseling
- Heidi Forsythe, Adjunct, Communication

Basic Skills
- Janet Fulks, Dean, Institutional Effectiveness
- Lesley Bonds, Director, Student Success and Support Programs
- Lisa Kent, Program Manager, Student Success and Equity
- Kimberly Bligh, Faculty Chair, Academic Development Department
- Steven Waller, Dean, Instruction
- Maria Wright, Director, Academic Support Services
- Kimberly Nickell, Academic Development Faculty

College Council
- Sonya Christian, President
- Zav Dadabhoy, Vice President, Student Affairs
- Nicky Damania, Student Services Administrator
- Nan Gomez-Heitzeberg, Vice President, Instruction
- Sue Vaughn, Management Association
- Kate Pluta, Administrative Chair, AIQ Committee,
- Cindy Collier, Academic Affairs Administrator
- Steve Holmes, President, Academic Senate
- Mark Staller, Faculty Chair, AIQ Committee
- Jason Stratton, Representative Social Science, Art, Communication, Foreign Language, Performing Arts, Philosophy, Faculty Co-chair Accreditation, Faculty Department Chair

College Council contd
- Kimberly Bligh, Representative Academic Development, ESL, Engligh, Math and Faculty Department Chair,
- Krista Moreland, Representative, Behavioral Science, Science/Health, P.E.
- John Hart, Representative, FCDC Faculty Department Chair
- Isabel Stierle, Representative, CCA
- Faith Bradham, Representative, Library and Counseling
- Kathy Rosellini, Representative, CCA, Faculty Department Chair
- Chris Glaser, Representative, Administrative Services
- Janet Thomas, Representative, Academic Services
- Bernadette Martinez, Representative, Student Services
- Matt Frazer, President, SGA
- Grace Commiso, Interim Dean, Counseling
- Carla Gard, Associate Dean/Director, Nursing Programs
- Terri Godstein, Director ,DSPS
- Abel Guzman, Representative, AEBG
- Laura Lorigo, Budget Analyst