# COMPREHENSIVE MASTER PLAN

Barstow Community College

Jantuary 2017

## VISION 2030

CW/P + HPI architecture

# CHAPTER 01

# EDUCATIONAL MASTER PLAN

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## Message from the Superintendent/President

I am pleased to introduce this Educational and Facilities Master Plan (EFMP) to everyone concerned with the progress of higher education in the Barstow Community College (BCC) District. The EFMP provides a comprehensive view of the ten-year educational plans that we have outlined for our district. It also provides an overview of the facilities needed to support our educational plans.

These plans have been formulated by professional advisors who have worked hand-in-hand with our district's students, faculty, staff, administrators, and trustees to assess the higher-education needs of our students, and the communities we serve. It has been a district-wide effort that has included the active participation of every college constituency to ensure success. The planning has incorporated data regarding forecasted job and career opportunities and the needs of local and regional employers. It also ensures that the district provides fully accredited programs of study that are transferable to the degree programs of our California State Colleges and Universities, recognized throughout the world for their excellence in higher education.

Once these educational priorities were established and reviewed/approved by our faculty and management, the facilities plan was built to support those priorities, and create a collegial environment poised for growth and improvement of services. All of the buildings and facilities of our district were evaluated based on their functionality, years of service, and the costs projected to either refurbish or replace the facilities requiring renovation or improvement. Priorities were then established that allow for construction to occur in a planned, systematic fashion that coincides with and supports the educational plans of the district.

The EFMP establishes the overarching view that will influence all other district plans that are formulated by the Participatory Governance Committees who create and/or refine more specific plans and strategies for: Enrollment Management, Student Success & Equity, Staffing, EEO & Diversity, Professional Development, Safety, Technology, Finance and Budget. This ongoing, integrated method of planning and implementation is constantly being updated by robust program reviews, and the accompanying budget allocation process which supports continuous institutional improvement. The EFMP is intended to be a dynamic, living document, which is constantly moving forward, and may be revised based on actual performance and adaptation to the evolving needs of our students and the communities in our district.

This planning process is vital to the growth, adaptability, and sustainability of the district's programs. The active, peer-reviewed, participatory governance structure of Barstow Community College is imperative to the integrity of our institution and staying true to the vision, mission and

core values of this district. I appreciate all who diligently participate in the planning and review processes of our district, and I am especially grateful to everyone who helped create this Educational and Facilities Master Plan that will act as our guiding “blueprints” for the next ten years.

Sincerely,

Deborah D. Thomas

Superintendent/President

## Executive Summary

During calendar year 2016 the Cambridge West Partnership, LLC and HPI Architecture were invited to assist the College in updating its combined Educational and Facilities Master Plans from a document. This combined Plan creates a framework for the College's future development of the instructional and student services programs. It estimates the amount and type of space that will be needed to accommodate future growth in academic programs of instruction and support services, and provides a framework for the evolution of capital construction at the College.

The Educational Plan component is presented with the intent that it will serve as an educational programming blueprint for the College over the next ten years. The Facilities Master Plan portion will cast the projected space needed into a sequenced building and facility program that addresses the primary elements of site development/modification and facilities planning. The Facilities Plan component provides a blueprint out to the year 2030.

This 2016 Barstow Community College District Combined Master Plan is the District's long-term plan. As a central component in the District's integrated planning process, this document serves many purposes but principally to:

1. Project the long-term development of programs and services;
2. Develop Institutional Strategic Goals;
3. Provide a common foundation for discussion about District programs and services;
4. Develop recommendations for site and facilities improvements;
5. Support accreditation and demonstrate compliance with accreditation standards; and
6. Inform the public of the District's intentions and garner support for the services provided in and to the communities served.

The Educational Master Plan (EMP) section provides an overview of the College and its history then restates the College mission, vision, values, and strategic goals. Describing the organizational arrangements for integrated planning and resource allocation sets the context for the EMP and the key plans developed at the College.

The EMP narrative moves to an external scan of the opportunities presented to the College from recent public policy and funding initiatives, characterizes the direction of the economy in the service area of San Bernardino County, and concludes with a discussion and projection of the social-economic attributes of the residents and the immediate economy sub-region served by the College. Most employed adults work in public administration, retail trade, or services industries with some in construction, manufacturing, and transportation/utilities industries. The Great Recession hit the Inland Empire hard. Slow population growth is projected for the effective service area (.66% annual rate of increase). Throughout the effective service area 50% of the adults have a high school diploma or less. Approximately 37% of the households in the effective service area have an annual income of less than $35,000. Some 30% of the residents fall in the 15-24 years of age range that represents the prime years for college attendance.

The internal scan portion of the EMP traces enrollment and FTES trends to determine the growth the College has experienced after the disastrous experience from 2010 to 2012. This section also analyzes several different patterns of instructional delivery. Over many years the College is become distinctive, as it has enjoyed a large portion of enrollments from individuals enrolled in online classes and offers classes at Ft. Irwin for military personnel and their dependents. The scan characterizes the students enrolled at the College with further details available in the excellent comprehensive fact books prepared by the Office of Institutional Effectiveness. The internal scan provides a profile of the support services provided to students through face-to-face and online self-service delivery modes. The narrative concludes with a sketch of the library, human, fiscal, technology, and space resources available to support the instructional program.

The third chapter in the EMP section highlights the College's institutional performance experience and goals, documents the findings regarding the assessment results of the five institutional learning outcomes, and concludes with a summary of the interventions implemented to promote student success. The College is exceeding the institutional-set standards it established. Most of the degrees awarded were in the fields business and management, public services, or in interdisciplinary fields of study such as social sciences, or interdisciplinary studies. Most students transfer to out-of-state institutions. To improve student success the College has invested in creating a student success center and appointing three individuals to coordinate basic skills, implement the common assessment effort, and lead the overall student success and equity effort. Faculty members have implemented strategies to accelerate basic skills instruction, contextualize basic skills instruction, and provide more tutoring. Several student sub-groups have been identified for extra attention to improve outcomes in the five student equity indicator areas.

A series of key planning assumptions are outlined in the fourth chapter of the Educational Master Plan. These are based on a mix of trends in California and national community colleges and observations about the anticipated direction of the economy in Riverside and San Bernardino Counties. Roughly eight-six percent of all nonfarm job growth opportunities in the region will be concentrated in five industry sectors: (1) private educational services, health care, and social assistance; (2) professional and business services; (3) trade, transportation and utilities; (4) leisure and hospitality; and (5) construction.

As reflected in its strategic goals, the College is keenly interested in student achievement and completion, and sets a high priority on those indicators of its successful accomplishment of its mission.

The final segment of the Educational Master Plan reviews labor market data, documents what faculty members and staff envision for the future development of the instructional program and delivery of student support services, and outlines a series of recommendations for expansions to existing programs along with the introduction of possible new programs. Several faculty members expressed an interest in developing additional associate degrees for transfer and others indicated ways to adjust career and technical education programs of instruction. The labor market discussion is supported by a detailed analysis found in the appendix material where projected occupational openings in the service area are matched with instructional programs offered by the community colleges in the region.

Among several suggestions for the College to consider is participating to a greater extent in some of the statewide initiatives. The California Online Education Initiative is an opportunity to secure some assistance to faculty and students to engage in that pedagogy. A newly hired dean for online education will be a valuable asset in this area. The state initiative for Adult Basic Education Planning and Block Grant funding may be an opportunity the College has seized upon to address critical community educational needs in collaboration with the primary adult school in Barstow. The math faculty has successfully experimented with compressing basic skills course offerings, but there are other related opportunities for accelerated basic skills instructional strategies that College might want to consider. Additional general suggestions for the College to consider include aligning career and technical education programs with industry-recognized certifications, promoting a college promise program initiative, and pursuing federal grants to acquire additional resources to support the student success interventions.

Several instructional programs were identified for potential expansion such as: home health aide; education in early childhood and other disciplines to include a teacher assistant program; business administration focused on retail management/customer service/small business needs; computer office applications to promote a business information worker certification program; automotive technology to offer automotive service excellence exam preparation; welding to qualify as a testing site for the American Welding Society examination; a residential heating, ventilation and air conditioning program.

A limited number of new career and technical education programs were identified as possible areas for the College to consider. These include medical records and health information technician, national academy of railroad sciences curriculum, and perhaps truck driving training as a workforce development effort.

The Facilities Master Plan (FMP) section provides a current perspective for future academic and support services space, buildings, and overall college/campus development. As a companion to the EMP, the FMP supports the development of the institution through the year 2030. The recommendations developed in the FMP will depend upon, and may require, additional consideration in future planning, but the Plan is intended to serve as a framework for campus development.

The FMP section provides a projection of future college attendance expressed as weekly student contact hours (WSCH). It also includes an analysis of the current conditions of buildings, instructional, and support spaces at the main campus and the educational center, circulation and parking on campus, and open spaces. By the end of the planning period (2030) nine of the campus buildings will be 65 years of age. If they remain in service, they will need significant costly renovation. Most of the capital needs related to site improvements to enhance circulation, accessibility, and provide student amenities/spaces. The College should continue to focus on providing interior and exterior spaces for students to gather, communicate, and socialize.

Based on the current space inventory, State space use standards, and projections for growth the College needs include:

- Moving the CTE instruction onto the main campus
- Replacing existing lab and classroom facilities
- Expanding student services and administrative offices
- Adding a new multipurpose space area

## Introduction

During the 2016 calendar year the Cambridge West Partnership, LLC and the HPi Architecture were invited to assist the College in updating its combined Educational and Facilities Master Plans. The purpose of this Plan is to create a framework for the future development of the instructional and student services programs of the College and to determine the amount and type of space that will be needed to accommodate the future academic program of instruction and support services. The Facilities Master Plan portion will cast the projected space needed into a sequenced building and facility program that addresses the primary elements of site development/modification and facilities planning through the year 2030.

Deliverables of the Plan

This Plan will deliver the following:

- Identify occupations with projected openings into the future.
- Describe faculty visions for future curriculum and student services visions for anticipated future services.
- Identify general opportunities for instructional program development.
- Evaluate the mix of programs vs. labor market and transfer opportunities.
- Identify space needs by discipline and program for the program of instruction and support service elements of the campus.
- Allocate spaces into facilities (new, existing or renovated).
- Create a sequenced schedule for facility development.
- Define a building and facilities program that identifies needed new construction, renovation for reuse, interim swing space to support implementation, and points to possible secondary effects.
- Identify a funding strategy.

Framework for the Plan

The planning process principally relied on: (1) an analysis of the external and internal environment of the College including the demographic profile/characteristics; (2) the current and historical performance of the College relative to the areas of academic and support services; (3) the wisdom of those professional educators and administrators who are responsible for delivering the program of instruction and support services; and, (4) input from the consulting teams of Cambridge West Partnership, LLC and HPi Architecture.

Underpinnings

The process for generating the Plan relied heavily on the analysis of the existing program of instruction, the current level of space demand and the existing degree of space utilization. It offers a discipline-specific set of recommendations and a broader assessment of the instructional mix of programs.

The 2015 fall semester was used as a "snapshot" in time from which a planning baseline was constructed. Although the College has experienced a downturn in enrollments from the high point of fall 2010, the 2015 fall term was selected as the benchmark because it was the last complete term of data available to reflect the scope and breadth of the program of instruction and support services.

Analysis was also conducted relative to the demographic and income capacity of the "effective service area" of the College. This was defined as a geographic area with a sufficient and appropriate population base from which students of the future could be drawn. Additionally, a detailed look at the College was provided via an analysis of its external and internal conditions, its past characteristics and trends over a five-year period of fall terms from 2010 to 2014, its current productivity and efficiency, and its future needs for space.

Forecasting the future program of instruction was based on determining weekly student contact hours (WSCH) in fall 2015, while forecasting future space needs were largely predicted after defining a future program of instruction.

Activities

The development of the Plan included the following activities:

- Referencing and use of the College data files for student basic demographics and enrollment information.
- A review of the history and evolution of the College.
- An environmental assessment (environmental scan) to consider the present and anticipated impacts both within and outside the College's service area.
- The development of a "vision for the future space needs" derived from qualitative and quantitative analyses.
- The development of growth and enrollment estimates extending to the year 2030.
- A review to assure that access and overall success of underprepared and underrepresented groups within the community were considered in the planning process.
- An evaluation of current and projected facility needs to support growth and innovation in instruction.

This Plan is presented with the intent that it will serve as an educational programming blueprint for the College over the next ten years and as a facilities blueprint out to the year 2030.

## Overview of College

Barstow Community College (BCC) is an open-access, comprehensive two-year institution primarily serving a diverse student population in the Mojave region of San Bernardino County, California, but there are some modest overlaps into Kern and Inyo Counties. Established in 1959, the Barstow Community College District (BCCD) encompasses a vast service area, stretching from the Nevada border on the east to Kern County on the west, and from Inyo County in the North to the San Bernardino Mountain range in the south. BCCD serves the communities of Barstow, Lenwood, Newberry Springs, Daggett, Yermo, Hinkley, Ludlow and Baker. The District spans 9,157 square miles and is therefore the third largest community college district in California.

The College's campus is located in the City of Barstow, California, situated in California's high desert, between Los Angeles, California and Las Vegas, Nevada. The College leases a property on State Street in Barstow for the trades and industry element of the career and technical education instructional program. The institution also maintains a satellite-learning center that serves military personnel and their families within the U.S. Army National Training Center at Ft. Irwin, California.

Evening classes began in 1960 at Barstow High School, followed by the first day of classes in fall 1962 at the Barstow First Methodist Church. Two years later, a $3 million, six-building complex was constructed at the present location on Barstow Road, and classes began there in February 1965. There followed a technical building in 1967, an administration building in 1975 and an automotive laboratory in spring 1978. The automotive laboratory was converted into a physical fitness center in 2000 and a new 28,000-square-foot, state-of-the-art Learning Resource Center (LRC) opened in the fall of 2004. In 2005 many campus facilities underwent a Remodel for Efficiency project, a two-phase improvement project that renovated and updated the K Building, S Building and the Norman Smith Center. Phase 1 included the renovation of the K Building (the old library) into the Interim Performing Arts Center (IPAC) which was an open space used primarily by the Performing Arts Department. At that time the S Building was updated to facilitate more efficient use as a co-laboratory for science instruction. Phase 2 transformed the Norman Smith Center into a One-Stop Services Center for students that included admissions and records, financial aid, counseling services, the Transfer Center, the student lounge, the cafeteria, and the Associated Student Government. In 2007 the cosmetology department found a new home in the D Building, having been located off campus for several years. The building was fully renovated to meet State of California Board Certification for Cosmetology approval and to provide several practicum and theory classrooms and also become the home of the Viking Bookstore. In 2010, ground was broken on construction for the 750-seat Performing Arts Center. The facility was completed in late summer 2014. The Wellness Center, which is constructed behind the current gymnasium, was completed in late fall 2015.

At the present time the College offers a comprehensive curriculum at the 200-acre main campus site in Barstow. In 1969 the College entered into a 100 year agreement to lease 25 acres directly south of the main campus to the Barstow Veterans Home of California. The College serves more than 5,000 students annually with approximately 120 full-time employees and an annual budget of

$18 million. BCC provides the first two years of college or university study as part of the California State Community College System of Higher Education. The College's educational programs include lower-division college coursework and general education offerings for transfer to baccalaureate degree institutions. The College also provides a skilled workforce through credit-based classes and contract training to meet the needs of employers. Additionally, BCC provides students with relevant 21st century career and technical education that leads to academic achievement and successful employment in a global economy. To further assist students, the College offers an extensive range of pre-collegiate basic skills courses in mathematics, reading, English, and English as a Second Language for those who need additional academic support before matriculating into a college degree, certificate and/or transfer program.

Transfer Degrees – The California Community Colleges and the California State Universities worked together to create associate degrees for transfer. Successful community college students can be awarded an Associate Degree that guarantees 60 transfer units. A complete list of BCC's many transfer degrees can be found in the annual college catalog.

Associates Degrees and Certificates / Career and Technical Education (CTE) – Many associates degrees and certificates offered by the College are in the emerging Career and Technical Education fields which the college has emphasized over the past five years. The College has developed occupational programs for entry into the workforce as well as advancing skill sets of incumbent workers. To meet the evolving professional development needs of local and regional businesses, the College is now offering contract educational and training offerings tailored to the working professional and the unique demands of local and regional businesses.

Partnership with the Military – The College has proudly provided services to military personnel and their families since 1981. The faculty and staff ensure a high-quality education that prepares the military students for life-long learning. BCC's main campus and satellite campus at Fort Irwin National Training Center provide live and online courses leading to certificates and degrees in various fields of study. There are also extensive online programs also provide education and student services to military members located throughout Europe, Asia and the Middle East.

Student Success – BCC offers the traditional full array of student services, including services for disabled students (DSPS), Extended Opportunity Programs & Services (EOPS), veterans and military education services, California Work Opportunity and Responsibility to Kids (CalWORKS), Transfer and Career Center, and financial aid services. Additionally, Barstow Community College has launched a new program dedicated to the success of local high school graduates. All high school seniors are afforded the opportunity to participate in College Days held throughout the spring when they can join in orientation and assessment activities. These activities, in collaboration with local school districts, can lead to stronger starts to students' college careers and assist them in pursuing higher education with confidence. Complementing the activities in the spring, students may choose to participate in the summer fast track program. This program provides students with intensive study in math or English, which may allow them to bypass non-transferrable preparatory courses.

## Mission, Vision, Values

Mission

In 2014 the campus community, through an all-college meeting and discussion at the institutional Effectiveness Committee, revisited the College mission statement. Board of Trustees approved the most recent mission statement on April 16, 2014. It reads as follows.

> Barstow Community College is an accredited, open access institution of higher learning committed to providing our students, community, and military population with the educational tools to achieve personal goals and professional growth. To accomplish this, the college offers traditional and distance education courses, programs, and pathways designed to enhance student success, leadership development, and career opportunities, enabling all in the community to thrive in a changing global society.

Vision

The Board of Trustees approved a vision statement on December 14, 2011. It reads as follows.

Empowering students to achieve their personal best through excellence in education.

Values

The college community developed a set of five values, which the Board of Trustees approved on November 20, 2013. They are built around the acronym C.A.R.E.S.

C - Communicating consistently with others respectfully and professionally;
A - Accountability to our stakeholders as demonstrated through integrity and ethical behavior;
R - Reaching balance in the full appreciation for the institution as a whole;
E - Embracing a breadth and depth of perspectives;
S - Supporting our students and each other as we serve the educational needs of the community.

## Strategic Priorities of the College and Board Goals

The College Strategic Plan for 2015-18 set out seven strategic priorities with related goals and activities as follows.

**Strategic Priority 1: Educational Success- Measurably advance student equity, completion and attainment of educational goals.**
GOAL #1: Provide Student Success Support Plan and Equity Plan information to the Enrollment Management and Curriculum Committees to facilitate making educational pathways accessible through course offerings, course timing and research into student needs.

Activity 1: Participate in the creation of two-year plans, with a concurrent one-year schedule of courses.
Expected Outcomes: Transparent course planning available to assist counselors, students, curriculum creators, and Academic Affairs in planning effective pathways, leading to improved student success. A two-year plan will be created and made available. A one-year schedule of courses will be created and made available.
Success Metrics: Longitudinal success rates increase in degree and certificate completion.

Activity 2: Promote the addition of information about pathways to the course catalog, student handbooks, and orientations.
Expected Outcomes: Students will work with counselors to create educational plans in order to achieve their educational goals.
Success Metrics: Longitudinal data will indicate a continued growth in the number of students with educational plans.

GOAL #2: Promote improvement in the success of underprepared and/or at-risk students through instructional support and college services.

Activity 1: Explore and implement innovative academic support systems, such as embedded tutoring, supplemental instruction, etc.
Expected Outcomes: Improved success rates in classes, especially those with high D, F and W rates.
Success Metrics: Evaluation of success and retention in comparable courses; student experience assessment via focus groups; evaluating comparable classes through surveys; rubrics to assess effectiveness of supplemental instruction, tutoring, etc.

Activity 2: Research and support the implementation of non-credit skill course options.
Expected Outcomes: Improved success and retention rates in classes, especially those with high D, F, and W rates.
Success Metrics: Comparison of success and retention in comparable courses.

**Strategic Priority 2: Marketing and Outreach- Expand marketing, outreach, and access to our community so as to advance BCC's image as the best small college in the high desert.**
GOAL #1: Discover and enhance the current perception of Barstow Community College.

Activity #1: Create and administer surveys to determine current perceptions.

Expected Outcomes: The data will focus our marketing and outreach activities.
Success Metrics: The creation of action plans to enhance perception of the College and future surveys will determine if our efforts have improved perceptions.

Activity #2: Conduct focus groups with community members, students and potential students.
Expected Outcomes: An analysis of the data will focus our marketing and outreach activities.
Success Metrics: Creation of action plans to enhance perception of the College and future surveys will determine if our efforts have improved perceptions.

GOAL #2: Provide insight for and support of a user-friendly website.

Activity #1: Conduct focus groups to determine opinions of current website.
Expected Outcomes: A more user friendly website.
Success Metrics: A decrease in negative comments regarding website use and an increase in easily accessible information.

Activity #2: Provide information and ideas about improving website navigation.
Expected Outcomes: Improved navigation of the website and improvement of the College's image.
Success Metrics: A decrease in negative comments regarding website use.

Activity #3: Provide insight and support to create a bilingual option for the website.
Expected Outcomes: A better understanding of College services to our local Spanish speakers.
Success Metrics: Increased requests for information from Spanish speakers.

Activity #4: Provide support for and logistical assistance for posting student testimonials on the website.
Expected Outcomes: Improved perception of the College and enhanced marketing.
Success Metrics: Increased applications and requests for College information.

GOAL #3: Concisely capture flaws in articulation, transfer and 2-year pathways and work with appropriate departments to create and promote easy ways for students to achieve their educational goals.

Activity #1: Identify articulation gaps and create an action plan to eliminate gaps.
Expected Outcomes: An increased number of transfer agreements and an increase number of completers.
Success Metrics: The increased number of articulation agreements and an increase in the number of satisfied transfer students.

Activity #2: Identify and prioritize transfer institutions and create an action plan to create transfer agreements.
Expected Outcomes: An increased number of transfer agreements and an increase number of completers.
Success Metrics: The number of transfer agreements and the number of transfer completers.

**Strategic Priority 3: Fiscal Health- Sustain and cultivate an environment that strengthens the district's long-term fiscal health.**

GOAL #1: Educate the college community on financial risk management.

Activity #1: Explain the benefits of a Board approved reserve.
Expected Outcome: The college community will better understand the benefits of the long-term fiscal health of the district and how the reserve supports the goal.
Success Metrics: The District budget will reflect a Board approved reserve; Board policy is updated; an annual survey is completed to measure understanding; year over year changes are documented.

Activity #2: Facilitate discussions regarding District wide risks.
Expected Outcomes: The Business and Finance Committee will deliver risk management discussion topics district wide.
Success Metrics: The number of topics identified, discussed and addressed will be captured and reviewed annually.

GOAL #2: Increase conservation efforts to reduce utility costs.

Activity #1: Implement an electricity generating plant.
Expected Outcome: A solar field is fully functioning.
Success Metrics: Review of electricity bills.

Activity #2: Fully develop and implement a water savings program.
Expected Outcomes: A water savings program is developed and implemented providing reduced costs to water bills.
Success Metrics: Review of water bills.

GOAL #3: Search for, evaluate and apply for external funding while considering the long term, total cost of ownership.

Activity #1: Develop the special projects evaluation form.
Expected Outcomes: A form will be developed and used. Improve choices of submitting for special projects.
Success Metrics: A form will be used, evaluated and modified as needed. Not using inefficient resources for special projects. Comparison of special projects "cost" to the College before and after the form is implemented.

Activity #2: Secure an external grant writing team to search for opportunities and help facilitate the grant writing.
Expected Outcomes: Opportunities are discussed and decisions to apply for funding are made. We receive external funding.
Success Metrics: The number of discussions, applications and awards that are fully discussed compared to grants and special projects that are not institutionalized.

**Strategic Priority 4: Safety for All- Promote safety and security of all facets of the College community.**

GOAL #1: Improve and increase college-wide awareness of cyber policies, procedures, and best practices.

Activity #1: Implement security software /hardware such as an intruder detection systems (IDS).
Expected Outcomes: Implement monitoring equipment to prevent suspicious activity from occurring.
Success Metrics: Reduction in Firewall issues, periodic surveys to the campus population for feedback.

Activity #2: Revise and make readily available cyber safety policies and procedures.

Expected Outcomes: Campus-wide implement training and deployment of cyber safety policies and procedures.
Success Metrics: Reduction in safety issues, periodic surveys to the campus population for feedback.

Activity #3: Have College wide and consistent focused training on best practices and college procedures.
Expected Outcomes: Deployment of best practices and procedures.
Success Metrics: Reduction in incidents college-wide, and periodic surveys of the campus population for feedback.

GOAL #2: Prepare and train the college for cyber emergencies and/or intrusive problems.

Activity #1: Complete and disseminate a Data Breach Policy.
Expected Outcomes: Document completed and disseminated.
Success Metrics: Practice Drills to ensure the plan is working properly.

Activity #2: Complete and disseminate a Disaster Recovery Plan.
Expected Outcomes: Document completed and disseminated.
Success Metrics: Practice Drills to ensure the plan is working properly.

GOAL #3: Educate and train all college group stakeholders on the Emergency Action Plan (EAP).

Activity #1: Ongoing safety and awareness training at BCC All College meetings.
Expected Outcomes: Updated information on an ongoing basis.
Success Metrics: Sign in sheet for accountability and record keeping and surveys of stakeholders.

Activity #2: Ensure that existing EAP elements are valid and current.
Expected Outcomes: New and updated EAPs.
Success Metrics: Dated and posted updated EAPs presented at All-College meetings.

GOAL #4: Training and resources Enhancement.

Activity #1: Ongoing safety and awareness training at BCC All-College meetings.
Expected Outcomes: Ongoing awareness and improved preparation.
Success Metrics: Receipt of emails, training attendance, and participant surveys.

Activity #2: Classroom/departmental preparedness training (weekly/monthly/ quarterly).
Expected Outcomes: Improved preparedness.
Success Metrics: Feedback from the department leads and agenda/minutes from Safety meetings.

GOAL #5: Obtain District-wide resources and expertise in the area of personal safety and training.

Activity #1: Conduct discussions to establish funding to hire/contract with a safety specialist.
Expected Outcomes: Funding is identified to pay for the expertise.
Success Metrics: Funding allocated for this expertise.

GOAL #6: Infrastructure is improved to enhance personal safety in buildings.

Activity #1: Improve communication technology to allow for improved messaging in classrooms/buildings.
Expected Outcomes: Phone and other technology improvements are made to improve communications in the event of an emergency.
Success Metrics: 100% of the telephone software and hardware systems are updated to meet today's safety and security needs.

Activity #2: Improve door hardware to better secure rooms and buildings.
Expected Outcomes: Door hardware is updated to improve security in the event of an emergency.
Success Metrics: 100% of door hardware needed to be safe is upgraded.

**Strategic Priority 5: Campus Culture- Build a diverse and committed campus culture that promotes engagement among students, staff (classified/management), faculty, and the college and the community.**

GOAL #1: Support a variety of cultural activities and interactions among students, faculty, staff and the surrounding community.

Activity #1: Expand diverse student events and increase student involvement and engagement.
Expected Outcomes: Increased student and community engagement and participation. Create a vibrant college culture.
Success Metrics: Participation documentation (sign-in sheets, satisfaction/engagement surveys).

Activity #2: Encourage faculty and staff to participate in student activities through engagement both inside and outside the classroom.
Expected Outcomes: Increased of faculty/staff participation and involvement in campus events. Create a vibrant college culture.
Success Metrics: Participation documentation (sign-in sheets, satisfaction/engagement surveys).

GOAL #2: Encourage/improve campus communication about events and activities.

Activity #1: Create an event calendar available online at the beginning of every semester and regularly updated throughout the semester.
Expected Outcomes: Increased participation in and knowledge about campus events and creation of a vibrant college culture.
Success Metrics: Participation documentation (sign-in sheets, satisfaction/engagement surveys).

GOAL #3: Improve college workplace communication culture.

Activity #1: Advocate the offering of training in MS Outlook, e-mail protocol and etiquette.
Expected Outcomes: Increased workplace efficiency, satisfaction and professionalism.
Success Metrics: Workplace satisfaction surveys.

**Strategic Priority 6: Evidence Based Decision Making- Enhance and further an evidence-based framework that supports the institution's decision-making process.**

GOAL #1: Utilize current technology fully to insure data integrity.

Activity #1: Provide training in Banner usage and utilization of data.
Expected Outcomes: Promote training and information sharing in multiple delivery methods.
Data gleaned from Banner verified as accurate.
Success Metrics: The number of corrections to be submitted to the state will decrease compared to current number of submissions.

Activity #2: Provide training in SARS usage and utilization of data.
Expected Outcomes: Promote training and information sharing in multiple delivery methods. Data gleaned from SARS used to improve student success.
Success Metrics: Measure attendance at trainings; aggregated data gathered from SARS.

Activity #3: Establish training to analyze and assure data integrity.
Expected Outcomes: Better data integrity and better campus-wide understanding of data.
Success Metrics: Measure attendance at trainings; review of data integrity procedures and results.
Activity #4: Establish a trained data analysis team to provide independent review of data elements to the stakeholders.
Expected Outcomes: Data analysis team established and trained with a standardized independent review process.
Success Metrics: Data analysis team activity and findings.

Activity #5: Align data fields with state reporting structure.
Expected Outcomes: Lessen the workload of affected stakeholders with number of corrections to be submitted to the State.
Success Metrics: Improve workplace efficiency; reduce number of corrections requested; in such areas as curriculum, MIS reporting, etc.

GOAL #2: Improve the utilization of data in decision-making.
Activity #1: Provide training in data retrieval technology and use of data.
Expected Outcomes: Valid data leads to valid decisions.
Success Metrics: Number of trainings provide, increased attendance, use of accurate data based on cross verification.

Activity #2: Continue to enhance Program Review training and handbook to improve PR submissions.
Expected Outcomes: Improvement in Program Review scores and BAP success, reduction in recommended changes.
Success Metrics: Program Review rubric and scores, number of BAPs granted, increased commendations, departments improve their performance for student success.

**Strategic Priority 7: Diverse and Excellent Workforce- Attract, develop, and retain an excellent and diverse workforce.**
GOAL #1: Increase applicant pools by 10-20% to achieve a highly qualified and diverse workforce.

Activity #1: Expand recruiting efforts and target recruiting efforts to underrepresented groups.

Expected Outcomes: Increase in applicant pool size and diversity.
Success Metrics: Number of applicants, recruitment source data, applicant diversity.

Activity #2: Implement applicant tracking system.
Expected Outcomes: Smoother and user-friendly application process and automated capturing of applicant demographics.
Success Metrics: Applicant tracking system implemented and applicant demographics made available.

GOAL #2: Ensure all screening committee members and employees are trained on EEO and diversity compliance and understand the value of having a diverse workforce.

Activity #1: Training of screening committee members on EEO and Diversity compliances and best practices.
Expected Outcomes: Increased screening committee awareness of the value of a diverse workforce.
Success Metrics: Demographics of candidates, employees, students and hiring committees.

Activity #2: Employee training on the importance of diversity in the workforce.
Expected Outcomes: A better understanding by the employee of the value of a diverse workforce.
Success Metrics: Training attendance and improved employee relations leading to student success.

GOAL #3: Reduce employee attrition by 30-50% through an improved employee onboarding, and orientation and mentoring program.

Activity #1: Formalize and enhance employee onboarding.
Expected Outcomes: A better-informed employee who feels welcomed and enabled.
Success Metrics: Onboarding completion rates.

Activity #2: Formalize and enhance employee orientation.
Expected Outcomes: A better-informed employee who feels welcomed and enabled.
Success Metrics: Employee orientation completion rates and completion survey data.

GOAL #4: Identify and promote both internal and external professional development opportunities for all faculty and staff.

Activity #1: Develop an easy-access resource for professional development activities.
Expected Outcomes: Easy-access to resource of professional development trainings and seminars.
Success Metrics: Increased use of resources and completion of professional development opportunities.

Activity #2: Identify and communicate opportunities for professional development.
Expected Outcomes: Improved professional development.
Success Metrics: Increased participation in professional development activities.

In November 2016 the Board of Trustees articulated a set of goals for the 2016-17 academic year that are intended to augment the longer-term strategic priorities and College goals. Those annual Board goals were articulated in two broad categories as follows:

**Board Goals to Achieve Institutional Effectiveness & Excellence**

1. Ensure that the College a) sets appropriate student achievement standards, b) monitors student performance data, and c) provides action plans including benchmarks to remedy unmet standards. Areas of focus include transfer, developmental education and career/technical education.
2. Expect and support local community involvement by the Superintendent/President as well as state and national activities that promote district interests.
3. Promote community involvement in the continued utilization of the Performing Arts Center.
4. As a continuous goal, partner with area leaders in economic development activities within the region.
5. Fulfill the Board's responsibility to maintain the fiscal integrity of the district by expecting that the District finances are managed effectively, including maintaining a budget reserve of at least 15%.
6. Support the College's continued efforts to advance emergency planning and preparedness.
7. Expect and support the College efforts to achieve continuous customer service excellence, and that a culture of civility and collaboration exists amongst all constituency groups.
8. Expect the development of policy and related procedures to implement a comprehensive student achievement recognition program.
9. Expect that the College's information systems produce accurate data and information to support decision-making; provides the capacity to monitor institutional effectiveness; and implementation of a comprehensive enrollment management plan.
10. Support College professional development opportunities.
11. Expect continued focus on developing a diverse and excellent workforce.

**Board Goals to Ensure Board Effectiveness and a Strong Board / CEO Partnership**

12. Expect that Board Policies and Administrative Procedures are up-to-date and reflect Board values.
13. Expect and support Board members' involvement in the local community and in state and national activities that promote district interests.
14. Maintain and strengthen a sense of team, including positive and supportive communication between trustees and the CEO.
15. Continue to clarify the need for information required for board decision-making.
16. Be appropriately involved in accreditation.

# Educational Master Plan Section

## I. Planning Context for the Educational Master Plan

The Barstow College Educational Master Plan (EMP) is a reflective evaluation of where the College has been, where it is now, and where it might plan to be in the future. The EMP aligns with the College's Strategic Plan and will guide the Facilities Master Plan (FMP) by suggesting likely future enrollment growth and potential new instructional programs. The EMP is integrated with several of the functional plans discussed below because it is a resource for them and draws from them. An inventory of College plans related to the EMP is found in Appendix A of this Plan. The inventory identifies the groups involved with the authorship, review and/or approval, resource (funding) source, and implementation responsibility of plans. Almost all plans are shared with the president's Shared Governance Council (PSGC). The PSGC is a representative body designed to assist the governance of the District and is limited by the scope of collective bargaining and the responsibilities of the President. It guides the goals, objectives, and action plans of other committees and departments through the Strategic Planning and Communication process.

For purposes of this discussion, three plans are institutional documents: (3) Strategic Plan; (2) Educational Master Plan; and, (3) Facilities Master Plan.

Strategic Plan. The College Strategic Plan is the third institutional plan. The development of the 2015-18 Strategic Plan began in spring 2015 with an all college planning retreat supported by the Institutional Effectiveness Committee. It involved reviews of the priorities by all participatory governance committees and concluded with Board of Trustees approval in February 2016. The Plan establishes a limited set of goals and objectives designed to guide the development of the College so that in future years it builds upon its strengths, takes advantage of opportunities, strengthens weaknesses, and mitigates threats. The Strategic Plan was developed through the collaborative discussion of the college community at professional development days. Some units of the College are assigned a leading role to work on elements of the Plan. The program reviews for each unit will address how their efforts and accomplishments align to the strategic initiative and mission of the College. The Institutional Effectiveness Committee, Service and Learning Outcomes Committee, Program Review Committee, and PSGC annually review the Strategic Plan. Annual updates are shared at the May all-college meeting and with the Board of Trustees at their May meeting.

Educational Master Plan (EMP). The EMP is one of three institutional plans. The EMP was developed under the leadership of the Business and Finance Committee, augmented by additional instructional and student services representatives, to offer a comprehensive view of the instructional and related student support services efforts of the College. It documents the educational needs in the service area and the College's response to those needs. It reflects upon the performance of the College and its strategic priorities. The EMP provides a review of opportunities in the labor market and at transfer institutions to which the faculty members' future curriculum visions could be directed. The final chapter provides a projection of future growth, identifies current facilities instructional issues, and recognizes potential new space

needs arising from the future curriculum visions. The projection of future growth serves as a bridge to the Facilities Master Plan (FMP). The President's Cabinet and PSGC reviewed the EMP.

Facilities Master Plan (FMP). The FMP is one of three institutional plans. The FMP was developed under the leadership of the Business and Finance Committee, augmented by additional instructional and student services representatives, to be a comprehensive view of the campus physical development. The purpose of the Business and Finance Committee is to review and make recommendations on the budget process, budget forecasting, facilities planning, and scheduled maintenance. The FMP is based upon the projection of future growth from the EMP and an analysis of the current physical conditions of the campus property. It provides a series of options for the College to consider regarding the future development of parking, circulation (pedestrian and vehicular), way-finding signage, instructional spaces and their placement within the campus. The President's Cabinet and PSGC reviewed the FMP.

The College committee system has authored numerous functional plans. Those that are most related to the EMP are described below. Through the shared governance process each of the plans is reviewed and funded.

Technology Plan. The Technology Committee (TC) developed the College Technology Plan. The purpose of the TC is to promote the use of technology to increase efficiency of College support services and to improve teaching and enhance student learning. It makes recommendations for creating and improving technological policies and procedures and replacing and enhancing technology components to position the infrastructure for growth and expansion. The Technology Plan ties to the, College EMP, Strategic Plan goals, and unit comprehensive program reviews. It seeks to promote the use of technology for instructional and administrative purposes. The Technology Committee and PSGC reviewed the College Technology Plan.

Student Equity Plan. The Plan was developed by the Student Success and Equity Committee (SSEC) and reviewed by the Institutional Effectiveness Committee (IEC), Senate and PSGC. Barstow Community College has established the SSEC to centralize the institution's focus on student achievement and equitable outcomes for all and ensure the College was in compliance with appropriate regulations. Membership of the committee comes from all constituent groups (faculty, administration, classified and students) and a number of the members also sit on the Basic Skills Committee. The purpose of the SSEC is to ensure student access and success in an environment that fosters equity and diversity. (Detailed information about the committee charge and responsibilities can be found at: http://www.barstow.edu/Committee_Student_Success.html) Specifically, the SSEC is responsible for creation and monitoring of both the Student Success Plan and the Student Equity Plan, representing the College's commitment to provide a hospitable and student-centered environment; increase student access and success by providing necessary support services; foster awareness and respect for ethnic and cultural diversity.

The Plan identified subpopulations within the student body whose success has been disproportionately impacted adversely through the college experience. The traditional Student Equity Plan areas of inquiry are access, course completion, ESL and basic skills completion, degrees and certificates obtained, and transfers to a four-year institution. Because the SSEC authors the Student Equity

Plan and the Student Success and Support Program Plan the planning and action goals of the two plans are integrated. The Basic Skills Coordinator and others on the Basic Skills Committee (BSC) are members of the SSEC. Until 2015 dedicated funding for interventions to assist the subpopulations experiencing a disproportionate impact had not been available. However, a number of the student support services listed in the internal scan section of the EMP have been organized to target those subpopulations identified as most at risk.

A Connections Work Group was created in 2016 to create better connections between plans such as the Student Equity Plan and the integrated planning process.

Basic Skills Plan. Deans and departments propose ideas for the Plan. These proposals were reviewed and evaluated by the BSC and Coordinator as they formulated each annual Plan. The Vice President for Academic Affairs and the PSGC reviewed the annual Plans.

The Plan identified subpopulations within the student body whose success is lagging and specific segments of the basic skills curriculum that are the most challenging. Funding from this Plan supported interventions such as early alert, supplemental instruction, acceleration instructional strategies, workshops, and tutoring services.

A Connections Work Group was created in 2016 to create better connections between plans such as the Basic Skills Plan and the integrated planning process.

Student Success and Support Program (SSSP) Plan. The Plan was developed by the SSEC and reviewed by the IEC and PSGC. Through integrated planning the purpose of the IEC is to lead program review, and accreditation processes to ensure that decision-making is data driven and connected to the mission and strategic priorities of the College.

It identified steps to be taken to improve the effectiveness of core services (orientation, assessment and placement, counseling, advising, and other educational planning services, and follow-up services to at-risk students). The Plan described District research support for the services and uses of technology in the provision of core services. Changes to College policy and professional development initiatives are outlined in the Plan. After the initial 2014-15 year all of the interventions were reviewed and extensive group interviews were completed with key College leaders to inform new ideas and adjustments for the 2015-16 Plan.

A Connections Work Group was created in 2016 to create better connections between plans such as the Student Success Support Program Plan and the integrated planning process.

Assessment of Student Learning Outcomes Plan. The Service and Learning Outcomes Assessment Committee (SLOAC) developed the long-range schedule for the assessment of the Institutional Learning Outcomes (ILO) described as core competencies. The Plan and annual assessment data is reviewed by the SLOAC and the Institutional Effectiveness Committee. The Assessment Plan described a philosophy, goals, and guidelines for assessment work as well as levels of assessment (classroom, degree/certificate/pathway, and general education core competencies). Learning outcomes assessment work is integrated

with comprehensive program reviews where faculty members report on their assessment activities.

Major Grants. The College participates in a range of grants, most of which are competitively awarded and have performance expectations. The faculty and the Dean for Workforce Development/Career and Technical Education develop the grant proposals that are reviewed within Academic Affairs and shared with the PSGC.

- U.S. Department of Labor/U.S. Department of Education Trade Adjustment Assistance Community College and Career Training (TAACCT) grant. The grant's purpose is to educate students to complete a program of study in two years that will lead to employment in high-wage and high-skill occupations. The funds have been used to develop the new Industrial Maintenance programs.
- Carl D. Perkins federal grant program to improve career and technical education (CTE) programs serving special populations and seeking to meet gender equity needs. The funds are awarded to the Chancellor's Office then passed through to the College based on student population numbers in the CTE programs.
- CTE Enhancement grant provides funds to develop, enhance, retool, and/or expand programs that addresses regional labor market needs. The College has used these for the emerging pathways in Diesel, Automotive and Industrial Maintenance program areas.
- CTE Transitions grant that focuses upon outreach/career exploration, articulation, concurrent enrollment, credit-by-exam, and work-based learning to help students migrate from secondary to postsecondary education then into the world of work.
- California Career Pathways Trust (CCPT) RAMP-Up grant is to develop locally defined career pathways to connect school districts, community colleges, and business entities. The College has focused on: (1) Manufacturing and Product Development- Machine and Forming Pathway; and, (2) Transportation- Vehicle Maintenance Service Repair Pathway.
- Proposition 39 Clean Energy Workforce Program grant to help schools improve energy efficiency and expand clean energy generation in schools. The College has devoted these funds to the welding, industrial maintenance, and electrical programs.
- Foster and Kinship Care Education grant to provide noncredit education and training to potential and existing foster parents.

Career and Technical Education (Perkins) Plan. The Career and Technical Education programs advisory committees provide specific direction to this segment of the College's instructional offerings. The various committees review respective programs and course content to ensure that they reflect currency in the field and provide students with necessary skills to fulfill any national or state certification requirements. The committee members assist in the identification of community needs, employment trends, the availability of human, material, and financial resources necessary to develop and implement programs, and in the promotion of CTE programs.

Five-Year Capital Construction Plan. This Plan is developed by the Vice President for Administrative Services and is reviewed by the

Business and Finance Committee and the PSGC. It sets forth proposed capital construction projects and provides an analysis of how the projects would impact the College's use of facilities. The Plan is annually submitted in July and becomes the basis of verifying the needs of the College over the five-year period. At the same time the College may submit Initial Project Proposals (IPPs) and Final Project Proposals (FPPs) that detail the construction projects being proposed and provide a justification and analysis of the need for the project and alternatives considered. All projects that are planned must be included regardless of the funding source (State or entirely local funding). The Plan also includes a statement of the College's energy plans.

Staffing Plan and Equal Opportunity and Diversity Plans. These Plans are developed by the Associate Vice President for Human Resources and are reviewed by the Equal Opportunity and Diversity Committee (EEODC) and the PSGC. The purposes of the EEO and Diversity Committee is to develop, review and update the District's EEO and Diversity Plan and to ensure the College implements measures which ensure equal employment opportunities and a diverse workforce. The Staffing Plan provides the process for staffing due to the creation of new positions, implementing new programs or technology support, and filling of vacant positions. The Plan supports a goal in the Strategic Plan and works in conjunction with the Professional Development Plan.

Professional Development (PD) Plan. The Staff Development and Recognition Committee (SDRC) developed and reviewed this Plan. The purpose of the SDRC is to identify and plan professional development opportunities for faculty and staff that support the institution's continuous improvement and goals. It works with Human Resources to document all professional development completed and evaluates the effectiveness of the training. The Plan is also reviewed by the PSGC. The PD Plan provided for monthly activities and formal professional development days each academic year. The annual Plan draws upon suggestions offered by the faculty, staff and administrators of the College. The PD Plan is integrated with other planning activities at the College because some of the ideas for development activities arise from the other functional plans discussed in this chapter and from the Strategic Plan.

Comprehensive Program Reviews and Unit Planning. The units and departments of the college prepare comprehensive program review documents on a rotational three-year cycle with a due date in October. If a unit is not due for a comprehensive review, an annual update is submitted in October as a means to convey a request for resources. The purpose of the cycle is to ensure that all employees focus day-to-day operations and planning on the core mission and strategic goals of the College. One of those goals is to sustain continuous quality improvement in an effort to improve a student's chances of success.

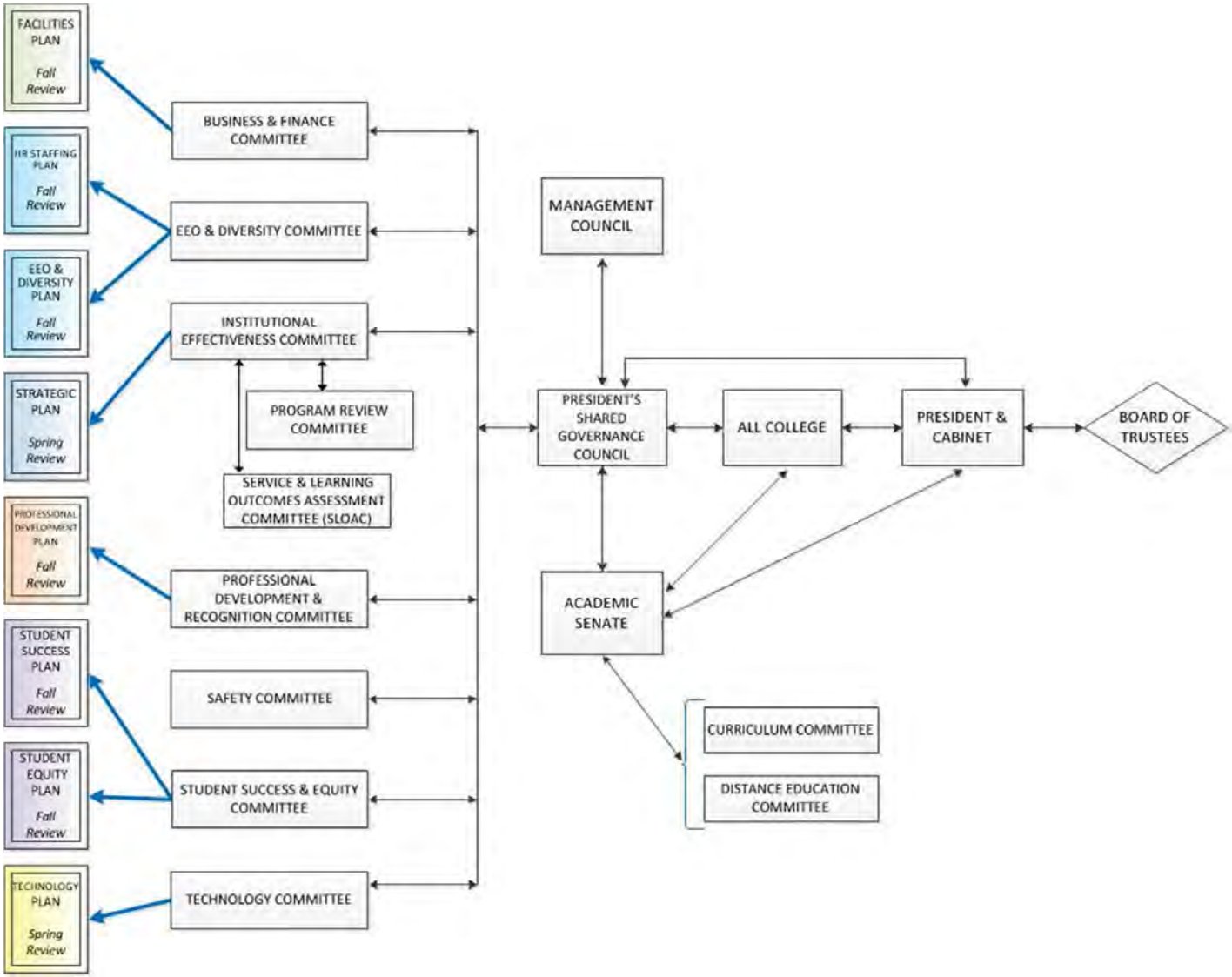
The instructional program review promotes integrated planning by requiring a discussion of how the unit has responded to the collectively developed objectives associated with College strategic goals, how it has implemented its curriculum, how it has assessed student learning outcomes, the achievement performance of students, how the program has performed on administrative outcomes, and how it has utilized faculty, staff, facilities, and equipment. A portion of the review provides an opportunity to discuss two-year scheduling plans, future needs, professional development, and strengths, weaknesses, opportunities, and threats to the program. The more recent instructional

comprehensive program reviews were consulted in preparing the EMP. Particular attention in instructional unit reviews was given to the responses about curriculum, facilities, and future needs.

In the case of student services units the comprehensive program review, also on a three-year cycle, provides for a discussion of service area or administrative outcomes and changes in policies and procedures. Otherwise, the prompt questions invite a discussion on the same topics addressed by the instructional programs. The more recent student services comprehensive program reviews were consulted in preparing the EMP. Particular attention in student services unit reviews was given to the responses about technology and planning agendas for the future.

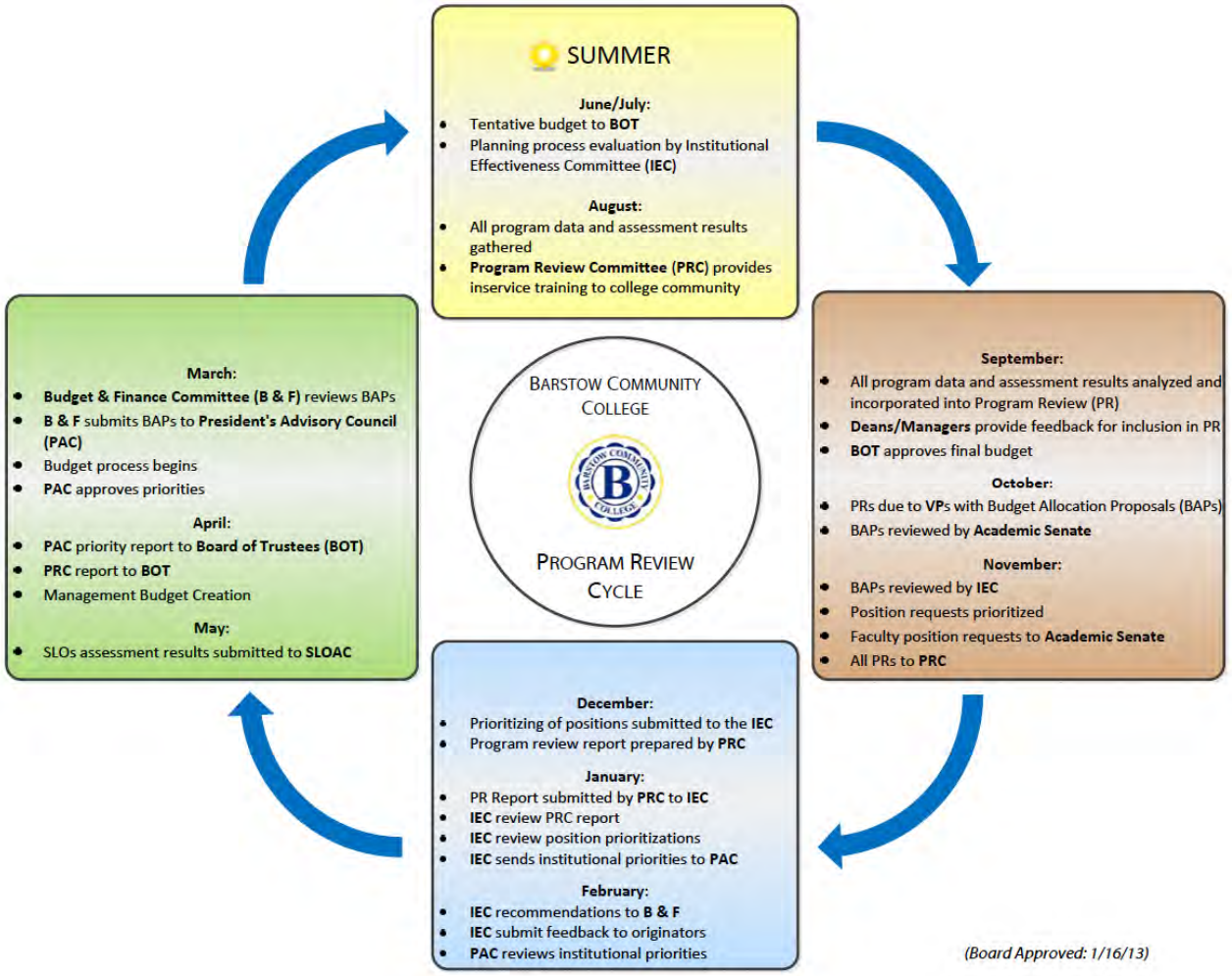
The integrated nature of College planning and resource allocation activities is illustrated by the following two graphics.

Chart 1: Barstow College Annual Strategic Planning and Communication Process




Source: Barstow College, Institutional Effectiveness Office. *2015 Evaluation of Planning Documents & Strategic Planning Process*.

Chart 2: Barstow College Program Review Cycle




Source: Barstow College. *Accreditation Follow-Up Report.* February 28, 2013.

The practice of integrated planning rests on three assumptions:

1. Data and dialogue regarding the improvement of institutional effectiveness occurs in an ongoing systematic cycle of evaluation, integrated planning, resource allocation, implementation and re-evaluation. Student success is one goal of institutional effectiveness
2. The integrated planning process is driven in all levels by internal and external data and data is particularly utilized in the assessment of effectiveness.
3. Internal and external factors contribute to the process and policy changes for the college, e.g., accreditation, state initiatives, etc. These internal and external factors are taken into account in the institutional plans such as the EMP.

The planning process acknowledges the considerations of institutional set standards for student performance, an accreditation requirement, and the college indicator rates for institutional effectiveness mandated by State legislation.

Resource Allocation Process

The Budget allocation proposal prioritization process involves the Institutional Effectiveness Committee (IEC), the Business and Finance Committee and the President's Shared Governance Council to provide leadership and support in the planning and communication process. Each committee/council ranks staffing, equipment, facility and technology requests through the use of criteria developed by that particular committee/council. Prioritized lists are submitted to the President's Cabinet.

The Budget Allocation Proposal, or BAP, process begins near the completion of the annual program review cycle. All departments, both instructional and administrative, submit either a full program review or annual update each fall. BAPs are attached to these program reviews if a department is requesting new monies to cover the cost of new equipment, technology, facilities (or remodeling), or personnel. The vice presidents review the program reviews and BAPs to assure that the program reviews are appropriate, complete and thorough, and that the monies requested are not to be found elsewhere. Once the program reviews and BAPs meet the satisfaction of the Vice President, they are forwarded to the Institutional Effectiveness Committee.

The IEC forwards the reviews to the Program Review Committee for an initial review. If the committee determines that there are substantial flaws in a review, it is sent back to the department with suggestions for strengthening or clarifying information. Once the final submission is received, the committee begins the final review process. Two individual members of the committee are assigned to each review. These individuals use a rubric to assess the strength of the data and the narrative in nine different categories.

The BAPs remain with the IEC. Once the Program Review Committee completes its process, the final assessments are forwarded to the IEC, which then begin the process of evaluating the BAPs. The IEC uses a rubric to assess the requests. The committee reviews six different areas and ranks how well the BAP is supported by the department's program review, how well it is aligned with strategic priorities and goals, whether the department discusses measureable outcomes, whether the proposal discusses the benefit to the department and the college as a whole, assesses how detailed the action plan for implementation is, and ranks the creativity of problem solving with regards to departmental and institutional enhancement.

The point values assigned to these categories are totaled and then each BAP is ranked in comparison to the other BAPs. This ranked list is then forwarded to the Budget and Finance Committee for their review. The Budget and Finance Committee reviews the BAP's and establishes priorities. This vetted information is captured on one spreadsheet and presented to the President's Cabinet for review before being presented to the President's Shared Governance Council for its consideration and a final recommendation to the President. Based on the president's approval, resource allocations are made in response to the prioritized lists.

The planning and communication process is completed in two steps. The IEC returns to each department their program reviews and BAPs with completed rubrics indicating commendations and recommendations for improvement. The departments are informed of BAP rankings from both the IEC and Business and Finance Committees. The IEC posts online all program reviews and gives special designations to departments who are "superstars" in the hope that these provide samples of best practices.

The second step is the President's annual address at the beginning of the fall semester and the subsequent letter to the College community detailing the outcomes of the process. This message details which proposals and projects were funded. This completes the last step in the College's integrated program review/budget allocation planning process.

## II. Environmental Scan

### A. Scan of Conditions External to the College

The College in Context to its Environment

The official Barstow Community College District boundaries cover some 9,157 square miles of semiarid land located east of the Mojave National Preserve that occupies vast desert areas between the Nevada border and the City of Barstow. The College is in the City of Barstow, along the Interstate 15, approximately 150 miles from both Los Angeles and Las Vegas, Nevada. The western border of the official District area is the Kern County line. The Inyo County line in the north is the end of the District area and the southern border is roughly defined by the San Bernardino Mountains. Almost seventy percent of the official District service area population resides in the Barstow. When the population at Fort Irwin is added the combined total is 87% of all residents in the service area.

The District serves the cities of Barstow, Lenwood, Newberry Springs, Baggett, Yermo, Hinkley, Ludlow and Baker. The College also provides on-site programs to military personnel at the U.S. Army National Training Center, Fort Irwin. Over the years the College has built up a large following of students through its online instructional program. Distances from the campus location to neighboring community colleges are found in Appendix B.

Economy and Employment

The California economy is expected to continue its expansion and growth. State revenue is greater than projections in 2014 or 2015. The Legislative Analyst's Office estimated that the State would likely receive another $3.6 billion more revenue in 2015-16 than the Governor had predicted.[1] For K-14 public education the adverse economic circumstances of the Great Recession seem to have come to a conclusion.

Although the State economy appears to be on the mend and unemployment levels continue to diminish, a recent report from the Public Policy Institute of California (PPIC) observed that if recent trends in higher education and the economy were to continue, by 2025 the State is likely to face a greater shortage of workers who have some college education but less than a bachelor's degree. Their projections, and those of the Centers of Excellence, are that the shortfall of workers with some college education may be as high as 1.4 million to replace workers who will retire. The expected growth of the state economy is projected to create one million new middle-skill jobs by 2025. Together, these needs are even larger than the projected one-million-worker shortage of college graduates with a bachelor's degree.[2] The analysis affirms that training beyond high school has become increasingly valuable in the labor market.

The State's economic upturn has been slow to reach the high desert areas of San Bernardino County where the key industrial clusters of manufacturing, construction, retain trade, and professional and management were particularly hit hard in the downturn. The

[1] Jim Miller. "Legislative Analyst Predicts California Revenue Will Exceed Revised Budget Estimate by $3 Billion," *Sacramento Bee.* May 18, 2015

[2] Sarah Bohn, "California's Need for Skilled Workers," Public Policy Institute of California, September 2014 and "California's Future-Higher Education." February 2015. Centers of Excellence. *Focus on 2025: A 10-year Middle-Skill Occupational Outlook for California.* Retrieved 4/17/16 from http://doingwhatmatters.cccco.edu

subprime mortgage crisis and related wave of foreclosures and collapsing home prices only added to the misery. At its worst, residents living in Barstow witnessed over 285 foreclosures in 2008.

The workforce, by industry, in the College effective service area is described in the following two tables. The tables account for 161,949 working adults in the workforce who are age 16 or older.

Table 1: Barstow College Effective Service Area 2015 Employment by Industry

| North American Industry Classification System (NAICS) Category | % Employed |
|---|---|
| Agriculture/Mining | 1.2% |
| Construction | 8.6% |
| Manufacturing | 7.6% |
| Wholesale Trade | 1.6% |
| Retail Trade | 14.5% |
| Transportation/Utilities | 8.6% |
| Information | 1.9% |
| Finance/Insurance/Real Estate | 3.9% |
| Services | 44.4% |
| Public Administration | 7.8% |

Source: Environmental Systems Research Institute, Market Profile, 2015; analysis by Cambridge West Partnership, LLC

Table 2: Barstow College Effective Service Area 2015 Employment by Occupational Group

| Occupational Families | % Employed | Category % |
|---|---|---|
| While Collar | | 43.4% |
| Management/Business/Financial | 9.0% | |
| Professional | 15.9% | |
| Sales | 10.6% | |
| Administrative Support | 13.8% | |
| Services | 21.1% | 27.1% |
| Blue Collar | | 29.5% |
| Farming/Forestry/Fishing | 0.5% | |
| Construction/Extraction | 7.5% | |
| Installation/Maintenance/Repair | 6.9% | |
| Production | 5.1% | |
| Transportation/Material Moving | 9.5% | |

Source: Environmental Systems Research Institute, Market Profile, 2015; analysis by Cambridge West Partnership, LLC

The future is looking bright for San Bernardino and Riverside Counties. Between 2012 and 2022 the California Employment Development Department (EDD) projects an annual average 1.9% increase in jobs in. The greatest growth is concentrated in five industrial sectors: (1) educational services (private), health care, and social assistance; (2) professional and business services; (3) leisure and hospitality; (4) trade, transportation, utilities; and (5) construction. The following table documents the projections in Los Angeles County for employment opportunities by industry category.

Table 3: San Bernardino-Riverside County Projected Job Openings by Industry

| North American Industry Classification System (NAICS) Categories | Change 2012 to 2022 | Annual Job Openings | Annual Average % Change |
|---|---|---|---|
| Self Employed | 12,200 | 1,220 | 1.6% |
| Unpaid Family & Private Household | 300 | 30 | 0.3% |
| Farm | -500 | -50 | -0.3% |
| Mining and Logging | 400 | 40 | 3.3% |
| Construction | 36,300 | 3,630 | 5.8% |
| Manufacturing | -2,900 | -290 | -0.3% |
| Trade, Transportation, Utilities | 59,800 | 5,980 | 2.1% |
| Information | 300 | 30 | 0.3% |
| Financial Activities | 6,100 | 610 | 1.5% |
| Professional & Business Services | 36,200 | 3,620 | 2.8% |
| Education (Private), Health Care, & Social Assistance | 44,800 | 4,480 | 2.7% |
| Leisure and Hospitality | 35,400 | 3,540 | 2.9% |
| Other Services | 7,300 | 730 | 1.8% |
| Government | 11,300 | 1,130 | 5.0% |
| ***Total*** | ***247,000*** | ***24,700*** | ***1.9%*** |

Source: California Employment Development Department, Labor Market Information; analysis by Cambridge West Partnership, LLC

A listing of major employers in the Barstow area is found in Appendix B.

Employment in the service industry dominates the economy in all of the census places within the District official service area. That industry and retail trade is the economy in the Nipton, Baker, and Ludlow area. Public Administration is the second largest industrial sector in the census places within the District official service area. Transportation/utilities and retail trade are the third and fourth largest sectors to those economies.

Table 4: 2015 Comparison of Industries Where Adults Were Employed Among Census Places in the District Official Service Area

| | 2015 Percentage of Adults 16 Years or Older Employed in These Industries | | | | | | |
|---|---|---|---|---|---|---|---|
| North American Industry Classification System (NAICS) Category | Effective Service Area | Barstow | Ft. Irwin | Newberry Springs & Daggett | Hinkley | Nipton, Baker, Ludlow | w/o ESA Average |
| Agriculture/Mining | 1.2% | 1.3% | 0.0% | 3.7% | 0.2% | 0.0% | 1.0% |
| Construction | 8.6% | 5.4% | 1.4% | 12.7% | 3.5% | 3.1% | 5.2% |
| Manufacturing | 7.6% | 6.0% | 0.1% | 7.4% | 18.2% | 0.0% | 6.3% |
| Wholesale Trade | 1.6% | 0.5% | 0.0% | 0.1% | 1.9% | 0.0% | 0.5% |
| Retail Trade | 14.5% | 11.9% | 21.1% | 4.5% | 11.0% | 18.3% | 13.4% |
| Transportation/Utilities | 8.6% | 10.7% | 2.3% | 10.1% | 25.6% | 1.4% | 10.0% |
| Information | 1.9% | 0.4% | 0.0% | 0.7% | 3.9% | 0.3% | 1.1% |
| Finance/Insurance/Real Estate | 3.9% | 4.0% | 3.1% | 3.0% | 3.1% | 2.0% | 3.0% |
| Services | 44.4% | 45.9% | 36.7% | 38.4% | 28.1% | 74.3% | 44.7% |
| Public Administration | 7.8% | 13.9% | 35.2% | 19.5% | 4.5% | 0.6% | 14.7% |
| | | | | | | | |
| count of adults | 161,949 | 12,278 | 1,064 | 982 | 484 | 350 | |

Source: Environmental Systems Research Institute, Market Profile, 2015; analysis by Cambridge West Partnership, LLC

Employment in white-collar occupations dominates the economy in three of the census places (Barstow, Ft. Irwin, and Newberry Springs/Daggett) within the District official service area. Blue-collar occupations provide most jobs in Hinkley while service occupations create most of the occupational employment opportunities in the Nipton, Baker, and Ludlow area.

Table 5: 2015 Comparison of Occupational Families Where Adults Were Employed Among Census Places in the District Official Service Area

| | 2015 Percentage of Adults 16 Years or Older Employed in These Occupations | | | | | | |
|---|---|---|---|---|---|---|---|
| **Occupational Families** | **Effective Service Area (ESA)** | **Barstow** | **Ft. Irwin** | **Newberry Springs & Daggett** | **Hinkley** | **Nipton, Baker, Ludlow** | **w/o ESA Average** |
| While Collar | | | | | | | 43.4% |
| Management/Business/Financial | 9.0% | 9.2% | 6.6% | 9.0% | 0.8% | 6.6% | |
| Professional | 15.9% | 12.2% | 13.5% | 10.5% | 13.2% | 4.9% | |
| Sales | 10.6% | 7.8% | 15.6% | 9.0% | 13.4% | 22.6% | |
| Administrative Support | 13.8% | 14.7% | 18.7% | 17.1% | 8.1% | 3.7% | |
| Services | 21.1% | 23.3% | 27.2% | 29.6% | 8.7% | 46.6% | 27.1% |
| Blue Collar | | | | | | | 29.5% |
| Farming/Forestry/Fishing | 0.5% | 0.5% | 0.0% | 1.1% | 0.0% | 0.0% | |
| Construction/Extraction | 7.5% | 5.1% | 0.0% | 4.0% | 3.1% | 2.0% | |
| Installation/Maintenance/Repair | 6.9% | 12.4% | 5.1% | 6.3% | 18.4% | 0.0% | |
| Production | 5.1% | 4.5% | 4.2% | 4.8% | 14.0% | 9.1% | |
| Transportation/Material Moving | 9.5% | 10.2% | 9.1% | 8.7% | 20.2% | 4.6% | |
| | | | | | | | |
| count of adults | 161,949 | 12,278 | 1,064 | 982 | 484 | 350 | |

Source: Environmental Systems Research Institute, Market Profile, 2015; analysis by Cambridge West Partnership, LLC

The primary city in the District official service area, Barstow, is well positioned as a transportation hub. The BNSF and Union Pacific railroads serve the area. Barstow is home to the BNSF classification yard, which is the largest rail yard west of Kansas City. The ports of Los Angeles and Long Beach are 150 miles from Barstow. Freight arriving in the ports is quickly unloaded and sent via rail along the Alameda Corridor to Barstow for efficient distribution to the western United States. Interstate 15 runs through Barstow linking Southern California to Las Vegas and points northwest; Interstate 40 connects Barstow to southeastern United States; and State Highway 58 provides quick, efficient access to Central and Northern California by linking to Interstate 5 and State Highway 99. More than $200 million has been spent on freeway improvements in the greater Barstow area during the past 8 years. Six trucking carriers serve Barstow and provide regular service to Los Angeles, San Diego, Las Vegas, and beyond. The city is host to five truck stops; four truck washes, and two truck service facilities. Ontario International Airport, 75 miles southwest of Barstow, provides passenger and freight service. Southern California Logistics Airport is 30 miles from the site. Barstow-Daggett Airport offers service for executive and charter aircraft.

The housing and population growth that is expected to occur in Barstow between 2015 and 2020 will consist of infill development on existing vacant parcels. Looking toward 2020 the City of Barstow anticipates housing construction to be concentrated on low-income housing stock and homes for active seniors. An area straddling Barstow Road between Rimrock Road and I-15 (just north of the College location) has been identified as potentially accommodating 550 single-family homes, if the parcels were subdivided to their maximum allowable density. South of Rimrock Road there is a second area that might accommodate an additional 500 single-family homes. Most of these potential new housing starts are expected to be for senior citizens.

With regard to commercial land uses there are several existing vacant parcels in the vicinity of I-15 at L Street and Lenwood Road that are most likely to be developed in the near future. An Indian operated casino and hotel are proposed for an area southwest of the City. Just west of that site a 314 acre parcel owned by the Lansing Companies was proposed for a diverse use project including a golf course and up to 1,500 homes designed for active seniors. Just west of the College, there is a large vacant parcel starting at the southeast corner of H Street and Rimrock Road that has been designated for single-family residential development that might accommodate 400 homes.[3]

Any industrial development is expected to occur in the southwest portion of the City were one large area of 1,200 acres and two smaller areas of 45 and 32 acres respectively have been earmarked for an industrial park.[4] The City of Barstow has graded the land, connected to utilities and infrastructure and is actively seeking firms to develop on the land. As of spring 2016 most of the inquiries have been from logistics firms and capital-intensive manufacturers that do not employ large numbers of workers.[5] The I-5 corridor and the growth of desert communities to the south of the City are one consideration that will pull future development in a southwesterly direction.

[3] City of Barstow, *General Plan 2015-2020, parts 1 and 2*.
[4] City of Barstow. *General Plan 2015-2020, part 1*.
[5] Gaither Lowenstein, Economic Development Department, City of Barstow. *Email Correspondence*. April 22, 2016.

Development of any land to the north is limited due to the biological sensitivity of that land while the Marine Base and the absence of infrastructure curtail development to the east.

Most private sector businesses in Barstow employ fewer than 10 workers.

Table 6: Barstow Businesses and Numbers of Employees

| | | | 2013 Economic Census Number of Employees | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **North American industry Classification System (NAICS) Category** | **NAICS Description** | **Nbr. Establish-ments** | **1-4** | **5-9** | **10-19** | **20-49** | **50-99** | **100-249** | **250-499** |
| Natural Resources and Mining | Mining, Quarrying, and Oil/Gas Extraction | 3 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| Trade, Transportation & Utilities | Utilities | 3 | 2 | 0 | 1 | 0 | 0 | 0 | 0 |
| Construction | Construction | 20 | 12 | 8 | 0 | 0 | 0 | 0 | 0 |
| Manufacturing | Manufacturing | 5 | 1 | 3 | 0 | 1 | 0 | 0 | 0 |
| Trade, Transportation & Utilities | Wholesale Trade | 13 | 6 | 1 | 5 | 0 | 1 | 0 | 0 |
| Trade, Transportation & Utilities | Retail Trade | 133 | 50 | 33 | 24 | 18 | 6 | 2 | 0 |
| Trade, Transportation & Utilities | Transportation and Warehousing | 13 | 3 | 3 | 3 | 3 | 1 | 0 | 0 |
| Information | Information | 6 | 3 | 2 | 1 | 0 | 0 | 0 | 0 |
| Financial Activities | Finance and Insurance | 20 | 13 | 4 | 3 | 0 | 0 | 0 | 0 |
| Financial Activities | Real Estate and Rental and Leasing | 32 | 21 | 7 | 4 | 0 | 0 | 0 | 0 |
| Professional & Business Services | Professional, Scientific, and Technical Services | 25 | 10 | 4 | 9 | 2 | 0 | 0 | 0 |
| Professional & Business Services | Administrative and Support and Waste Management & Remediation Services | 14 | 6 | 1 | 5 | 1 | 1 | 0 | 0 |
| Education, Health Care, & Social Assistance | Educational Services | 3 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| Education, Health Care, & Social Assistance | Health Care and Social Assistance | 58 | 27 | 15 | 11 | 1 | 2 | 1 | 1 |
| Leisure & Hospitality | Arts, Entertainment, and Recreation | 3 | 2 | 0 | 1 | 0 | 0 | 0 | 0 |
| Leisure & Hospitality | Accommodation and Food Services | 96 | 23 | 11 | 21 | 35 | 6 | 0 | 0 |
| Other Services (except Public Administration) | Other Services (except Public Administration) | 50 | 31 | 10 | 5 | 2 | 2 | 0 | 0 |
| | Industries not classified | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| | ***Total*** | ***498*** | ***213*** | ***104*** | ***95*** | ***63*** | ***19*** | ***3*** | ***1*** |

Source: U.S. Census. County Business Patterns by Zip, 2013; analysis by Cambridge West Partnership, LLC

As a result of the Great Recession of 2008 the numbers of businesses establishments in Barstow has declined.

Table 7: Barstow Business Establishments 2004 vs. 2013

| | | Total Establishments | | |
|---|---|---|---|---|
| NAICS Code | NAICS Code Description | 2004 | 2013 | 2013 less 2004 |
| 21 | Mining, Quarrying, Oil& Gas Extraction | 2 | 3 | 1 |
| 22 | Utilities | 3 | 3 | 0 |
| 23 | Construction | 24 | 20 | -4 |
| 31-33 | Manufacturing | 12 | 5 | -7 |
| 42 | Wholesale Trade | 11 | 13 | 2 |
| 44-45 | Retail Trade | 148 | 133 | -15 |
| 48-49 | Transportation & Warehousing | 17 | 13 | -4 |
| 51 | Information | 10 | 6 | -4 |
| 52 | Finance & Insurance | 21 | 20 | -1 |
| 53 | Real Estate, Rental, & Leasing | 23 | 32 | 9 |
| 54 | Professional, Scientific, & Technical Services | 28 | 25 | -3 |
| 55 | Management of Companies & Enterprises | 1 | 0 | -1 |
| 56 | Administrative & Support | 17 | 14 | -3 |
| 61 | Educational Services | 4 | 3 | -1 |
| 62 | Health Care & Social Assistance | 63 | 58 | -5 |
| 71 | Arts, Entertainment, & Recreation | 5 | 3 | -2 |
| 72 | Accommodation & Food Services | 82 | 96 | 14 |
| 81 | Other Services | 60 | 50 | -10 |
| 99 | Industries not classified | | 1 | 1 |
| | ***Total*** | ***531*** | ***498*** | ***-33*** |

Source: U.S. Census. *County Business Patterns by Zip, 2004 and 2013*; analysis by Cambridge West Partnership, LLC

However, based upon the Regional Transportation Plan developed by the Southern Association of Governments (SCAG) and the Regional Housing Need Allocation, the City of Barstow projects continued modest employment growth, perhaps 3.8% annually through 2040. That compares to an overall population growth projection of 12,000 people between 2012 and 2040.[6]

Much of 13 million acres in San Bernardino County are outside the control of the County Supervisors. Approximately 6 million acres are owned and controlled by the Federal Bureau of Land Management; another 1.9 million acres are owned and controlled by the U.S. Department of Defense. Unfortunately, a good deal of this land is fragmented and scattered throughout the County. Roughly 4% of the land in the County lies within 24 incorporated cities. As a result, much of the County is not developed and population density is very low.

One of the striking features of the economic dynamics in the region is the number of workers who commute from Barstow into other parts of San Bernardino County, Riverside County locations, Los Angeles County and beyond. In the case of Barstow, approximately 32% of the residents work in the city while 68% commute to other places. The following table illustrates the top ten commuting destinations for Barstow residents.

[6] Southern California Association of Governments. *2016-2040 Regional Transportation Plan (2012),Regional Housing Need Allocation Plan 2014-2021*, and *Current Demographics and Growth Forecast 2016-2040*.

Table 8: Top Ten Commuting Destinations from Barstow, 2015

| Rank | Location | Nbr. Commuters | % of Total Commuters |
|---|---|---|---|
| 1 | Barstow | 2,175 | 31.65% |
| 2 | Los Angeles | 558 | 8.12% |
| 3 | Unincorporated SB County | 523 | 7.61% |
| 4 | San Bernardino | 337 | 4.90% |
| 5 | Victorville | 167 | 2.43% |
| 6 | Ontario | 89 | 1.30% |
| 7 | Irvine | 74 | 1.08% |
| 8 | Riverside | 71 | 1.03% |
| 9 | Rancho Cucamonga | 69 | 1.00% |
| 10 | San Diego | 66 | 0.96% |
| | All Other Destinations | 2,743 | 39.92% |
| | ***Total*** | ***6,872*** | |

Source: U.S. Census Bureau, 2014, *Longitudinal-Employer Household Dynamics Program, LODES Data, 2011* as cited in the Southern California Association of Governments. *2015 Local Profiles Reports- City of Barstow*. May 2015.

Implications for the College

1. Future job opportunities, economic growth in construction, and health care/social assistance industries, plus a much improved real estate market with affordable housing characterize the future of the region. The College can contribute to the economy of the region by preparing students for transfer to four-year institutions and by equipping with the job skills in demand those students who want to "transfer to the workplace" upon completing a certificate or Associate Degree.
2. Reasonable employment opportunities in several industry categories (trade, transportation, utilities; professional and business services; health care and social assistance; leisure and hospitality; and construction) are projected to continue into the future but they may not be in Barstow per se. Although entry-level preparation for many jobs in some of these industries commonly does not require education beyond high school, there may openings for which the College needs to prepare individuals with career and technical certificates and Associate Degrees.
3. The distinctive mix in the San Bernardino-Riverside County region of advanced manufacturing employers and research and development employers places a premium on Science, Technology, Engineering, Mathematics, and Medicine (STEMM) fields of study. The College has well-established programs of study in these disciplines but will be called upon to increase the numbers of graduates.
4. Future housing development envisioned by the City is being discussed in terms of accommodations for senior citizens. That may bring a new audience for the College to woo.

Higher Education Policy

Several key policy decisions will influence the California Community College system in the coming years. These public policies both provide opportunities for the colleges but in some cases impose constraints.

The Completion Agenda

In July 2009, President Obama articulated that the American Graduation Initiative (AGI) has a goal of increasing the percentage of U.S. residents who earn high-quality degrees and credentials from the present rate of 39 percent to a rate of 60 percent by the year 2025. The goal is to make the U.S. competitive in the global marketplace. In the private sector, employers have been increasingly screening applicants for employment by requiring college degrees for positions that previously did not require a degree.[7]

After President Obama has pushed to increase college graduation rates across the nation, Complete College America, a non-profit organization, was formed to advance this mission. It has enlisted support from leaders in 34 states to ensure greater numbers of students acquire degrees.

The President's challenge to the nation has not been ignored in California. The Community College League of California (CCLC) launched an "alternative futures" project, 2020 Vision for Student Success, to respond to the national graduation goal by identifying policy and practice changes that could be implemented to increase student achievement. To contribute its part toward achieving the national graduation goal, California needs to produce a total of 1,065,000 degrees or certificates per year to 2025. That translates to producing an additional 23,000 degrees and certificates per year, a 5.2% annual increase.[8] The California Public Policy Institute has repeatedly informed state policy makers that the State faces a skills gap.[9]

In August, 2014, the Board of Governors for the California community college system joined in the completion effort by announcing a goal to increase the numbers of students earning certificates, degrees, or transferring to four-year institutions by nearly a quarter of a million over the next ten years. For academic year 2013-14 the system awarded 190,314 certificates and degrees, a 40 percent increase from 2009-10 and an all-time high for the system. The Gates, Ford, Lumina, and Kellogg Foundations as well as the Carnegie Corporation of New York fund their collective work and the efforts of others to promote more college graduates. Collectively, there are more than two-dozen major entities that have sponsored initiatives to promote college completion.[10]

[7] Doug Lederman. "Credential Creep Confirmed" *Inside Higher Education*. September 9, 2014; Karin Fischer. "A College Degree Sorts Job Applicants, but Employers Wish It Meant More," *Chronicle of Higher Education*. March 8, 2013 p. 26-29

[8] *2020 Vision: A Report of the Commission on the Future*, (Sacramento, CA: Community College League of California, 2010)

[9] Public Policy Institute of California. *California's Future: Higher Education*. January 2016 and Higher Education in California. April 2016.

[10] Alene Russell. *A Guide to Major U.S. College Completion Initiatives*, American Association of State Colleges and Universities, October 2011.

Federal Policy and Funding Initiatives

The Congress passed the Higher Education Opportunities Act in 2008. Subsequently, a series of new federal regulations have been issued to improve program integrity where Title IV financial aid funds are involved. Regional accrediting bodies are now expected to provide closer scrutiny of member institutions on a range of new topics. The Higher Education Act has been due for renewal and no one can predict its future direction.

The Obama administration and the U.S. Department of Education have announced a new emphasis for their involvement with career and technical education through a transformation of the Carl D. Perkins Career and Technical Education Act of 2006 as it comes due for renewal. Although the Act has not yet been renewed, the desired new directions will promote greater alignment between CTE programs and labor market needs as well as collaboration with K-12 and employers. Differences in the current provisions of the Perkins Act and the proposed changes were announced as long ago as April 2012.[11]

In July 2014 the Congress enacted the Workforce Innovation and Opportunity Act (WIOA) by a wide bipartisan majority as the first legislative reform in the past 15 years of the public workforce system. This legislation took effect on July 1, 2015 with regulatory rules written by the Departments of Labor (DOL), Education (DOE), and Health and Human Services (HHS). In general, the legislation eliminates 15 existing federal training programs and focuses on streamlining programs, reporting, and administration. WIOA keeps the basic structure of the prior legislation, with components covering occupational training, adult basic education, literacy and English language acquisition, vocational rehabilitation, and the national system of public employment offices and services. Key features and opportunities of the WIOA legislation include requirements for more unified planning between state and local authorities to address regional labor markets, a common set of performance measures, and promotion of best practices including contextualized adult basic education, ESL, and attainment of industry-recognized certificates.

The White House convened a series of higher education summits in order to promote change in higher education policy and practice. Attention was given to greater access, particularly for low-income students, the completion agenda, college outcome performance measures, constraints to the ever-rising costs of high education, and other topics of interest to the federal government. To encourage more participation in postsecondary education the President used his 2015 state of the union address to offer a proposal, along the lines of the current policy in Tennessee, that the federal government help each state to make attendance at a community college free of tuition. By mid-spring 2016 there had been launched 27 new free community college programs.[12]

While it has been announced that some new federal resources will be allocated for use by community colleges, the Congress is currently also struggling to restrain spending and to reduce debt levels. The long-term impact remains to be seen, but federal aid

[11] U.S. Department of Education, Office of Vocational and Adult Education. *Investing in America's Future: A Blueprint for Transforming Career and Technical Education*. April 2012.

[12] White House Press Release. *White House Launches $100 Million Competition to Expand Tuition-Free Community College Programs that Connect Americans to In-Demand Jobs.* April 25, 2016.

now has a lifetime limit and is also limited to a maximum number of credit hours represented by 150% of the credits required for the program of study the student is pursuing. For a community college associate degree 150% would equate to 90-semester credit hours. Veterans on the G.I. Education Bill may be more limited in the credit hours funded by that program. In the FY2016 budget the President proposed that the maximum award under the Pell Grant program would increase and new rules would require students to make progress in their programs by passing an increasing percentage of their total course load. In a December 2015 budget deal the Congress unexpectedly agreed to increase the Pell grant maximums and provide additional funds to college access programs for needy students (TRIO and GEAR UP). President Obama has signed an executive order to align the monthly repayment rate of federal loans to the level of future wages earned by the student. That may ease the burden of debt for students and make the act of borrowing for a college education more feasible for prospective students. The President has also declared a policy to not enforce deportation on children of illegal immigrants meeting certain conditions and to provide work permits for those children.

Regional Accreditation Initiatives

In part, stimulated by prior federal government actions, all regional accrediting bodies are insisting that greater attention be given to student learning outcomes.

These new areas are in addition to the traditional goals of accreditation that are:

1. Providing assurance to the public that the education provided by the institution meets acceptable levels of quality
2. Promoting continuous institutional improvement
3. Maintaining the high quality of higher education institutions in the region

Implementation of the new ACCJC 2014 accreditation standards has introduced a number of changes, including the requirement to create a quality focus essay to guide future improvement efforts. [13] The changes also echoed some of the national discussions about educational quality and accreditation.

California Community College Initiatives for Student Success

The following State initiatives are intended to increase student success rates:

- The Board of Governors' basic skills initiative seeks to enable more students to overcome their academic deficiencies.
- Targeted funds for student equity and student success and support programs.
- Additional legislation, SB1440 Student Transfer Achievement Reform or STAR Act in 2010, simplified the process of transferring from a community college to a school in the California State University (CSU) system. This program provides a pathway for students to follow so that they can be admitted to a CSU with junior status. It has been complemented by SB440 in 2013, which further incentivizes transfer students to complete an associate degree.[14]

[13] Accrediting Commission for Community and Junior Colleges. *Preparing for A Comprehensive Visit*. Workshop materials presented on October 15, 2014.

[14] Campaign for College Opportunity. *Keeping the Promise: Going the Distance on Transfer Reform*. March 2016.

The long-standing commitment to basic skills education has sometimes suffered for lack of adequate funding. However, in the 2016-17 budget there was a $30 million increase in this targeted allocation. In May 2016 the Chancellor's Office announced a request for applications to be awarded up to $60 million from Proposition 98 funds to implement or expand evidence-based innovations and redesign in the areas of assessment, student services, and instruction in order to improve the progression rate of basic skills students into college level instruction. Known as the Basic Skills and Student Outcomes Transformation Program, the funds were awarded to 43 colleges.

As second pool of funds was awarded to basic skills partnerships between community college districts or a consortium of districts and at least one California State University for the purpose of developing efficient and effective methods of coordinating remedial instruction and services. Successful applicants centered their proposals on evidence-based remedial education, instructional redesign, or program expansion. Five project proposals were awarded a total of $10 million.

Perhaps the most potentially far-reaching set of recommendations for change in policy and practice were included in the report from the California Community College Chancellor's Office Student Success Task Force. The group proposed eight areas of focus with 22 recommendations. The Legislature passed the Student Success Act (SB 1456) in August 2012 and the governor signed it shortly thereafter. The measure did the following:

- Commissioned the development of a uniform placement exam for students;
- Directed colleges to provide students with orientation, assessment, placement and counseling services;
- Required students to identify an educational goal (such as degree or certificate for transfer to a four-year university) and complete an educational plan;
- Required colleges that receive student support service funds to complete and post a student success scorecard showing how well the campus is doing in improving completion rates, especially by race, ethnicity, gender, and income;
- Established minimum academic progress standards for students to receive Board of Governors fee waivers, but also developed an appeal process.

The Task Force recommendations came in the wake of a severe shortfall in resources for California's public higher education institutions. Therefore, implementation of these ideas was delayed.

Funds allocated for 2015-16 enabled the Chancellor's Office to provide support to colleges that develop a student success and support plan (formerly matriculation) built around some of the recommendations arising from the Student Success Task Force. The provision of effective core services (orientation, assessment and placement, counseling, academic advising, and early intervention or follow-up for at-risk students) has been found to improve students' ability promptly to define their educational and career goals, complete more of their courses, persist to the next term and achieve their educational objectives in a timely manner.[15] As new

[15] Eva Schiorring and Rogeair Purnell. *Literature Review Brief: What We Know About Student Support 2nd Ed*. Research and Planning Group of the California Community Colleges. Fall 2012.

priority enrollment rules were made effective in fall 2014, one of the incentives for students to complete the core services was the potential loss of priority enrollment or withholding of an enrollment opportunity.

One Student Success Task Force recommendation was the development of a robust common assessment instrument. The assessment services will also include data collection and course placement guidance, but the placement cut scores will remain a local decision. Working groups of faculty from the disciplines of English, Math and ESL have been involved in drafting competencies that address the full range of prerequisite skills found in the curriculum. The common assessment initiative has a “go live” target of the 2016-17 academic year, pending a successful pilot experience.

The effort to exploit technology to support student success blossomed into the Educational Planning Initiative that was launched to help colleges meet the requirements for student success and support program funding by providing an individual comprehensive educational plan for all students. The initiative is also intended to enhance the counseling experience by inducing students to take more responsibility for their educational program plans and to have counseling expertise used only to verify the planning. A degree audit system to provide transcript, articulation and curriculum inventory elements is to be provided to help both students and counselors. As a by-product, it is hoped that the numbers of unnecessary units accumulated by students will be reduced. A single sign-on portal is intended to be the student’s point of access to this system that is described as a service-oriented experience in which some existing services will be complemented by new services yet to be produced. The project has a “go live” target of the 2016-17 academic year, pending a successful pilot experience.

The legislation implementing some of the recommendations of the Student Success Task Force, SB 1456, requires the coordination of student equity plans and student success and support programs. Student equity identifies groups of students needing more help and focuses on services and instruction for new and continuing students through to completion whereas student success and support programs focus on services for entering students and identifies individual students who need more help. Interest in student equity is not new as the Board of Governors adopted a student equity policy in 1992, but financial support for planning and interventions has not always been available or adequate. In 2014 the Legislature appropriated $70 million for student equity purposes, added foster youth, veterans, and low-income students as target populations, and required specific goals and activities to address disparities and coordination of them with other categorical programs. The traditional populations or variables researched for student equity planning are: age, disability status, gender and ethnicity. Unlike the student success and support program funding, dollars for student equity interventions do not require a match of funds or in-kind effort from the colleges. Funding for both efforts was increased for 2015-16 after the May 2015 budget revision. An additional increase is proposed for 2016-17.

The governor’s interest in online education garnered an appropriation of $56.9 million over 55 months to launch the Online Education Initiative for the community colleges. The initiative is intended to increase access to more online courses created by community college faculty members and to provide students well-designed resources that will improve their chances of a successful

learning experience. Part of the work in this initiative is to improve student readiness to engage in the learning experience through online instruction and to provide tutoring support for those students. Those two components have had a successful pilot project "go live" in spring 2015. A common course management system launched among the pilot colleges in fall 2015. Within the initiative are efforts to assist faculty in several professional development ways- creating of online course content, teaching strategies for the online environment, course design standards, and course review training.

Adult Education Initiative

The governor's initial proposal for the adult education programs to be absorbed into the community colleges met with stiff opposition in the Legislature. A compromise was fashioned to improve and expand the provision of adult education through regional consortia that would eliminate redundancy and craft pathways into higher education for interested students. Instruction in parenting, home economics and classes for older adults were explicitly excluded from this funding. The 2015 AB104 legislation provided a block grant of funds (AEBG) to support action plans to close gaps for adult learners in four areas: (1) elementary and secondary basic skills; (2) ESL and citizenship for immigrant populations; (3) adults with disabilities; and (4) short-term career and technical education.

Career and Technical Education Initiatives

In 2012 the Legislature passed SB 1402 which the Governor signed to signal intent to recast and rewrite the economic and workforce education division programs and services. The new direction requires industry sector strategies that align collaboratively with labor markets on a regional basis. The Chancellor's Office translated these policy directions into a four-part initiative called Doing What Matters (DWM) for Jobs and the Economy. Governor Brown has been generous in funding this work and his 2016-17 budget proposals offered $200 million more to expand access to career and technical education as well as to implement new regional accountability structures.

The colleges in the Inland Empire selected the three priority sectors or clusters and two emerging sectors as described in the following table.

Table 9: Consortium Priority Sector Choices

| Priority Sectors/Clusters |
|---|
| Advanced Manufacturing |
| Global Trade & Logistics |
| Health |

| Emergent Sectors/Clusters |
|---|
| Advanced Transportation & Renewables |
| Information & Communication Technologies (ICT)/Digital Media |

Source: California Community Colleges, Los Angeles Regional Consortium. Extracted from doingwhatmatters.cccco.edu/ResourceMap/Los Angeles

These choices are largely consistent with the priorities set forth by the San Bernardino County Workforce Investment Board (SBWIC). The SBWIB identified the following industry sectors as priorities: (1) healthcare; (2) transportation, distribution and logistics; (3) manufacturing; (4) construction; and, (5) energy and utilities.[16]

[16] San Bernardino County Workforce Investment Board. *Strategic Plan 2013-2017*.

The initial phase of DWM was designed to dovetail with the State Workforce Plan created by the California Workforce Investment Board. Some funding from the DWM initiative was awarded to the regions to enhance existing CTE programs and to support regional collaborative work. The second phase of this initiative applies common accountability metrics to gauge the extent to which the efforts have "moved the needle." A system of common metrics was then developed that includes student momentum points and leading indicators of success. A third phase promotes bringing innovation and best practices to scale. The overriding message of the DWM initiative is to prompt collaborative action within regions to prepare students for work in critical industry sectors.

The 2014-15 State budget provided a one-time pool of $50 million that helped the DWM initiative incentivize the colleges to develop, enhance, retool, and expand CTE offerings in response to regional labor market needs and to stimulate additional regional collaboration. The budget for 2016-17 offers $200 million to be allocated among the regions for the work of preparing students to enter the middle-skills workforce.

In 2013 SB 1070 (California Partnership Academies) was enacted to establish an economic and workforce development program for the community colleges. It requires the Board of Governors, the Chancellor's Office staff and the colleges to assist economic and workforce regional development centers and consortia to improve, among other things, career-technical education pathways between high schools and community colleges. Contracts and competitive grants funded by the program through 2015 were jointly administered to improve linkages and CTE pathways between high schools and community colleges.

Additional efforts to promote career pathways from high schools to the community colleges were enshrined in the 2014-15 budget as it passed the California Career Pathways Trust Act. Some $250 million was provided in the form of one-time competitive grants. These funds were made available to school districts, county superintendents of schools, directly funded charter schools, regional occupational centers or programs operated by a joint powers authority, and community college districts. The Legislature allocated a second round of funding for the Trust with applications for competitive grants to be implemented in academic years 2015-16 and 2016-17.

The most recent legislation to promote collaboration, AB 288, signed into law on October 8, 2015, authorizes the governance board of a community college district to enter into a College and Career Access Pathways (CCAP) partnership with the governing board of a school district to offer or expand dual enrollment opportunities for students who may not already be college bound or are from underrepresented groups in higher education. The goal is to develop a seamless pathway from high school to community college for career-technical education or preparation for transfer, improving high school graduation rates, or helping high school students achieve college and career readiness.

In November 2015 the Board of Governors culminated a yearlong effort to revisit the ways in which career and technical education was delivered as a means to prepare students for middle skills jobs. The Task Force they commissioned provided 25 recommendations in seven broad areas. Full details are available at http://bit.ly/1lpCGOM. The recommendations are expected to shape policies from the Board of Governors over the next few years.

Dual Enrollment

The most recent legislation to promote collaboration, AB 288, signed into law on October 8, 2015 to take effect in January 2016, authorizes the governing board of a community college district to enter into a College and Career Access Pathways (CCAP) partnership with the governing board of a school district. The partnerships are to offer or expand dual enrollment opportunities for students who may not already be college bound or are from groups underrepresented in higher education. The goal is to develop a seamless pathway from high school to community college for career-technical education or preparation for transfer, improving high school graduation rates, or helping high school students achieve college and career readiness. The following are the highlights of the legislation:

- Community colleges can assign priority enrollment and registration to high school students in a CCAP with no fees to pay;
- Courses during the regular high school day can be restricted to high school students and do not have to meet the normal open enrollment standard;
- Courses with no open seats on campus cannot be offered at high schools through the CCAP;
- Basic skills math and English can be offered through CCAP but only for students who are not at grade level in that subject; and
- Community colleges can claim FTES if the high school student is qualified for full high school apportionment without using hours of the college course.

Many of the initiatives discussed above have benefited from generous funding associated with the continued recovery of the California economy. Apportionment base funding has been restored, categorical funding has been advanced, and one-time funds have been provided. That funding trend continued into the May 2016 revision of the Governor's 2016-17 Budget. However, it is believed that the California economy is nearing the point when a normal economic expansion period should end and resources provided should be used to position each college for the future.[17]

New Growth Funding Formula

Apart from targeted funds described above, the SB 860 legislation from 2014 will impact the allocation of apportionment funds for growth to the districts by using a new formula starting in 2015-16. The legislation directed that growth would be based on each community's need for access to their community college as determined by local demographics. Need within each district's official boundaries is to be determined by two primary factors: number of people within each district who are without a college degree, and the number of individuals who are disadvantaged as evidenced by unemployment and measures of poverty.[18]

Implications for the Colleges:

1. A broad array of governmental and private organizations is promoting the urgency for postsecondary institutions to produce more graduates.

[17] Mario Rodriguez, Acting Vice Chancellor for Finance. 2016-17 *May Revise Letter to the System*.

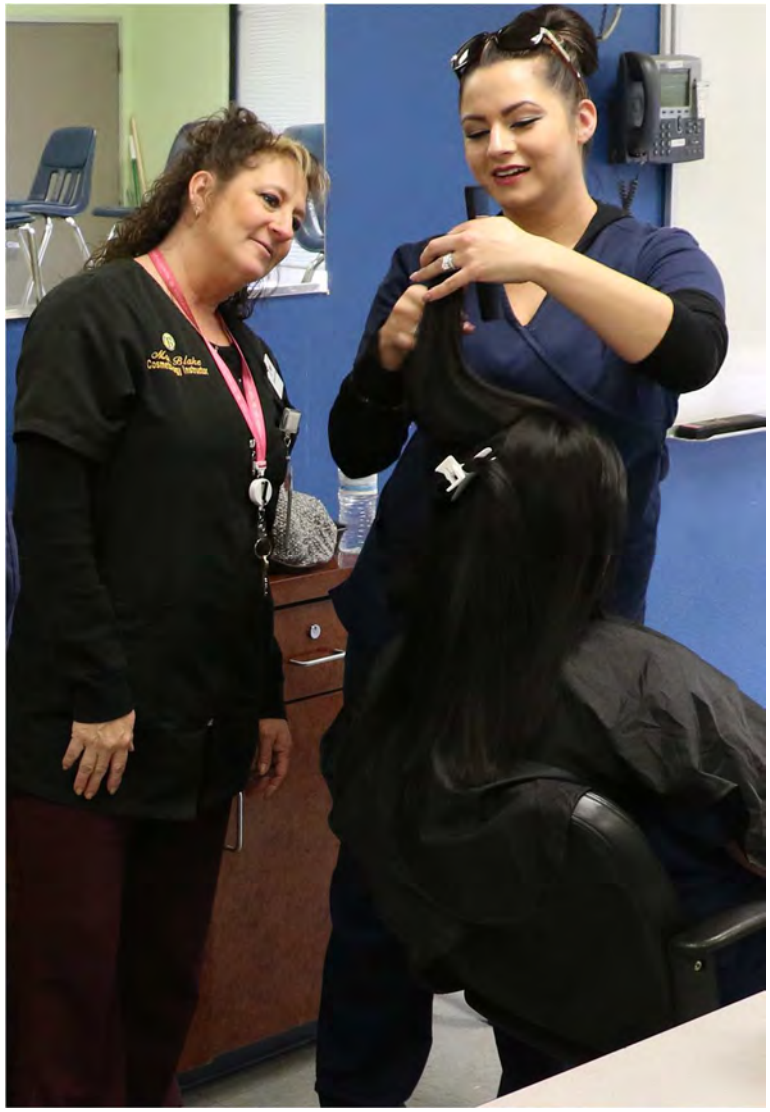
[18] Day Toy, Vice Chancellor for Finance. "Growth Funding Allocation Formula," *Consultation Digest*. November 20, 2014. "California Community Colleges Growth Funding Allocation Model" power point presentation to the Association of Chief Business Officers Conference. October 27, 2014.

It has been estimated that the State economy will be short in excess of two million graduates with a bachelor's degree or postsecondary education short of the bachelor's degree by 2025. As a public agency the College should embrace that public agenda with vigor.

2. As the federal government seeks to achieve a more balanced budget there is still financial support for students and incentives for institutions to increase student success and prepare more students to compete in a global economy. However, these incentives come with performance expectations. The College may have opportunities to enhance resources and it should act upon those opportunities.
3. After many years of debate, several federal workforce-training programs have been consolidated and a new direction emphasizing regional efforts and agency collaboration has emerged in the Workforce Innovation and Opportunity Act (WIOA) legislation. As of fall 2016 the Carl Perkins legislation has not yet been reauthorized nor has the Higher Education Act been reauthorized. The College should monitor trends in federal to be in a position to take advantage of any new direction.
4. The regional accrediting commission, ACCJC, is following federal direction with requirements it has imposed on member institutions. Recent state legislation intended to induce intentionality into institutional planning and to hold public colleges accountable for performance on state priorities are in a similar spirit to the accreditation expectations. Attention should be given to tracking student achievement and learning performance and acting upon areas were performance does not meet ACCJC expectations.
5. Starting three years ago State legislation (SB 1440) created a remarkable framework to facilitate transfer to a campus within the California State University (CSU). Community college and CSU faculty throughout the state have risen to the occasion to forge transfer model curriculums (TMCs). Antelope Valley College achieved its expected target, but there may be more that could be done to facilitate transfer.
6. Particular state attention has been given to re-crafting matriculation and other student services along the lines of recommendations from the Student Success Task Force. Although matching funds are required, attention must be given to student success concerns. Participating institutions will be required to use a common placement assessment instrument when it is developed if funds are accepted. The College has a series of opportunities to improve services and student success by participating in these new state programs.
7. A serious revisiting of online instruction as a delivery mode is being funded in the State. While the College has been building an array of online classes, the online education initiative is a promising opportunity in which the College should consider participating.
8. Adult education has long been neglected as a public service in the state. The AEBG legislation provides fresh funding to promote regional cooperation and elimination of redundancy with incentives to focus the instruction on preparing vulnerable citizens for more effective participation in the workforce. This legislation, combined with the promise to raise the funding level

for selective noncredit curriculum to equal the level of credit instruction starting in FY 2015-16, presents a unique opportunity to make a very substantial difference in the service area. The College should grasp the opportunity to implement the planning work done by the regional consortium.

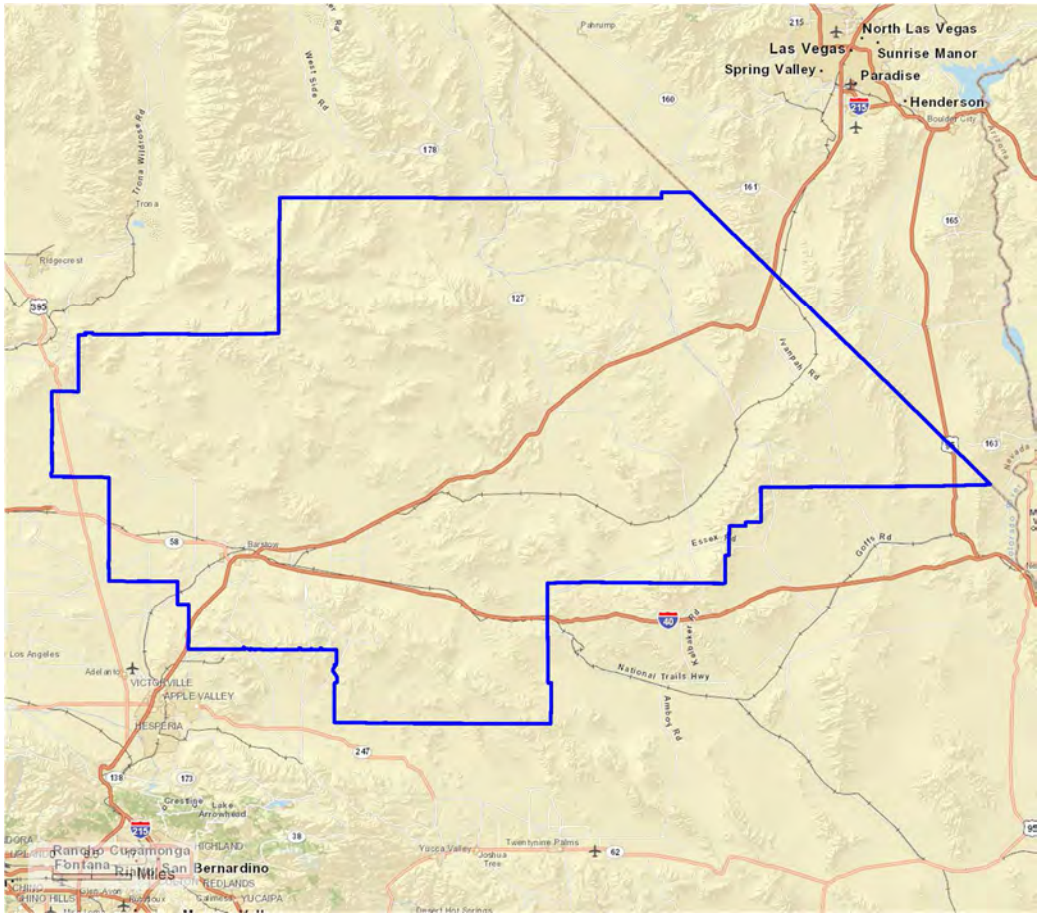
9. Several opportunities are unfolding for career and technical education both within and outside of the Doing What Matters for Jobs and the Economy initiative from the Chancellor's Office. Several dedicated funding sources are promoting inter-segmental cooperation and regional approaches to this type of instruction. The College should position itself to fully engage the various opportunities in this curriculum.



Population Served: Barstow CCD Effective Service Area

Within San Bernardino County, the official boundaries of the BCCD include the zip code areas described in this graphic.

Chart 3: Official BCCD District Boundaries




Source: Environmental Systems Research Institute; analysis by Cambridge West Partnership, LLC

Geographically, the District covers 9,157 square miles. In 2000 the area population numbered 52,638 people. By 2010 the population had only increased to 53,529. The official District service area population is projected to become approximately 54,700 by 2019. Although the official District service area includes 10 zip codes, the College has been attracting student enrollments from a wider area.

Effective Service Area

Based upon an analysis of residential zip codes reported by enrolled students over the last five fall terms (2010 to 2014), the effective service area for Barstow College encompasses 17 cities Individuals from the 20 zip codes represented in these cities account for 76% of the students participating at the College in the fall terms from 2010 to 2014. Fifty-two percent of the student headcount comes from the zip codes that are inside the official District area.

Table 10: Barstow College, In-District vs. Outside-District Origination

| Category | 2010 | 2011 | 2012 | 2013 | 2014 | Average |
|---|---|---|---|---|---|---|
| % In-District | 51% | 56% | 54% | 51% | 50% | 52% |
| % Out-of-District | 49% | 44% | 46% | 49% | 50% | 48% |

Source: California Community College Chancellor's Office, MIS Referential Files; analysis by Cambridge West Partnership, LLC

Table 11: Barstow College, Key Zip Codes for Student Origination

| | | In | Fall Term Unduplicated Headcounts | | | | | | | % of | % |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Zip | City 92301 | District | 2010 | 2011 | 2012 | 2013 | 2014 | Total | Average | Grand Total | Cumulative |
| Adelanto | | | 190 | 98 | 79 | 83 | 106 | 556 | 111 | 3.0% | 55.1% |
| 92307 | Apple Valley | | 93 | 98 | 95 | 91 | 123 | 500 | 100 | 2.7% | 57.8% |
| 92308 | Apple Valley | | 78 | 64 | 78 | 95 | 111 | 426 | 85 | 2.3% | 62.6% |
| 92311 | Barstow | Y | 1,749 | 1,306 | 1,209 | 1,170 | 1,287 | 6,721 | 1,344 | 35.8% | 35.8% |
| 92312 | Barstow | Y | 75 | 52 | 38 | 33 | 27 | 225 | 45 | 1.2% | 71.5% |
| 93505 | California City | | 19 | 22 | 12 | 9 | 2 | 64 | 13 | 0.3% | 76.1% |
| 92327 | Daggett | Y | 24 | 20 | 8 | 9 | 15 | 76 | 15 | 0.4% | 75.8% |
| 92310 | Fort Irwin 92342 | Y | 559 | 465 | 445 | 389 | 330 | 2,188 | 438 | 11.7% | 47.5% |
| Helenc | ale 92344 | | 92 | 82 | 56 | 64 | 83 | 377 | 75 | 2.0% | 68.9% |
| Hespe | ia | | 16 | 22 | 18 | 41 | 27 | 124 | 25 | 0.7% | 75.4% |
| 92345 | Hesperia | | 97 | 77 | 88 | 117 | 104 | 483 | 97 | 2.6% | 60.4% |
| 92347 | Hinkley | Y | 61 | 58 | 41 | 30 | 21 | 211 | 42 | 1.1% | 73.8% |
| 92356 | Lucerne Valley | | 29 | 27 | 40 | 44 | 21 | 161 | 32 | 0.9% | 74.7% |
| 92365 | Newberry Springs | Y | 78 | 51 | 43 | 44 | 51 | 267 | 53 | 1.4% | 70.3% |
| 92371 | Phelan | | 16 | 6 | 9 | 10 | 16 | 57 | 11 | 0.3% | 76.7% |
| 92392 | Victorville | | 279 | 160 | 140 | 132 | 170 | 881 | 176 | 4.7% | 52.2% |
| 92394 | Victorville | | 76 | 83 | 71 | 91 | 96 | 417 | 83 | 2.2% | 64.9% |
| 92395 | Victorville | | 65 | 65 | 76 | 78 | 97 | 381 | 76 | 2.0% | 66.9% |
| 92398 | Yermo | Y | 54 | 41 | 46 | 38 | 46 | 225 | 45 | 1.2% | 72.7% |
| 92284 | Yucca Valley | | 16 | 6 | 11 | 14 | 13 | 60 | 12 | 0.3% | 76.4% |

Source: California Community College Chancellor's Office, MIS Referential Files; analysis by Cambridge West Partnership, LLC

These zip codes represent a limited number of cities as shown on the following table.

Table 12: Barstow College, Key Cities for Student Origination

| In | | Fall Term Unduplicated Headcounts | | | | | | | 2010-14 | % of | % |
|---|---|---|---|---|---|---|---|---|---|---|---|
| District | City | Total | Average | 2010 | 2011 | 2012 | 2013 | 2014 | % Change | Grand Total | Cumulative |
| Y | Barstow | 6,946 | 1,389 | 1,824 | 1,358 | 1,247 | 1,203 | 1,314 | -28.0% | 37.0% | 37.0% |
| Y | Ft. Irwin | 2,188 | 438 | 559 | 465 | 445 | 389 | 330 | -41.0% | 11.7% | 48.7% |
| | Victorville | 1,679 | 336 | 420 | 308 | 287 | 301 | 363 | -13.6% | 8.9% | 57.6% |
| | Apple Valley | 926 | 185 | 171 | 162 | 173 | 186 | 234 | 36.8% | 4.9% | 62.6% |
| | Hesperia | 607 | 121 | 113 | 99 | 106 | 158 | 131 | 15.9% | 3.2% | 65.8% |
| | Adelanto | 556 | 111 | 190 | 98 | 79 | 83 | 106 | -44.2% | 3.0% | 68.7% |
| | Helendale | 377 | 75 | 92 | 82 | 56 | 64 | 83 | -9.8% | 2.0% | 70.8% |
| Y | Newberry Springs | 267 | 53 | 78 | 51 | 43 | 44 | 51 | -34.6% | 1.4% | 72.2% |
| Y | Yermo | 225 | 45 | 54 | 41 | 46 | 38 | 46 | -14.8% | 1.2% | 73.4% |
| Y | Hinkley | 211 | 42 | 61 | 58 | 41 | 30 | 21 | -65.6% | 1.1% | 74.5% |
| | Lucern Valley | 161 | 32 | 29 | 27 | 40 | 44 | 21 | -27.6% | 0.9% | 75.4% |
| Y | Daggett | 76 | 15 | 24 | 20 | 8 | 9 | 15 | -37.5% | 0.4% | 75.8% |
| | California City | 64 | 13 | 19 | 22 | 12 | 9 | 2 | -89.5% | 0.3% | 76.1% |
| | Yucca Valley | 60 | 12 | 16 | 6 | 11 | 14 | 13 | -18.8% | 0.3% | 76.4% |
| | Phelan | 57 | 11 | 16 | 6 | 9 | 10 | 16 | 0.0% | 0.3% | 76.7% |

Source: California Community College Chancellor's Office, MIS Referential Files; analysis by Cambridge West Partnership, LLC

Demographic attributes for the effective service area associated with the BCC are provided in the following table. Population growth between the year 2010 and 2020 for the BCC effective service area is estimated to be 6.4%. The projected annual rate of population growth in the next several years (2015 to 2020) is 0.66%. The median age, in the low 30s, will be relatively young.

Table 13: Barstow College Effective Service Area Demographics

| Element | 2000 | 2010 | 2015 | 2020 | 2015 to 2020 Annual Rate of Change | 2000 to 2015 % Change | 2010 to 2020 % Change |
|---|---|---|---|---|---|---|---|
| Population | 323,371 | 457,692 | 471,175 | 486,915 | 0.66% | 45.7% | 6.4% |
| Group Quarters | | | 11,514 | | | | |
| Households | 108,574 | 142,732 | 146,055 | 150,209 | 0.56% | 34.5% | 5.2% |
| Average Household Size | 2.93 | 3.12 | 3.15 | 3.16 | | 7.5% | 1.3% |
| Median Age | | 32.2 | 32.5 | 32.9 | | | |
| Median Household Income | | | $46,354 | $53,023 | | | |
| Per Capita Income | | | $18,813 | $21,139 | | | |

Source: Environmental Systems Research Institute, *Demographic and Income Profile and Market Profile*; analysis by Cambridge West Partnership, LLC

An extended population projection for the effective service area is illustrated on the following table.

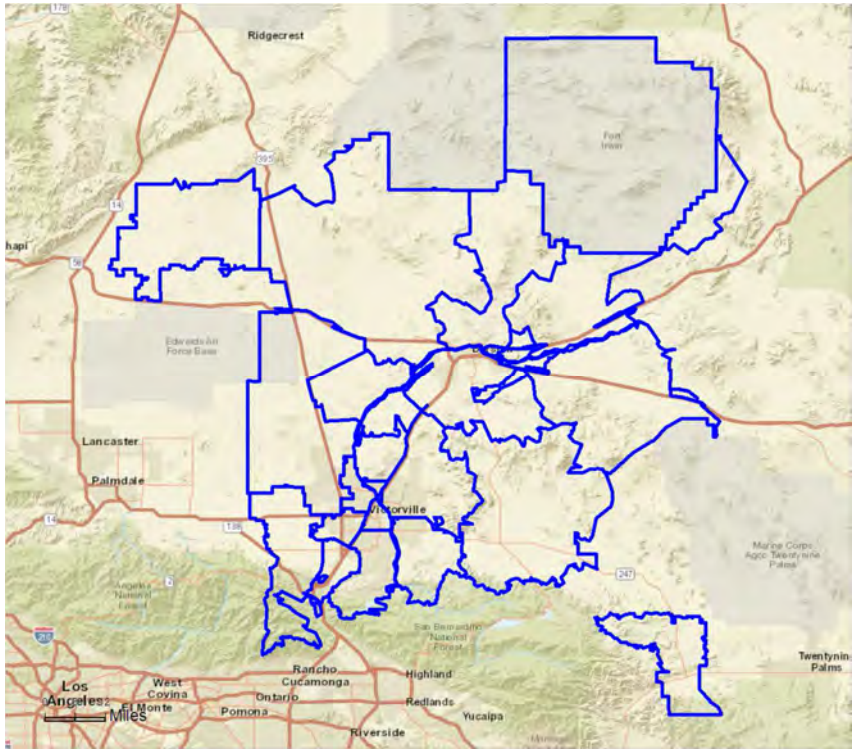
Table 14: Barstow College Effective Service Area, Extended Population Projections

| Barstow College | Extended Population Projection | | | | | Annual Rate |
|---|---|---|---|---|---|---|
| Area | 2021 | 2022 | 2023 | 2024 | 2025 | of Change |
| Effective Service Area | 490,129 | 493,363 | 496,620 | 499,897 | 503,197 | 0.66% |

Source: Environmental Systems Research Institute, *Market Profiles*; analysis by Cambridge West Partnership, LLC

This larger effective service area is illustrated in the following graphic with zip code boundaries.

Chart 4: Barstow College Effective Service Area




Source: Environmental Systems Research Institute, *Market Profiles*; analysis by Cambridge West Partnership, LLC

Individual locations within the District official service area have different rates of growth with Barstow growing most rapidly and the Newberry Springs-Daggett area projected to lose some population.

Table 15: Census Place Populations in the District Official Service Area

| | | | | | 2015 to 2020 |
|---|---|---|---|---|---|
| | Population Counts & Projection | | | | Annual Rate |
| Census Place | 2000 | 2010 | 2015 | 2020 | of Change |
| Barstow | 31,034 | 31,747 | 31,563 | 32,719 | 0.72% |
| Fort Irwin | 9,454 | 8,845 | 8,877 | 8,979 | 0.23% |
| group quarters | | | 1,317 | | |
| Newberry Springs-Daggett | 3,507 | 3,450 | 3,354 | 3,322 | -0.19% |
| Hinkley | 1,945 | 1,734 | 1,755 | 1,785 | 0.34% |
| Nipton, Baker, Ludlow | 1,177 | 974 | 990 | 1,008 | 0.36% |
| ***Total*** | ***47,117*** | ***46,750*** | ***47,856*** | ***47,813*** | |

Source: Environmental Systems Research Institute, *Market Profiles*; analysis by Cambridge West Partnership, LLC

An extended population projection for the District official service area census places is illustrated on the following table.

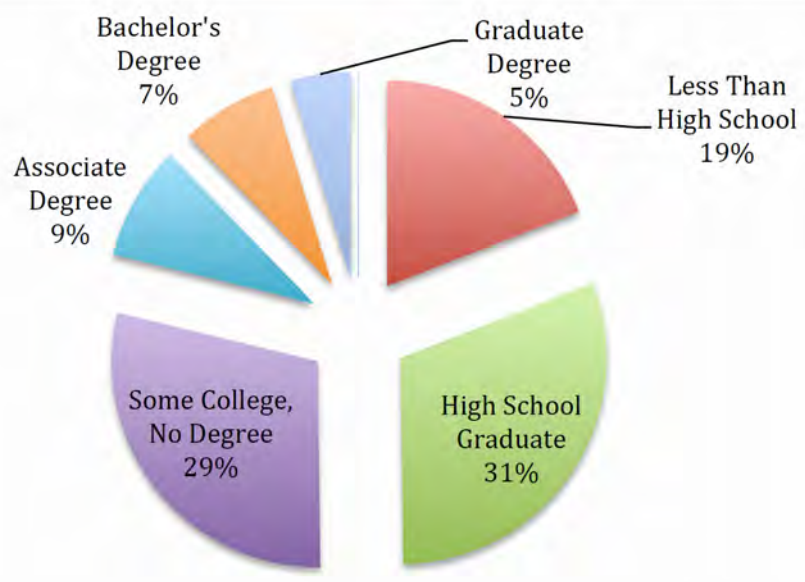
Table 16: Barstow College District Official Service Area Census Places, Extended Population Projections

| | Extended Population Projection | | | | | Annual Rate |
|---|---|---|---|---|---|---|
| Census Place | 2021 | 2022 | 2023 | 2024 | 2025 | of Change |
| Barstow City | 32,955 | 33,192 | 33,431 | 33,672 | 33,914 | 0.72% |
| Fort Irwin | 9,000 | 9,020 | 9,041 | 9,062 | 9,083 | 0.23% |
| Newberry Springs-Daggett | 2,691 | 2,180 | 1,765 | 1,430 | 1,158 | -0.19% |
| Hinkley | 1,791 | 1,797 | 1,803 | 1,809 | 1,816 | 0.34 |
| Nipton, Baker, Ludlow | 1,012 | 1,015 | 1,019 | 1,023 | 1,026 | 0.36 |
| ***Total*** | ***47,448*** | ***47,204*** | ***47,060*** | ***46,995*** | ***46,997*** | |

Source: Environmental Systems Research Institute, *Market Profiles*; analysis by Cambridge West Partnership, LLC

Within the BCC effective service area 50% of the residents have either less than a high school diploma or only a high school diploma. Another 29% completed some college but did not complete an Associate Degree. These residents are prime candidates for the instruction offered by the College.

Chart 5: Effective Service Area, Educational Attainment in 2015 for Adults Age 25 or Older




Source: Environmental Systems Research Institute, *Market Profile*; analysis by Cambridge West Partnership, LLC

The census place locations within the District official service area have different adult educational attainment distributions with the Nipton, Baker and Ludlow area having the largest portion of adults with less than high school completion attainment. The population at Fort Irwin reported the smallest portion of their adult population as having less than high school completion.

Table 17: District Official Service Area Census Place Adult Educational Attainment Levels, 2015

| Adult Educational Attainment | Barstow | Ft. Irwin | Newberry Springs & Daggett | Hinkley | Nipton, Baker, Ludlow |
|---|---|---|---|---|---|
| Less Than High School | 17.9% | 0.9% | 19.6% | 19.5% | 31.7% |
| High School Graduate | 33.6% | 21.5% | 28.8% | 24.3% | 37.2% |
| Some College, No Degree | 27.6% | 41.3% | 28.4% | 27.9% | 11.3% |
| Associate Degree | 9.5% | 10.0% | 10.2% | 5.3% | 10.5% |
| Bachelor's Degree | 6.8% | 18.1% | 7.0% | 19.3% | 2.4% |
| Graduate Degree | 4.6% | 8.2% | 5.9% | 3.6% | 6.9% |
| | | | | | |
| count of adults | 19,384 | 4,024 | 2,357 | 1,145 | 592 |
| Less Than HS & HS Grad | 51.5% | 22.4% | 48.4% | 43.8% | 68.9% |

Source: Environmental Systems Research Institute, *Market Profile*; analysis by Cambridge West Partnership, LLC

In response to the AB86 Adult Education legislation, educational need indicator data was assembled to facilitate adult education program planning in the regional consortia area. A dean at the College co-chaired the planning efforts with a senior administrator from one of the two public school districts. The socio-economic data they received to support planning is displayed in the following table representing the educational needs of the most vulnerable citizens in the larger region.

Table 18: Educational Needs of Adults in the Barstow Adult Education Consortium Region

| | 2014 ESRI Data | | | | | US Census ACS Data | | | |
|---|---|---|---|---|---|---|---|---|---|
| District | Not HS Grad | HS Grad | Some College | Total Unemployed | Pop. 18 + | Nbr. In Poverty | Illiteracy | ESL | 7th Grade Education |
| Barstow | 5,483 | 9,151 | 10,082 | 2,005 | 42,485 | 5,935 | 1,682 | 1,579 | 1,452 |
| *% of Pop 18+* | *13%* | *22%* | *24%* | *5%* | | *14%* | *4%* | *4%* | *3%* |

Sources: U.S. Census Bureau American Community Survey and U.S. Department of Education, National Center for Educational Statistics- National Assessment on Adult Literacy; analysis by the AB86 Work Group

Compared to San Bernardino County, the Barstow College effective service area (ESA) contains many more low income and far fewer middle class households.

Table 19: Comparative 2015 Household Incomes

| | 2015 | | |
|---|---|---|---|
| Household Income | ESA | County | Difference |
| <$15000 | 14.0% | 11.1% | 2.9% |
| $15-24,999 | 11.7% | 7.5% | 4.2% |
| $25-34,999 | 12.0% | 8.9% | 3.1% |
| $35-49,999 | 15.2% | 13.3% | 1.9% |
| $50-74,999 | 18.8% | 18.0% | 0.8% |
| $75-99,999 | 12.6% | 15.3% | -2.7% |
| $100-149,999 | 11.1% | 14.9% | -3.8% |
| $150-199,999 | 3.1% | 6.5% | -3.4% |
| $200,000 + | 1.5% | 4.4% | -2.9% |
| | | | |
| Number of Households | 146,055 | 625,903 | 479,848 |

Source: Environmental Systems Research Institute, *Demographic and Income Profile*; analysis by Cambridge West Partnership, LLC

The census places that comprise the District official service area vary in the 2015 household income distributions as illustrated in the following table. The Nipton, Baker, and Ludlow area as well as the Newberry Spring and Daggett area have the highest portion (49% each) of households reporting an annual income of less than $35,000.

Table 20: Barstow College District Official Service Area Census Places 2015 Household Income Distributions

| | 2015 Income Distributions | | | | | |
|---|---|---|---|---|---|---|
| Household Income | Effective Service Area | Hinkley | Barstow | Newberry Springs & Daggett | Ft. Irwin | Nipton, Baker, Ludlow |
| <$15000 | 14.0% | 22.5% | 16.7% | 16.3% | 4.0% | 22.2% |
| $15-24,999 | 11.7% | 14.8% | 13.7% | 15.7% | 21.5% | 10.6% |
| $25-34,999 | 12.0% | 9.2% | 10.5% | 16.7% | 16.8% | 16.1% |
| $35-49,999 | 15.2% | 15.1% | 14.0% | 17.3% | 8.3% | 17.0% |
| $50-74,999 | 18.8% | 17.1% | 18.9% | 16.9% | 21.4% | 31.6% |
| $75-99,999 | 12.6% | 9.9% | 12.1% | 8.8% | 15.9% | 1.8% |
| $100-149,999 | 11.1% | 7.7% | 10.9% | 6.7% | 9.0% | 0.3% |
| $150-199,999 | 3.1% | 2.6% | 2.2% | 1.2% | 2.3% | 0.3% |
| $200,000 + | 1.5% | 1.1% | 0.9% | 0.3% | 0.7% | 0.0% |
| | | | | | | |
| Median Household Income | $46,354 | $37,665 | $43,581 | $35,751 | $48,475 | $35,654 |
| Average Household Income | $59,166 | $49,884 | $54,878 | $46,041 | $56,226 | $38,342 |
| Per Capital Income | $18,813 | $17,310 | $19,592 | $17,969 | $18,387 | $13,230 |
| | | | | | | |
| Number of Households | 146,055 | 609 | 11,103 | 1,286 | 2,392 | 329 |

Source: Environmental Systems Research Institute, *Demographic and Income Profile*; analysis by Cambridge West Partnership, LLC

From the 2010 census to 2020 the age group in the College effective service area that will increase the most (1.9%) in proportion to the overall population is the career start (25-34 age group). The younger career choice group (15-24 age) is projected to decrease the most, 2.2%. Out to 2020, the combined career choice and career start groups are projected to decrease by 0.3%, but will continue to represent a substantial proportion of the overall population.

Table 21: Barstow College Effective Service Area Age Range Projections

| Barstow College | | | | Absolute | 2015 to 2020 |
|---|---|---|---|---|---|
| **Effective Service Area** | **2010** | **2015** | **2020** | **Change** | **% change** |
| under 15 | 24.6% | 23.1% | 23.3% | 0.2% | |
| Career Choice (15-24) | 15.8% | 15.9% | 13.7% | -2.2% | |
| Career Start (25-34) | 13.2% | 14.3% | 16.2% | 1.9% | |
| Career Middle (35-44) | 12.6% | 11.8% | 12.2% | 0.4% | |
| Career Finish (45-64) | 23.2% | 23.0% | 21.4% | -1.6% | |
| Retirement (65+) | 10.7% | 11.9% | 13.0% | 1.1% | |
| Number | 457,701 | 471,175 | 486,915 | 15,740 | 3.3% |
| | | | | | |
| 18+ | 69.8% | 72.3% | 72.4% | 0.1% | |
| less than 18 | 30.2% | 27.7% | 27.6% | -0.1% | |

Source: Environmental Systems Research Institute, *Market Profile*; analysis by Cambridge West Partnership, LLC

Table 22: Barstow College Effective Service Area Detailed Age Range Projections

| | Effective Service Area | | | | Effective Service Area | | | |
|---|---|---|---|---|---|---|---|---|
| **Age** | **2010** | **2015** | **2020** | **Average** | **2010** | **2015** | **2020** | **Average** |
| 15 | 1.9% | 1.5% | 1.4% | | 8,554 | 7,273 | 7,029 | |
| 16 | 1.9% | 1.5% | 1.4% | | 8,554 | 7,302 | 6,960 | |
| 17 | 1.8% | 1.5% | 1.4% | | 8,274 | 7,265 | 6,835 | |
| ***High School Subtotal*** | ***5.6%*** | ***4.5%*** | ***4.2%*** | ***4.8%*** | ***25,382*** | ***21,840*** | ***20,824*** | ***22,682*** |
| | | | | | | | | |
| 18 | 1.7% | 1.5% | 1.3% | | 7,778 | 7,037 | 6,545 | |
| 19 | 1.6% | 1.5% | 1.3% | | 7,136 | 6,951 | 6,380 | |
| 20-24 | 7.0% | 8.3% | 6.8% | | 31,962 | 39,141 | 33,064 | |
| ***College Age Subtotal*** | ***10.3%*** | ***11.3%*** | ***9.4%*** | ***10.3%*** | ***46,876*** | ***53,129*** | ***45,989*** | ***48,665*** |

Source: Environmental Systems Research Institute, *Market Profile*; analysis by Cambridge West Partnership, LLC

As might be anticipated, Fort Irwin reported the largest concentration of individuals in the combined career choice (15-24 age) and career start (25-34) age categories. Newberry Springs and Daggett reported the smallest portion of the population in those age categories. The distribution of these most likely college-going age groups among the census places within the District official service area is found on the following table. This sector of the population is decreasing slightly in every census place area. The decrease is the greatest in the Nipton, Baker, and Ludlow area. When the relatively youthful Ft. Irwin population is set aside, the portion of retirement age residents in the other census places will grow to be 14% of the residents in the District official service area.

Table 23: Barstow College District Official Service Area Age Range Projections

| Census Place | Career Choice & Start 2010 | 2015 | 2020 | 2015 to 2020 Absolute Change |
|---|---|---|---|---|
| Barstow | 28.9% | 29.6% | 28.5% | -1.1% |
| Ft. Irwin | 52.1% | 53.3% | 52.9% | -0.4% |
| Newberry Springs & Dagget | 22.0% | 21.9% | 21.1% | -0.8% |
| Hinkley | 23.4% | 25.5% | 25.0% | -0.5% |
| Nipton, Baker, Ludlow | 29.5% | 28.6% | 27.6% | -1.0% |

Career Choice- ages 15-24

Career Start- ages 25-34

Source: Environmental Systems Research Institute, *Market Profile*; analysis by Cambridge West Partnership, LLC

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 60% 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.

Over a long period of time, 1996 to 2010, the College annually enrolled 50 or more students from one high school that was the primary source of students and 20 to 49 students from two additional high schools. From 2010-11 to 2014-15 the annual and average yield rates are shown in the following table. The yield is calculated from the count of graduates (denominator) divided into the count of students who enroll at BCC the following year (numerator).

Table 24: Selected Feeder High Schools to Barstow Community College

| | Percentage Yield of Graduates | | | | | |
|---|---|---|---|---|---|---|
| High School Name | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | Average |
| Baker High School | 25% | 11% | 8% | 29% | 0% | 16% |
| Silver Valley High School | 21% | 25% | 24% | 115% | 29% | 40% |
| Central High School | 37% | 29% | 39% | 30% | 19% | 32% |
| Barstow High School | 49% | 36% | 51% | 39% | 37% | 42% |

Sources: Barstow College, Office of Institutional Effectiveness. *Fact Book 2013 - 2014.* California Community College Chancellor's Office, MIS Referential Files. California Postsecondary Education Commission. *Freshman Pathways*. Retrieved from www.cpec.ca.gov on November 23, 2015; analysis by Cambridge West Partnership, LLC

The largest racial group in the BCC effective service areas has been White. But, the portion of the self-reported White group is expected to shrink 1.9% by 2020 while the portion of the self-reported Some Other group is anticipated to increase 1.6% by 2020.

Hispanic ethnic residents currently constitute 39.9% of the population. The Hispanic ethnic group is estimated to continue increasing by 4.1% between 2015 and 2020 to become 48% by 2020.

Table 25: Barstow College Effective Service Area, Racial and Ethnic Composition

| | | | | 2015 to 2020 |
|---|---|---|---|---|
| | | | | Absolute |
| **Race** | **2010** | **2015** | **2020** | **Change** |
| White | 61.3% | 58.7% | 56.8% | -1.9% |
| Black | 10.4% | 10.3% | 10.2% | -0.1% |
| Asian* | 4.6% | 4.9% | 5.2% | 0.3% |
| Some Other | 18.2% | 20.0% | 21.6% | 1.6% |
| Two or More | 5.5% | 5.9% | 6.3% | 0.4% |
| | | | | |
| **Ethnicity** | | | | |
| Hispanic Origin | 39.9% | 43.9% | 48.0% | 4.1% |
| *Also includes American Indian and Pacific Islander | | | | |

Source Environmental Systems Research Institute, *Market Profile*; analysis by Cambridge West Partnership, LLC

Across the State, participation in the community college system varies among ethnic and racial groups. However, young people of Hispanic heritage have been historically underrepresented in higher education

Implications for the College:

1. The population in the effective service area is projected to continue growing with a 6.4% change between 2010 and 2020 or a 0.66% annual change rate between 2015 and 2020, but to 2025 the population is projected to become approximately 503,000. The largest census place within the District official service area, Barstow, is projected to grow 3.1% between 2010 and 2020 or a 0.72% annual change rate between 2015 and 2020. The College should consider concentrating its outreach and recruiting in Barstow.
2. Data assembled for the adult education consortium activities indicate that within the official District service area there are a number of families living at or below the poverty level and a significant segment are English language learners. These data present profound implications and opportunities for the College.
3. From 2010 to 2012, fall term student distinct headcounts have declined but, since 2012, enrollments have been increasing. To some extent, the decline in enrollments is related to the significant shortfall in state resources that accompanied the Great Recession. The College is somewhat unique in that a significant portion of the enrollments are distance education classes as opposed to the classes on the campus. That has implications for additional campus facility capacity.
4. Throughout the effective service area, the portion of adult residents age 25 or older that have no high school diploma is 19%. In the largest census place within the District official service area, Barstow, 18% of the adults have no high school diploma. There are ample residents who could benefit by attending the institution and completing a certificate or degree.
5. Over the next five years the portion of teenagers and very young adults in the effective service area who are making career choices will continue to represent a substantial segment of the population. A limited number of public high schools have been the primary providers of students to the College. These data underscore the importance of outreach

efforts the College might wish to continue in order to sustain enrollment volumes.

6. In the official District service area 14% of the households reported an income that is below $15,000, another 12% reported income between $15,000 and $24,999. The large portion of low income of households and households where English is spoken less than very well in the College's official service area provide an opportunity for the College to be a "merchant of hope" by recruiting students whose lives will be transformed by their success at the institution.
7. The portion of District residents who self-reported as Hispanic was 43.9% in 2015 but will grow to 48% by 2020. In the largest city within the District official service area, Barstow, the Hispanic group was 46.2% of the population in 2015 and will grow to 50.5% by 2020. Traditionally, that group has had a lower participation rate in higher education. These trends present a particular recruiting challenge to the College.

## B. Scan of Conditions Internal to the College

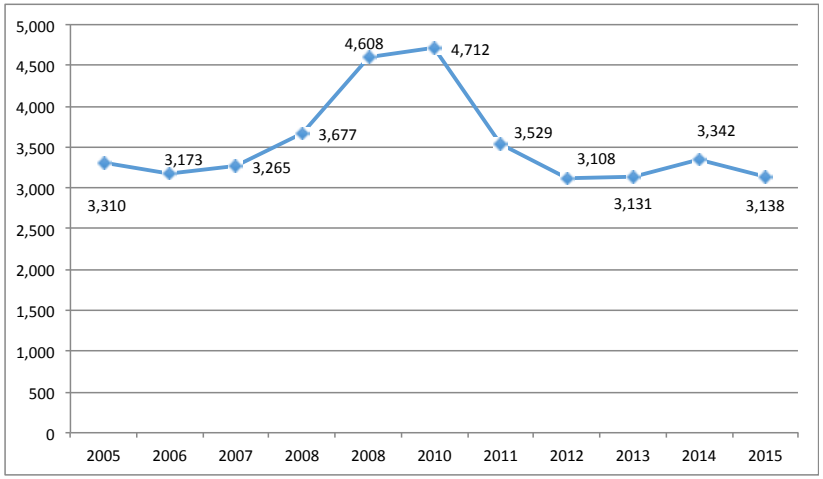
The Institution from Within

From fall 2005 to fall 2015, the unduplicated student headcount at Barstow College saw a decrease of 0.50% annually, peaking in fall 2010 (4,712 students). Between fall 2005 and fall 2015 the College has had a total decrease of 5.2% (only 172 students).

From fall 2010 to fall 2015, the headcount decreased by 33.4% overall; a decrease of 6.7% annually. Because of budget cuts at the state level, enrollments across the state fell drastically during this same time period. Preparations for workload reduction and other factors resulted in declining enrollments at Barstow College between fall 2010 (4,712 students) and fall 2012 when unduplicated headcount bottomed out at 3,108.

Since fall 2012, unduplicated headcount had gradually increased to fall 2014 but dropped to an unduplicated headcount of 3,138 in fall 2015. From the high point of fall 2010 to fall 2015 the College has lost 1,574 students.

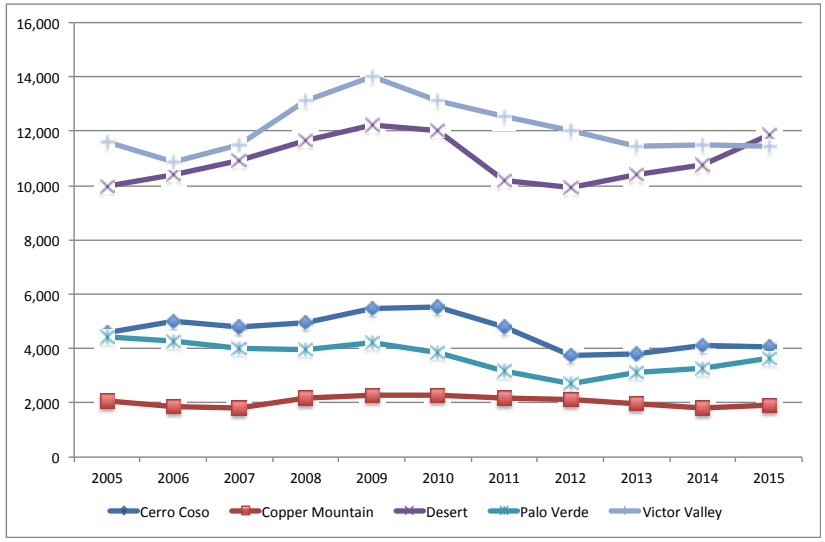
Chart 6: Barstow College Fall Term Unduplicated Student Headcount




Source: Barstow College Office of Institutional Effectiveness; analysis by Cambridge West Partnership, LLC.

Neighboring community colleges have had similar experiences with a down turn in fall term headcounts starting in 2010 to 2012. That was followed by a modest, slow increase between fall 2013 to fall 2015. Comparing fall 2005 to fall 2015 the two most rural and remote colleges, Cerro Coso and Palo Verde, have suffered the greatest loss of students, 11% and 18% respectively.

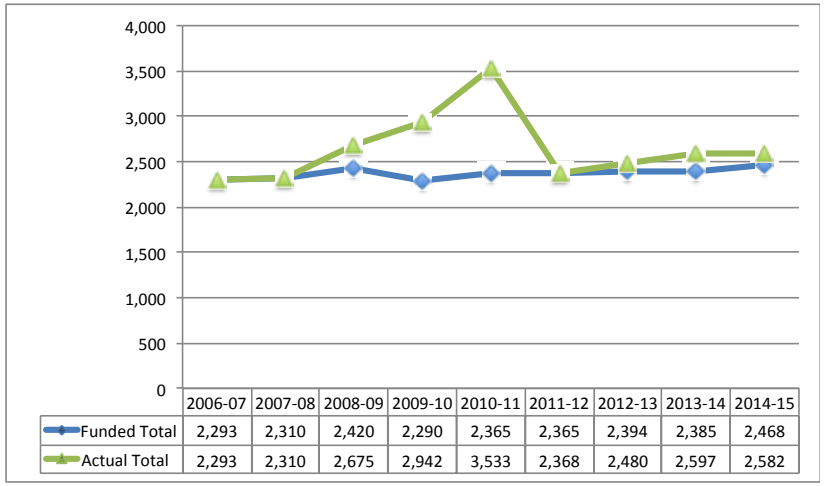
Chart 7: Neighboring Colleges Fall Term Unduplicated Student Headcount




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

From 2006-07 to 2014-2015 the actual Full-time Equivalent Students (FTES) produced at the College increased by 289 FTES, an increase of 12.6%. However, the funded FTES produced over those same years increased only 175 FTES or 7.64%.

Chart 8: Barstow College Annual FTES Trends

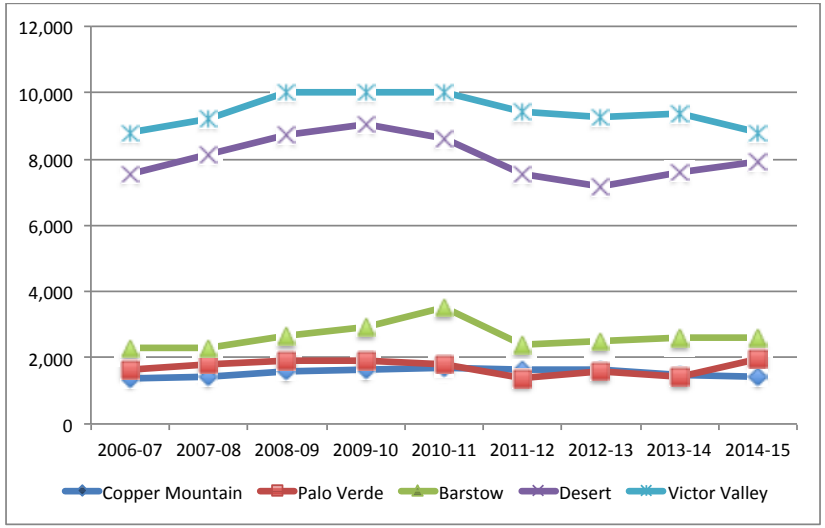



| | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|---|---|---|---|---|---|---|---|---|---|
| Funded Total | 2,293 | 2,310 | 2,420 | 2,290 | 2,365 | 2,365 | 2,394 | 2,385 | 2,468 |
| Actual Total | 2,293 | 2,310 | 2,675 | 2,942 | 3,533 | 2,368 | 2,480 | 2,597 | 2,582 |

Source: California Community Colleges, Chancellor's Office, Fiscal Services Unit. *Recalculated Apportionment Reports*; analysis by Cambridge West Partnership, LLC.

This same trend in declining annual FTES after the 2010-11 fiscal year was also experienced in neighboring California community districts. Two of the districts, Victor Valley and Copper Mountain have not regained FTES, but the others are now beginning to see modest increases in FTES.

Chart 9: Barstow College and Neighboring Districts Annual Actual FTES




Source: California Community Colleges, Chancellor's Office, Fiscal Services Unit. *Recalculated Apportionment Reports*; analysis by Cambridge West Partnership, LLC.

Current Program of Instruction

The current program of instruction was used to define the needs for instructional and student support space. The fall 2015 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 initial chapter to the Facilities Master Plan section of this Combined Plan. The available instructional space determines the institution's capacity to produce weekly student contact hours (WSCH).

At the start of the 2015-16 academic year, the College was authorized to offer 58 instructional programs (degrees and certificates). Nine of these approved programs are new associate degrees for transfer. These new degrees follow statewide transfer model curriculum designs. Three of these new transfer degrees are in fields of study previously approved as associate degrees. There are six of the new degrees for transfer offered in disciplines that are not duplicative of previously established associate degrees. The College continues to offer for additional associate degrees that announce a goal of transfer but are not designed with a statewide transfer model curriculum pattern.

The remaining degrees and certificates are in disciplines that are considered career and technical education. Of these programs, 11 culminate in the award of an associate degree while 26 culminate in the award of a certificate of achievement. Thirteen of the associate degrees offer certificates of achievement in the same field of study; the students may choose to earn both.

Although the labor markets and needs of the community differ, it is instructive to consider how many programs of study and different disciplines a small, remotely located community college can effectively offer. When compared to colleges producing a comparable volume of FTES, Barstow appears to be offering slightly fewer programs of study than two of its peers. Among the four institutions only Cerro Coso College offers fewer degrees and certificates. The count of Taxonomy of Programs (TOPs) data is an expression of the number of different disciplines provided in the degree and certificate programs of study. The efforts by Barstow are similar to three of its peers and more than Cerro Coso College.

Table 26: Comparative Breadth of Curriculum Programs of Study

| | Fall 2015 | | Programs of Study | | | Nbr. Distinct |
|---|---|---|---|---|---|---|
| College Name | Total FTES | Total | Cert | Degree | | TOPs |
| Barstow | 1,127.17 | 58 | 26 | 32 | | 37 |
| Cerro Coso | 1,131.51 | 50 | 23 | 27 | | 29 |
| Siskiyous | 1,062.41 | 62 | 16 | 46 | | 36 |
| Taft | 1,148.08 | 69 | 23 | 46 | | 36 |

Sources: California Community Colleges Chancellor's Office. *Data Mart and Curriculum Inventory*. Retrieved May 22, 2016 from http://datamart.cccco.edu and http://curriculum.cccco.edu

At the beginning of the 2015-16 academic year Barstow College had established nine Associate Degrees for Transfer (AD-T). Each was developed from a model curriculum and course outlines of record that were discussed and agreed upon by faculty workgroups from both the community college and the California State University systems. Each AD-T requires no more than 60 credit hours and with the exception of Business Administration, each requires 18-20 units of curriculum in the field of concentration in addition to the 39 units for the CSU General Education Breadth requirements.

Of the 526 possible courses listed in the College curriculum inventory, 94 have been named in these nine transfer degree programs. The courses required or named as restricted electives in these transfer degree programs 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 as illustrated in the following table.

Table 27: High Frequency Named Courses in Associate Degrees for Transfer

| Course | Description | Total |
|---|---|---|
| MATH 2 | Introduction to Statistics | 5 |
| PSYC 1 | Introduction to Psychology | 5 |
| SOCI 1 | Introduction to Sociology | 5 |
| PSYC/SOCI 12 | Research in the Social Sciences | 4 |
| ANTH 1 | Introduction to Cultural Anthropology | 3 |
| ECON 1 | Principles of Economics (Macro) | 3 |
| HIST 8A | World Civilizations | 3 |
| HIST 8B | World Civilizations | 3 |
| SPAN 1A | Beginning Spanish | 3 |

Source: Barstow College. *2015-16 Catalog*; analysis by Cambridge West Partnership, LLC

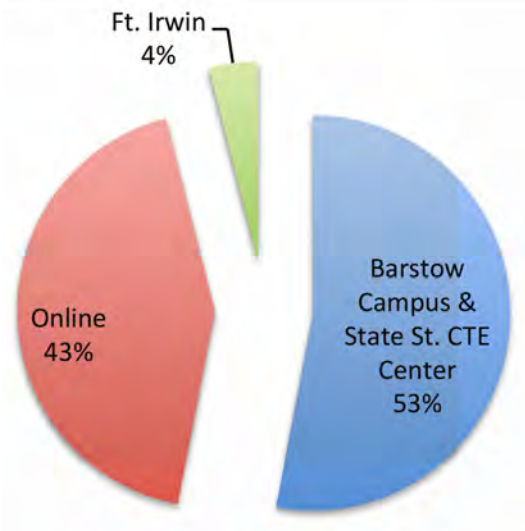
In an effort to simplify the curriculum, the College has been working on creating two-year plans of study that have a limited number of electives. The College has also begun a discussion to identify specific general education courses for each of the associate degrees so that the choices provided to students are limited. These efforts are consistent with the national trend to provide guided pathways for students through increased structure.[19]

The fall 2015 program of instruction consisted of 399 sections, which generated 33,480 weekly student contact hours (WSCH). Most (58%) of the sections were offered at the main campus and the CTE Center located on State Street in Barstow. However,

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

another 34% of the sections were delivered as online instruction classes. The attendance generated by the fall 2015 program of instruction is shown in the following chart. With only 34% of the sections being delivered as online classes it is impressive that they collectively created 43% of the WSCH that term.

Chart 10: Fall 2015 WSCH Generation by Location




Source: Barstow College, Office of Institutional Effectiveness, analysis by Cambridge West Partnership, LLC

For the face-to face enrollments (seat counts) per section averaged 23.18 and a WSCH per section of 76.68. For every one weekly hour of laboratory instruction 2.4 hours of lecture instruction was offered. The key characteristics of the fall 2015 program of instruction offered on the main campus and at the State Street CTE building in Barstow are reflected in the following table where all sections retained and all WSCH have been included, regardless of the residence status of the enrolled students.

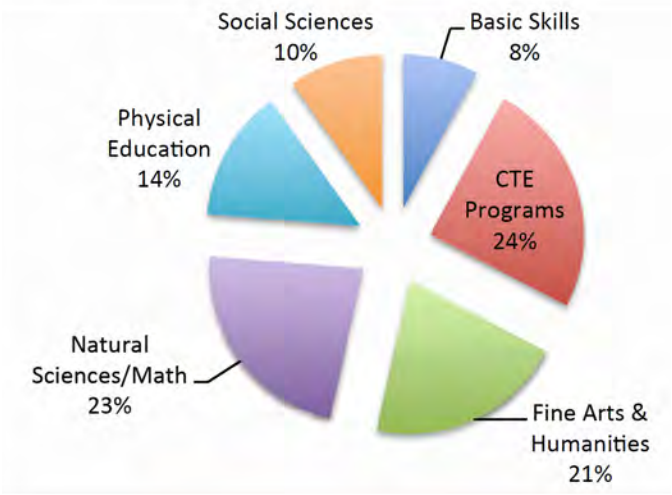
Table 28: Fall 2015 Key Measures for the Program of Instruction, Barstow

| | Main Campus and State Street CTE Facility | | | |
|---|---|---|---|---|
| **Division** | **% of WSCH** | **WSCH Fa 2015** | **% of Sect.** | **# of Sect.** |
| Basic Skills | 8% | 1,359 | 10% | 23 |
| CTE Programs | 25% | 4,371 | 29% | 66 |
| Fine Arts & Humanities | 21% | 3,668 | 21% | 48 |
| Natural Sciences/Math | 23% | 4,048 | 16% | 37 |
| Physical Education | 14% | 2,511 | 15% | 35 |
| Social Sciences | 10% | 1,755 | 10% | 22 |
| ***Total*** | | ***17,712*** | | ***231*** |

Source: Barstow College, Office of Institutional Effectiveness, analysis by Cambridge West Partnership, LLC

The divisions of the College were used to determine percentage shares of the WSCH attendance. As illustrated in the pie chart below, two divisions account for the largest portions of WSCH in the fall 2015 program of instruction: (1) Career & Technical (25%) and (2) Natural Science/Math (23%); (However there are significant contributions from Fine Arts & Humanities (21%).

Chart 11: Fall 2015 Distribution of Attendance WSCH, Barstow




Source: Barstow College, Office of Institutional Effectiveness, analysis by Cambridge West Partnership, LLC

During the fall 2015 baseline term the College offered 168 different courses at the main campus or at the State Street CTE facility spread across the six divisions as noted in the following table. Among the 168 courses, 20 of them accounted for fifty percent of all enrollments at the main campus and the State Street CTE facility.

Table 29: Fall 2015 Distribution of Courses, Main Campus and State Street

| | Main Campus and State Street CTE Facility | |
|---|---|---|
| **Division** | **% Courses** | **Nbr. Courses** |
| Basic Skills | 17% | 29 |
| CTE Programs | 35% | 58 |
| Fine Arts & Humanities | 19% | 32 |
| Natural Sciences/Math | 11% | 18 |
| Physical Education | 11% | 18 |
| Social Sciences | 8% | 13 |
| ***Total*** | | ***168*** |

Source: Barstow College, Office of Institutional Effectiveness, analysis by Cambridge West Partnership, LLC

During the fall 2015 baseline term the College offered 31 sections at the Ft. Irwin Satellite campus spread across the five divisions as noted in the following table. By far, the Fine Arts & Humanities Division generated the most WSCH (34%). The College also offers instruction in automotive technology and diesel engine repair at Ft. Irwin, but does so through contract education that is not included in this analysis.

Table 30: Fall 2015 Distribution of WSCH & Sections, Ft. Irwin

| | Fort Irwin Satellite Center | | | |
|---|---|---|---|---|
| **Division** | **% of WSCH** | **WSCH Fa 2015** | **% of Sect.** | **# of Sect.** |
| Basic Skills | 23% | 296 | 13% | 4 |
| CTE Programs | 10% | 126 | 13% | 4 |
| Fine Arts & Humanities | 34% | 446 | 35% | 11 |
| Natural Sciences/Math | 26% | 341 | 23% | 7 |
| Social Sciences | 7% | 96 | 16% | 5 |
| ***Total*** | | ***1,305*** | | ***31*** |

Source: Barstow College, Office of Institutional Effectiveness, analysis by Cambridge West Partnership, LLC

The fall 2015 program of instruction offered as online curriculum consisted of 137 sections that survived after the add/drop period. These fall 2015 sections generated 14,464 WSCH. Enrollments (seat counts) per section averaged 31.46 and a WSCH per section of 105.57. The instruction was entirely lecture. The key characteristics of the fall 2015 online program of instruction are reflected in the following table where all sections are retained and all WSCH have been included, regardless of the residence status of the enrolled students.

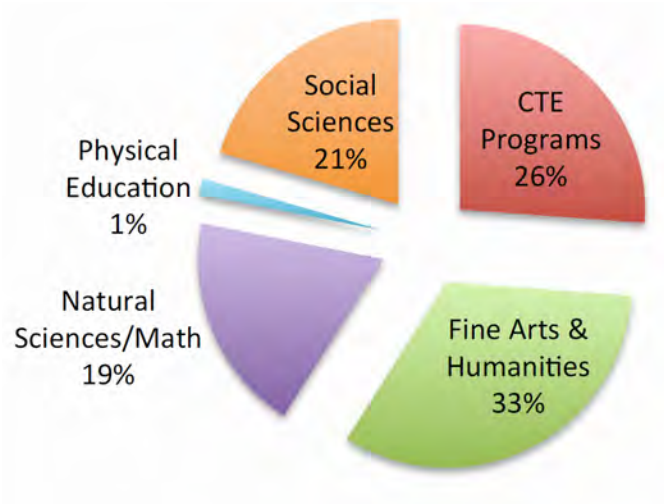
Table 31: Fall 2015 Key Measures for the Program of Instruction, Online

| | Online Curriculum Offerings | | | |
|---|---|---|---|---|
| **Division** | **% of WSCH** | **WSCH Fa 2015** | **% of Sect.** | **# of Sect.** |
| CTE Programs | 26% | 3,782 | 26% | 36 |
| Fine Arts & Humanities | 33% | 4,755 | 30% | 41 |
| Natural Sciences/Math | 19% | 2,762 | 15% | 21 |
| Physical Education | 1% | 198 | 1% | 2 |
| Social Sciences | 21% | 2,967 | 27% | 37 |
| ***Total*** | | ***14,464*** | | ***137*** |

Source: Barstow College, Office of Institutional Effectiveness; analysis by Cambridge West Partnership, LLC

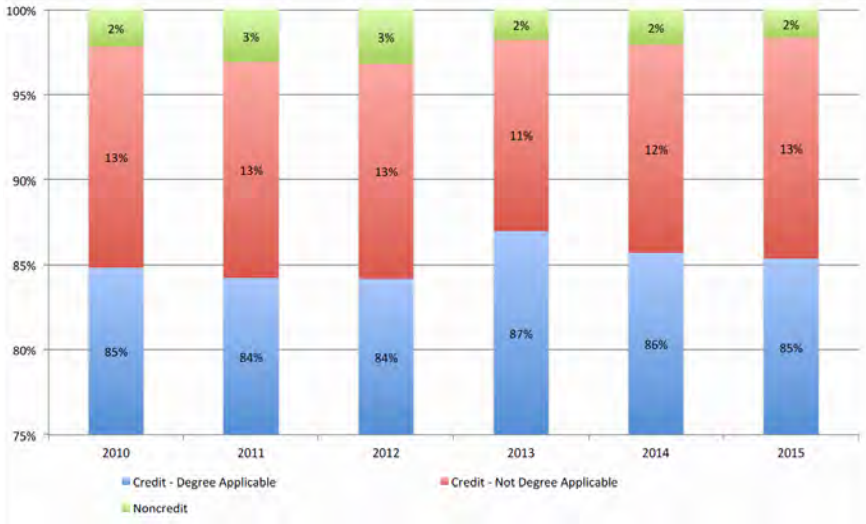
The divisions of the College were used to determine percentage shares of the online WSCH attendance. As illustrated in the pie chart below, two divisions account for the largest portions of WSCH in the fall 2015 online program of instruction: (1) Fine Arts and Humanities Division (33%) and (2) CTE Programs (26%). The social sciences made a strong third ranked contribution with 21% of the online WSCH.

Chart 12: Fall 2015 Distribution of Attendance WSCH, Online




Source: Barstow College, Office of Institutional Effectiveness, analysis by Cambridge West Partnership, LLC

Chart 13: Fall Class Offering Trends by Credit Status



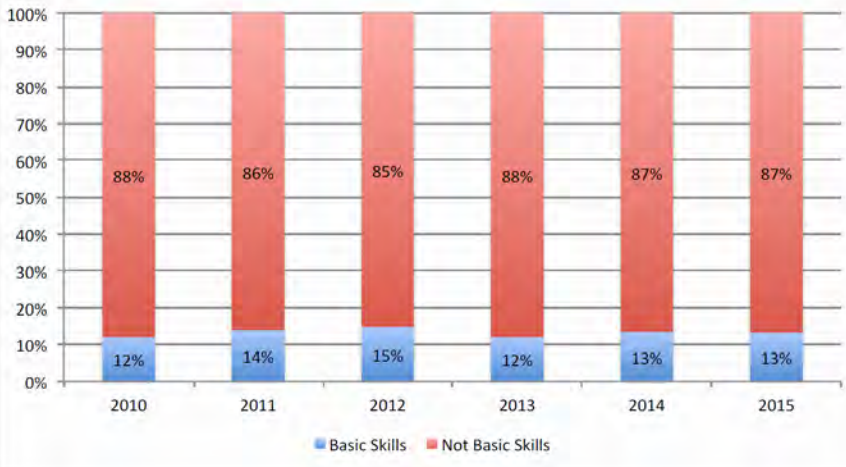

Source: California Community Colleges, Chancellor's Office, *Data Mart*; analysis by Cambridge West Partnership, LLC.

The following analysis of trends includes classes at all sites and offered in all modes of instruction, unless otherwise noted.

The portion of the sections offered that is credit degree-applicable courses has increased by 16% over the past six fall terms and the portion of credit but not degree-applicable sections also has decreased by 15%. The portion of the sections offered that are noncredit by one during the same time period.

In fall 2010, 88% of the sections offered were not basic skills courses. In fall 2015 that number decreased by 1%. On average from fall 2010 to fall 2015 13% of the sections offered have been basic skills curriculum.

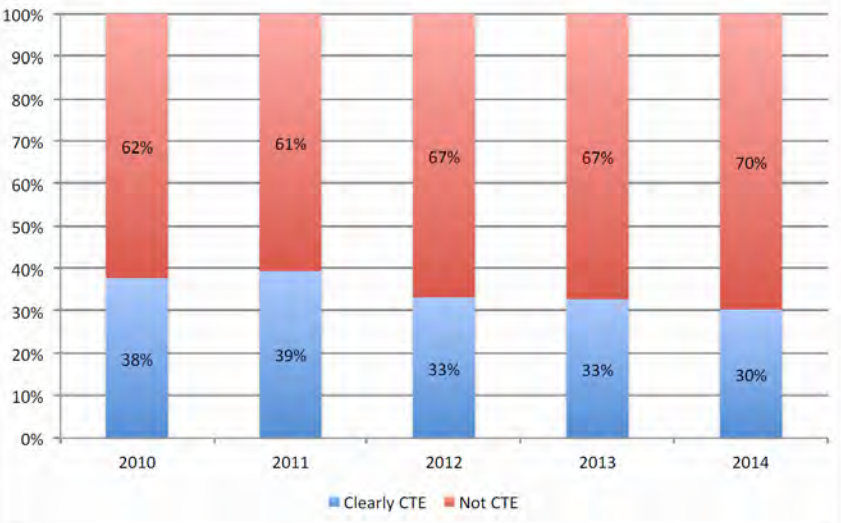
Chart 14: Fall Class Offering Trends by Basic Skills Status




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

The Student Accountability Model (SAM) coding system can be used to categorize the College curriculum, separating courses into CTE and non-CTE categories. The SAM coding of courses also distinguishes among different kinds of career and technical education (CTE) courses. On average the CTE offerings represent 47% of the offerings while the non-CTE classes comprise 35% of the sections scheduled from fall 2010 to fall 2015. Over those fall terms the portion of offerings that were CTE has declined by 7%.

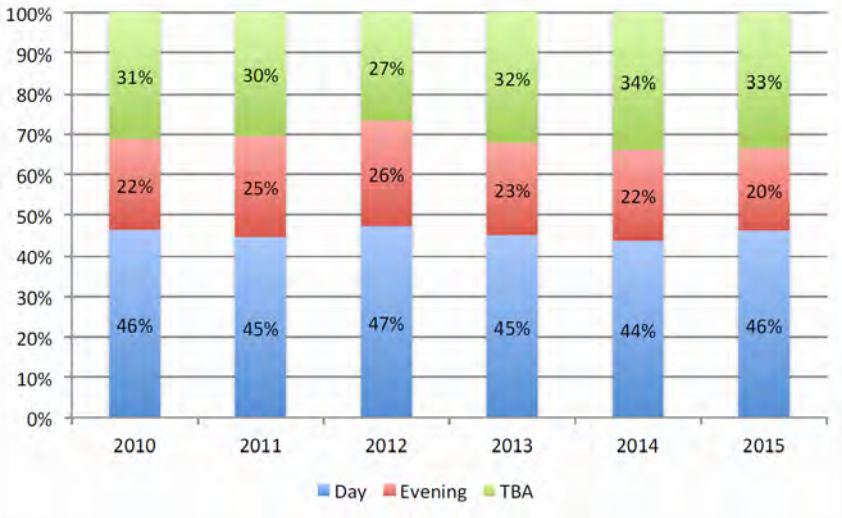
Chart 15: Fall Class Offering Trends by SAM Code Status




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

An analysis of the primary class meeting patterns reveals the predominance of daytime offerings. Over the last six fall terms (2010 to 2015), the portion of classes offered during the evening has declined 2%. On average, the number of daytime classes has exceeded the number of "to be arranged" (TBA) classes over the past five six terms; daytime classes averaged 46% of the sections while TBA classes averaged 31% of the sections. Classes identified as TBA are associated with online instruction where there are no fixed meeting days or times. The average portion of classes scheduled in the evening, sections that begin after 4:29 p.m., has been 23% of all offerings.

Chart 16: Fall Class Offering Trends by Day vs. Evening Schedule




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

The College offers classes in multiple formats in an effort to provide access to students who would not be able to attain a college education otherwise. In addition to traditional face-to-face classes, the College offers courses online. The College has a relatively long history with online instruction that began in 2003. Several fall terms were selected for a longitudinal study of the enrollment trends in online instruction. The College averaged 143 sections per fall term. Comparing the number of online sections offered in 2003 to 2015, there has been a 21% increase.

Student headcounts in online classes have averaged 4,484 over that period of time and between 2003 and 2015 have increased by 32%. This average includes students who were also enrolled in a face-to-face class. From fall 2003 to fall 2015 the portion of students participating in online instruction who live in the district has dropped by 24% while the number of out-of-district students has increased by that percentage. On average, 47% of the students were living in the district while 53% of the students were living outside of the district official service area. Far and away, most students participating in online instruction live in California. However, several other states have had some participation that appears to have fallen off in 2015. These non-California students may be military personnel who initially enrolled at the College while stationed at Ft. Irwin. The following table illustrates the out-of-state distinct count of students where 20 or more students had participated over the selected terms included in this trend analysis study.

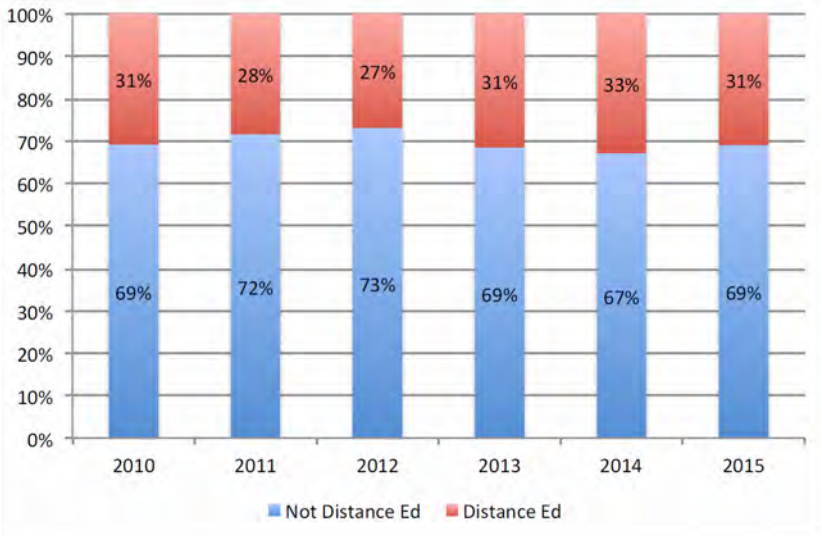
Table 32: Distance Education Headcount Trends by State

| | Student Head Counts by Fall Term | | | | | | |
|---|---|---|---|---|---|---|---|
| **State** | **2003** | **2006** | **2009** | **2012** | **2015** | **Total** | **Average** |
| CA | 3,143 | 3,901 | 5,886 | 3,814 | 4,228 | 20,972 | 4,194 |
| TX | 16 | 55 | 41 | 36 | 12 | 160 | 32 |
| NV | 22 | 21 | 33 | 30 | 18 | 124 | 25 |
| GA | 6 | 39 | 29 | 5 | 6 | 85 | 17 |
| NC | 14 | 17 | 23 | 6 | 3 | 63 | 13 |
| AZ | 2 | 15 | 9 | 27 | | 53 | 13 |
| WA | 12 | 5 | 10 | 8 | 10 | 45 | 9 |
| HI | 4 | 15 | 11 | 14 | | 44 | 11 |
| FL | 4 | 11 | 15 | 13 | | 43 | 11 |
| CO | 6 | 9 | 6 | 3 | 8 | 32 | 6 |
| NY | 1 | 2 | 6 | 17 | 1 | 27 | 5 |
| LA | 1 | 5 | 8 | 12 | | 26 | 7 |
| SC | 2 | 9 | 5 | 2 | 5 | 23 | 5 |
| KY | 8 | 3 | 11 | | | 22 | 7 |
| IL | | 14 | 3 | 2 | 2 | 21 | 5 |
| PA | 3 | 10 | 7 | | | 20 | 7 |

Source: Chancellor's Office Management Information System. *Section Enrollment and Student Term files*; analysis by Cambridge West Partnership, LLC

Over the past six fall terms 2010-2015), the portion of online classes shrank a little in 2011 and 2012 but has not otherwise changed.

Chart 17: Section Trends by Method of Instruction




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

In fall 2015 76% of the students enrolled exclusively in online classes lived outside of the district while 24% lived within the official district service area. In that same term 41% of those who enrolled in both online and face-to-face classes lived outside of the district while 59% lived within the official district service area. The following table illustrates the distribution of students who enrolled in at least one online class during the fall 2015 term.

Table 33: Fall 2015 Distribution of Students in At Least One Online Class

| | Number and Percentage of Total Students | | | | |
|---|---|---|---|---|---|
| **Category** | **In-District** | **%** | **Out-of-District** | **%** | **Total** |
| Distance Education Only | 263 | 12% | 832 | 39% | 1,095 |
| Distance Education & Regular | 609 | 29% | 425 | 20% | 1,034 |
| ***Total*** | ***872*** | | ***1,257*** | | ***2,129*** |

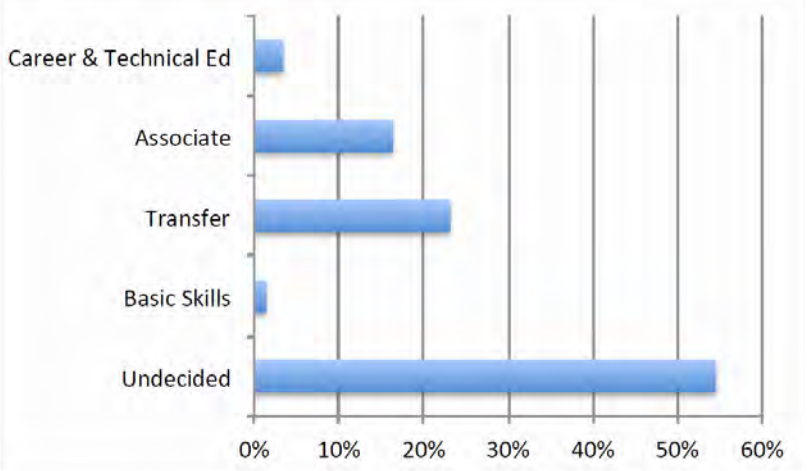
Source: Chancellor's Office Management Information System. *Section Enrollment and Student Term files*; analysis by Cambridge West Partnership, LLC

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, but the matriculation process is intended to assist students to navigate the curriculum as they traverse through higher education.

The chart below reflects the initial goals reported on the application for admission to Barstow College in the fall 2015 semester. The majority of the students who submitted an application fell in the undecided or transfers categories (55% and 23% respectively). Students who intended to obtain a two-year academic or vocational degree without transferring made up 19% of the total. Those seeking basic skills curriculum or to complete high school credits accounted for 1%.

Chart 18: Fall 2015 Term Application Goals




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

Additional information about the projective majors or fields of study for students attending the College can be found in the annual Fact Books prepared by the Office of Institutional Effectiveness. Those Fact Books contain a profile of student characteristics over the last five years that are summarized as follows: [20]

- Female students out-numbered males, on average by 16%.
- The traditional-age college student (18 to 24) represented 54% of the student body. However, since fall 2010 the 19 or less group declined by 33% while the 20-to-24 age group increased by 36%. The 25 to 29 year old group averaged 16% of the student body and increased 34%.

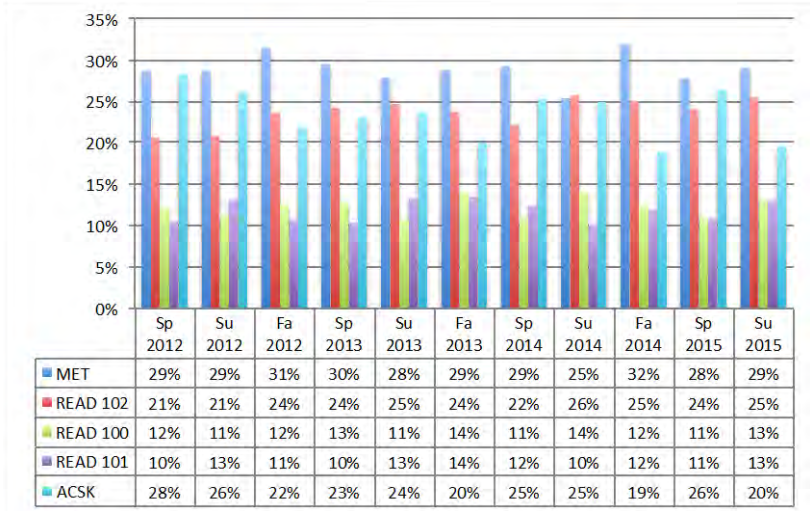
[20] Barstow College. Office of Institutional Effectiveness. *2014-15 Fact Book*.

- On average the largest racial/ethnic group was the White student population (38%) followed by the Hispanic group (36%) and the African American group (15%). The greatest gain between fall 2010 and fall 2014 was in the Hispanic student group (56%).
- An average from fall 2010 to fall 2015, over twice as many students attended on a part-time basis (less than 12 units) compared to those enrolled in 12 units or more. Between fall 2010 and fall 2015 the portion of those students attending part-time declined by 18% while the full-time group increased 140%. The portion of students enrolled only in non-credit instruction declined by 24%.
- From fall 2010 to fall 2015 most (51%) students were continuing their studies at the College. On average the fall terms included 19% of the students who were attending for the first time and 8% who were dual enrolled in high school as well as the college. The dual enrolled student group declined the most (71%) between fall 2010 and fall 2015. The first-time transfer student group increased the most (87%) between fall 2010 and fall 2014.
- Between fall 2010 and fall 2015 the portion of students attending classes in the day declined by 24% loss. The evening student portion also dropped by 46%.

The College provides placement assessment experiences for students in the disciplines of reading, writing, math and ESL. For those students participating in the placement experience from spring 2012 to summer 2015 the results draw a portrait regarding the extent to which the students were prepared for college-level curriculum. In the reading, English, and math column charts that follow the curriculum is arranged, reading left to right, from the highest level (transfer college level) down to the lowest level from transfer, college level.

Of the 7,455 reading placement exams from spring 2012 to summer 2015, 71% of the students were placed into curriculum below the transfer level (READ 102, 100, 101, or ACSK) while 29% achieved college level reading (MET) scores and met the graduation requirement. The entire reading curriculum is below the transfer level.

Chart 19: Reading Placement Results

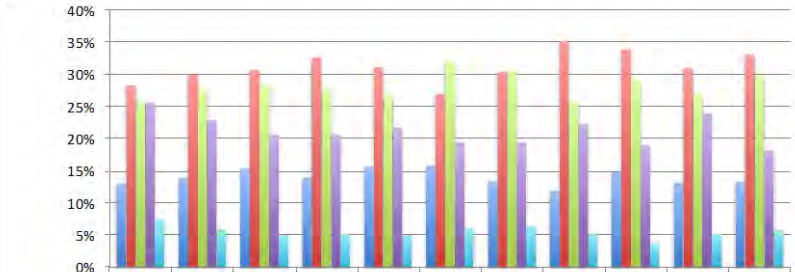



| | Sp 2012 | Su 2012 | Fa 2012 | Sp 2013 | Su 2013 | Fa 2013 | Sp 2014 | Su 2014 | Fa 2014 | Sp 2015 | Su 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MET | 29% | 29% | 31% | 30% | 28% | 29% | 29% | 25% | 32% | 28% | 29% |
| READ 102 | 21% | 21% | 24% | 24% | 25% | 24% | 22% | 26% | 25% | 24% | 25% |
| READ 100 | 12% | 11% | 12% | 13% | 11% | 14% | 11% | 14% | 12% | 11% | 13% |
| READ 101 | 10% | 13% | 11% | 10% | 13% | 14% | 12% | 10% | 12% | 11% | 13% |
| ACSK | 28% | 26% | 22% | 23% | 24% | 20% | 25% | 25% | 19% | 26% | 20% |

Source: Barstow College Office of Assessment; analysis by Cambridge West Partnership, LLC

Of the 7,425 placement exams to test writing skills between spring 2012 and summer 2015, 86% of the students were placed into curriculum below the transfer level (ENGL 50, 102, 101 or ACSK). In the graphic below, ENGL 1A is the transfer course.

Chart 20: Writing Placement Results

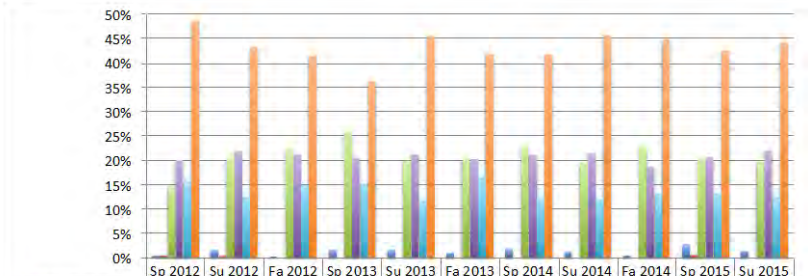



| | Sp 2012 | Su 2012 | Fa 2012 | Sp 2013 | Su 2013 | Fa 2013 | Sp 2014 | Su 2014 | Fa 2014 | Sp 2015 | Su 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ENGL 1A | 13% | 14% | 15% | 14% | 16% | 16% | 13% | 12% | 15% | 13% | 13% |
| ENGL 50 | 28% | 30% | 31% | 33% | 31% | 27% | 30% | 35% | 34% | 31% | 33% |
| ENGL 102 | 26% | 27% | 28% | 28% | 27% | 32% | 30% | 26% | 29% | 27% | 30% |
| ENGL 101 | 26% | 23% | 21% | 21% | 22% | 19% | 19% | 22% | 19% | 24% | 18% |
| ACSK | 7% | 6% | 5% | 5% | 5% | 6% | 6% | 5% | 4% | 5% | 6% |

Source: Barstow College Office of Assessment; analysis by Cambridge West Partnership, LLC

Of the 7,410 math placement exams between spring 2011 and summer 2015, 99% of the students were placed into curriculum below the transfer level (MATH 55, 50, 101, or ACSK). In the graphic below, MATH 55 is Intermediate Algebra and meets the requirements for the Associate Degree. MATH 1 to 5 is the transfer courses.

Chart 21: Math Placement Results



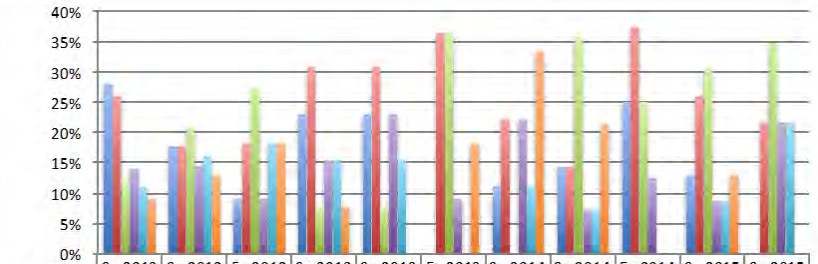

| | Sp 2012 | Su 2012 | Fa 2012 | Sp 2013 | Su 2013 | Fa 2013 | Sp 2014 | Su 2014 | Fa 2014 | Sp 2015 | Su 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MATH 1, 2, 3, 5 | 0% | 2% | 0% | 2% | 2% | 1% | 2% | 1% | 1% | 3% | 1% |
| MATH 4 | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 0% |
| MATH 55 | 15% | 20% | 22% | 26% | 20% | 20% | 23% | 20% | 23% | 20% | 20% |
| MATH 50 | 20% | 22% | 21% | 21% | 21% | 20% | 21% | 22% | 19% | 21% | 22% |
| MATH 101 | 16% | 13% | 15% | 15% | 12% | 16% | 12% | 12% | 13% | 13% | 13% |
| ACSK | 49% | 43% | 41% | 36% | 45% | 42% | 42% | 46% | 45% | 42% | 44% |

Source: Barstow College Office of Assessment; analysis by Cambridge West Partnership, LLC

Far fewer students participated in the English as a Second Language placement examination process. The entire ESL curriculum is below the transfer level. In the ESL column charts that follow the curriculum is arranged, reading left to right, from the highest level (one level below transfer or college level) down to the lowest level from transfer, college level.

Of the 295 ESL reading placement exams between spring 2012 and summer 2015, 15% of the students were placed into curriculum one level below the transfer level (ESL 132).

Chart 22: ESL Reading Placement Results

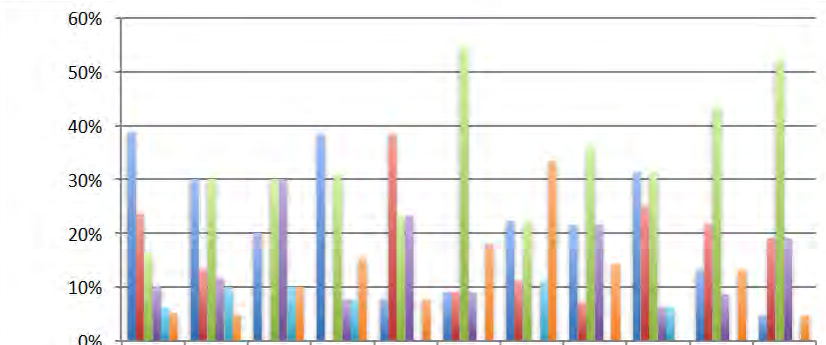



| | Sp 2012 | Su 2012 | Fa 2012 | Sp 2013 | Su 2013 | Fa 2013 | Sp 2014 | Su 2014 | Fa 2014 | Sp 2015 | Su 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESL 132 | 28% | 18% | 9% | 23% | 23% | 0% | 11% | 14% | 25% | 13% | 0% |
| ESL 122 | 26% | 18% | 18% | 31% | 31% | 36% | 22% | 14% | 38% | 26% | 22% |
| ESL 112 | 12% | 21% | 27% | 8% | 8% | 36% | 0% | 36% | 25% | 30% | 35% |
| ESL 102 | 14% | 15% | 9% | 15% | 23% | 9% | 22% | 7% | 13% | 9% | 22% |
| ESL 192 | 11% | 16% | 18% | 15% | 15% | 0% | 11% | 7% | 0% | 9% | 22% |
| ESL 190 | 9% | 13% | 18% | 8% | 0% | 18% | 33% | 21% | 0% | 13% | 0% |

Source: Barstow College Office of Assessment; analysis by Cambridge West Partnership, LLC

Of the 288 ESL writing placement exams between spring 2012 and summer 2015, 22% of the students were placed into curriculum one level below the transfer level (ESL 134).

Chart 23: ESL Writing Placement Results

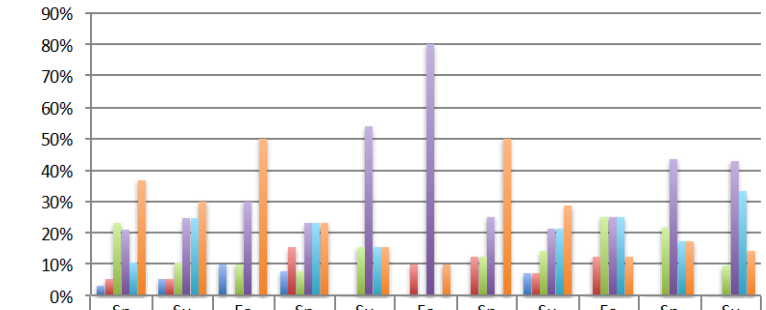



| | Sp 2012 | Su 2012 | Fa 2012 | Sp 2013 | Su 2013 | Fa 2013 | Sp 2014 | Su 2014 | Fa 2014 | Sp 2015 | Su 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESL 134 | 39% | 30% | 20% | 38% | 8% | 9% | 22% | 21% | 31% | 13% | 5% |
| ESL 124 | 23% | 13% | 0% | 0% | 38% | 9% | 11% | 7% | 25% | 22% | 19% |
| ESL 114 | 16% | 30% | 30% | 31% | 23% | 55% | 22% | 36% | 31% | 43% | 52% |
| ESL 104 | 10% | 12% | 30% | 8% | 23% | 9% | 0% | 21% | 6% | 9% | 19% |
| ESL 192 | 6% | 10% | 10% | 8% | 0% | 0% | 11% | 0% | 6% | 0% | 0% |
| ESL 190 | 5% | 5% | 10% | 15% | 8% | 18% | 33% | 14% | 0% | 13% | 5% |

Source: Barstow College Office of Assessment; analysis by Cambridge West Partnership, LLC

Of the 280 ESL oral communication placement exams between spring 2012 and summer 2015, 3% of the students were placed into curriculum one level below the transfer level (ESL 136).

Chart 24: ESL Oral Communication Placement Results




| | Sp 2012 | Su 2012 | Fa 2012 | Sp 2013 | Su 2013 | Fa 2013 | Sp 2014 | Su 2014 | Fa 2014 | Sp 2015 | Su 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ESL 136 | 3% | 5% | 10% | 8% | 0% | 0% | 0% | 7% | 0% | 0% | 0% |
| ESL 126 | 5% | 5% | 0% | 15% | 0% | 10% | 13% | 7% | 13% | 0% | 0% |
| ESL 116 | 23% | 11% | 10% | 8% | 15% | 0% | 13% | 14% | 25% | 22% | 10% |
| ESL 106 | 21% | 25% | 30% | 23% | 54% | 80% | 25% | 21% | 25% | 43% | 43% |
| ESL 192 | 11% | 25% | 0% | 23% | 15% | 0% | 0% | 21% | 25% | 17% | 33% |
| ESL 190 | 37% | 30% | 50% | 23% | 15% | 10% | 50% | 29% | 13% | 17% | 14% |

Source: Barstow College Office of Assessment; analysis by Cambridge West Partnership, LLC

Non-Instructional College Resources to Support the Educational Mission

Student Services Offices and Programs
Admissions and Records – The staff in Admissions and Records provide a variety of services to students. They offer assistance with application submission, registration, and high school concurrent enrollment processes. The staff also provides transcripts, transcript evaluation, and enrollment verification. The staff in Admission and Records also processes certificates and degrees awarded. They maintain and ensure the accuracy of student information in the College databases.

Bookstore/Viking Shop – The Viking Shop is the campus resource for textbooks, supplies, other course materials and study aides, college logo items, and an array of snack items. Students can purchase new and used textbooks, and when available rental books. Students can sell textbooks back to the bookstore when the text is eligible for return.

Business Office- The College Business Office disburses financial aid, payroll checks, processes refund requests, maintains student scholarship accounts, and collects fees, fines and other payments.

Counseling – The Counseling Department is committed to promoting student success by assisting students with educational planning, career and educational counseling, and developing strategies for navigating higher education through transfer advising. All new students are required to see a counselor after completing the online orientation and assessment testing and prior to enrolling for their first semester. Walk-in appointments are available but students are encouraged to call ahead and make an appointment to avoid waiting. Counseling professionals offer individual counseling for students who want assistance in coping with the problems they face in everyday life, issues relating to self-esteem, anxieties, relationships, and academic performance. The staff members also provide outreach services and information to prospective students at local high schools and to community members.

Financial Aid – The purpose of Financial Aid is to ensure that all students have access to a college education by assisting with the costs. Funds are available through federal, state and private programs and can be offered in the form of grants, loans and scholarships. The Office oversees the College work-study program. The Financial Aid Office staff at the College is available to assist students with applying for, obtaining and understanding financial aid. The staff provides workshops in financial literacy. Staff members also assist veterans and their dependents that may be eligible for various educational benefits by serving as a liaison between the Department of Veterans Affairs and the student/dependent, processing claims, and providing information. The Office provides one-on-one assistance to students in the Foster Youth Program.

Military Support- Barstow College grants up to 30 semester units for military training equivalency based upon standard recommendations from the American Council on Education. Students must submit a Joint Services Transcript for evaluation. The College also accepts tuition assistance from active duty students as a means of paying for enrollment fees, including out of state tuition. Military personnel may also submit official transcripts from other regionally accredited colleges or universities where they have attended as the College accepts those transfer credits. Additionally, military personnel who have completed CLEP/DANTES exams may

submit those score reports for evaluation and potential credit extended by the College. The College participates in the Servicemembers Opportunity College (SOC) Services program.

Special Programs and Services- The program is dedicated to providing access and support services to students who are educationally disadvantaged by social, physical, or economic barriers. The services are offered through these areas:

Accessibility Coordination Center and Educational Support Services (ACCESS) – The ACCESS program is designed to assist students with physical, psychological or learning difficulties. Staff and counselors assist students by providing liaison with the Department of Rehabilitation and the individualized support necessary for the student to be successful in achieving their goals.

California Work Opportunities and Responsibility to Kids (CalWORKs) – Students who are enrolled at the college, have young children and are receiving cash aid qualify for support from the CalWORKs program. The program offers job development skills, workshops for employability and work placement. The purpose of the program is to help students become independent and self-sufficient through education. The program also provides students with mentors and tutors and may also assist with childcare, transportation and textbook expenses.

Extended Opportunity Programs & Services (EOPS) /Cooperative Agencies Resources for Education (CARE)– The EOPS/CARE program offers assistance to students who are affected by language, social, and economic handicaps. Services include orientation, priority registration, peer counseling, transfer assistance and financial assistance for books, childcare and meals. The goal of the program is to provide qualified students with the resources necessary to be successful.

Vocational and Technical Education (VTEA)- The VTEA program assists eligible vocational students majoring in selected areas by providing book loans, transportation assistance, child care assistance, and academic or vocational counseling.

Office of Student Life- Through innovative experiences in a co-curricular setting, the Office of Student Life engages students in meaningful interactions and hands-on leadership development that fosters academic progress, student success, social justice, and citizenship while serving the diverse breadth and scope of the College's student community through recruitment, persistence, retention, and graduation efforts. Student Government, Student Clubs, and Student Activities provide a means by which students can enhance and enrich the educational experience. The Associated Student Government annually elects its own administrative officers and student senators who are provided with practical leadership training and education in the functions of leadership and governance. The group elects its own student trustee to the District Board of Trustees. The Student Senate participates in policy-making on college-wide committees and task force groups. Student activities programs provide enrolled students the opportunity to plan, develop, and implement educational, cultural, social, and recreational activities. Student Clubs and organizations serve a valuable and educational function offering students the opportunity to join in academic or professional, honor, political, service, social,

cultural and/or spiritual groups, and societies. The students involved assume various leadership roles that provide insight to further the mission of the group and contribute to the personal development and enjoyment of members within the context of the broader teaching, research, and service missions of the College. These opportunities offer students a chance to become more involved with their campus community, adding an experiential component to their educational experience.

Student Success and Equity- The program staff members lead the campus efforts to advance the objectives of the student success support program and the student equity program to promote greater student success at the College. It oversees the local equity oriented Aid for Schools program. The office provides and/or enhances student services housed in the Student Success Center. Barstow College has an emphasis on equity for all students that are reflected in the efforts and initiatives to promote student success. In a community such as Barstow College serves, students from various backgrounds, with education and career goals that are just as varied, need to know what opportunities await them when they are pursuing higher education (see Academic Support Services discussion).

Transfer and Career Planning Center- The Center staff members are dedicated to helping all students who want to transfer to a four-year college or university. A variety of services are provided such as transfer fairs, university representative appointments, admissions workshops, and university tours.


In addition to the services provided by the offices and programs described above, the College has made a commitment to provide other services, forms, and information to students through technology on a self-service bases twenty-four hours a day and seven days a week. Those online support services are listed in the following table.

Table 34: Barstow College Online Services

| Service Area & Service | Online Interactivity | Notes |
|---|---|---|
| Admissions & Records | | |
| Apply online | X | |
| Enroll in classes, add/drop classes, view class schedule | X | |
| Manage wait list | X | |
| Update contact information | X | |
| Make payments | X | |
| Receive student & faculty emails | X | |
| Printable forms | X | Students can print forms and submit in person, by mail, email or FAX |
| Articulation | | |
| Articulation transfer agreements | X | Via ASSIST.org<br>Additional information is available from these web sites:<br>WWW.CSUMENTOR.EDU<br>WWW.UNIVERSITYOFCALIFORNIA.EDU<br>WWW.AICCU.EDU |
| Assessment | | |
| Practice tests and test guides | X | |
| Testing schedule | X | |
| Career Center | | |
| Virtual Career Planning | X | Via www.kuderjourney.com |
| O*NET | X | |
| Counseling | | |
| Online Probation Workshop | X | |
| Online Orientation | X | |
| Disability Support Services | | |
| Basic information and agency links | X | Forms can be filled out online and printed for in-person, mail, or email submission |
| Application forms | X | |
| Equal Opportunity Programs & Services (EOPS)/CARE | | |
| Basic information | X | Forms can be filled out online and printed for in-person, mail, or email submission |
| Orientation/quiz | X | |
| Application forms | X | |
| Veterans | | |
| Basic information and forms available | X | |
| Financial Aid & Scholarships | | |
| Net calculator available; | X | |
| Apply for financial aid online | X | |
| Online scholarship application | X | |
| Forms | X | Forms can be filled out online and printed for in-person, mail, or email submission |
| Library | | |
| Online database resources & catalog search | X | |
| Library Handbook | X | |
| Online Instructional Supports | | |
| Online tutoring | X | |
| Bookstore | | |
| Order and/or rent textbooks | X | |
| *Student Life* | | |
| Basic information (ASG, Clubs, Calendar of Events) | X | |
| *Student Accounts* | | |
| Payment of fees | X | |
| *Transfer Center* | | |
| External transfer links available | X | Via ASSIST.org |
| Transfer assistance links | X | |
| Four-year college/university links | X | |
| IGETC/CSU Educational Plan | X | |

Source: Barstow College. Student Services, 2016

Academic Support
Assessment – Assessment testing is available in the Computer Commons at any time during normal operating hours. Taking the assessment test ensures that the student enrolls in English, Reading and Mathematics courses that best align with their current level of subject knowledge.

Computer Commons and Open Computer Laboratory
The Learning Resources Center is home to the Computer Commons (L-06) with posted open hours. A Computer Commons is also established at the Fort Irwin Campus in Building 285, room C-1. The Computer Commons is used for proctoring online course tests and assessment placement exams. The Open Computer Laboratory is available to enrolled students to assist them in preparing class assigned projects. Operating hours are consistent with those provided by the Computer Commons.

Remote Location Exam Proctoring
The College provides online students living in remote locations from the main campus to utilize the services of a local proctor who meets the published standards and have been approved by the College personnel. The same courtesy is extended to prospective students who need to complete the academic placement test prior to enrollment. Students in remote locations who cannot find a proctor may use the services of the ProctorU firm. There is a fee for their services and the student must have a camera so that the remote proctor can watch while the student is completing the test.

Student Success Center and Tutoring
A Student Success Center is located in Building K. Peer tutoring is provided to support and encourage the learning environment where students can learn effective study skills, become active participants in their learning process, and develop a positive approach toward learning. Examples of services include, walk-in free tutoring for almost all classes offered at BCC, study groups for Chemistry 1A, "live" tutoring online for math and English classes, help with homework for children in the 6$^{th}$ to 12$^{th}$ grade, online navigation tutoring to assist with the "nuts and bolts" of an online class, and an online tutorial discussion board.

Distinctive Academic Transition Programs
Bridge to College Success- The program is offered exclusively to graduating high school seniors from the College service area who plan to attend the College in the fall term after graduation. Students who are placed below college-level in mathematics and/or English will be assigned to the appropriate workshops to provide refresher instruction in the subjects. Commonly, participating students are better prepared for the college environment and receive a higher-level placement recommendation in math and/or English composition courses. Participating students also qualify for priority registration and a guarantee of English and math classes at the College in the fall term.

Credit for Military Service- The College will allow up to 30 units of credit for military experience and training. The American Council guides the decision to award units for these past experiences on Education (ACE) Guide. Such units will be posted as "military credit" on the student's transcript.

Credit for Test Equivalencies-

- The College accepts advanced Placement Test scores for credit in certain courses. Students scoring 3 or higher on a College Board Advanced Placement (AP) exam should contact a counselor for more details.

- College Level Examination Program (CLEP)/Defense Activity for Non Traditional Education Support (DANTES) is a national program of examination to evaluate, confirm, and assess academic achievement of students who have reached college level education through either traditional or non-traditional methods of study. Although the qualifying score varies by course, the College generally awards credit in selected general education courses for a CLEP score of at least 50 and a DANTES score between 44 and 48. Students should consult the catalog and see a counselor for details

Foreign School Credits- The College will extend credit to students who have attended institutions outside of the United States. Those students must provide an official transcript from a member of the National Association of Credential Evaluation Services, Inc.

Technical Preparation Program- The intent of the program, sometimes described as a "2+2" initiative, is to facilitate technical education beyond high school. The College, in collaboration with the Barstow Unified School District and the Silver Valley Unified School District, has created combined secondary and post-secondary programs of study to provide technical preparation in the fields of business and industrial technology. The program faculty members are discussing curriculum articulation agreements as a means for students to receive college credit for equivalent classes successfully completed in the high school.

The National Training Center at Fort Irwin- The National Training Center, located in the Mojave Desert about 45-minutes drive northeast of Barstow, is a major training area for the U.S. Military and is part of the U.S. Army Forces Command. Barstow College has an established satellite campus at Fort Irwin to offer military personnel and their dependents the opportunity to complete an associate degree through face-to-face classroom instruction or online courses. The College provides curriculum scheduled in a flexible way to accommodate the rotation schedules of the soldiers. College policy and practice provides military personnel and their dependents access to the Board of Governor's Fee Waiver program, requires that only four classes be taken in residence before applying to the College for a degree, allows 18 credits from the College Level Examination Program (CLEP) exams or transfer from another accredited institution, and will award up to 30 credit for military specialty training following the recommendations of the American Council on Education (ACE).

Unique Instructional Programs
Using Army facilities the College offers an 80-hour curriculum (COMM) designed to improve basic math, reading comprehension, and vocabulary skills. It is the only course of instruction like it available to Army personnel who want to improve their academic skills and increase opportunities for retention and promotion in the Army.

The College is providing, through contract education, a program of study in diesel mechanics- engine fundamentals, engine service, fuel injection systems, truck starting, charging and electrical systems, brake, steering and suspension systems, and engine auxiliary systems.

Command leadership at Fort Irwin has established the period from 3:00 pm to 6:00 pm as "Desert University" time that is reserved for personnel to attend college classes. However, military supervisors do not always release subordinate enlisted personnel to attend classes during the "Desert University" time because the working

hour obligations to achieve the primary military mission are given priority. In addition to using these late afternoon time periods, the College also offers face-to-face instruction during the morning and early afternoon hours. These offerings are supplemented by online class offerings from the main campus.

Enrollment Trends

In the post Iraq war era the Army has drawn down its enlisted ranks and the complement of military personnel as permanent staff and their dependents at the base has declined 6.2%.

Table 35: Population Trends at Ft. Irwin

| Age Group | 2000 | 2010 | 2015 | 2000 vs. 2015 % Change |
|---|---|---|---|---|
| 15-19 | 533 | 390 | 368 | -31.0% |
| 20-14 | 1,809 | 1,690 | 1,734 | -4.1% |
| 25-34 | 2,610 | 2,531 | 2,627 | 0.7% |
| Subtotal | 4,952 | 4,611 | 4,729 | -4.5% |
| Total Population | 9,460 | 8,845 | 8,877 | -6.2% |

Source: U.S. Census Bureau. *American Communities Surveys*; analysis by Cambridge West Partnership, LLC

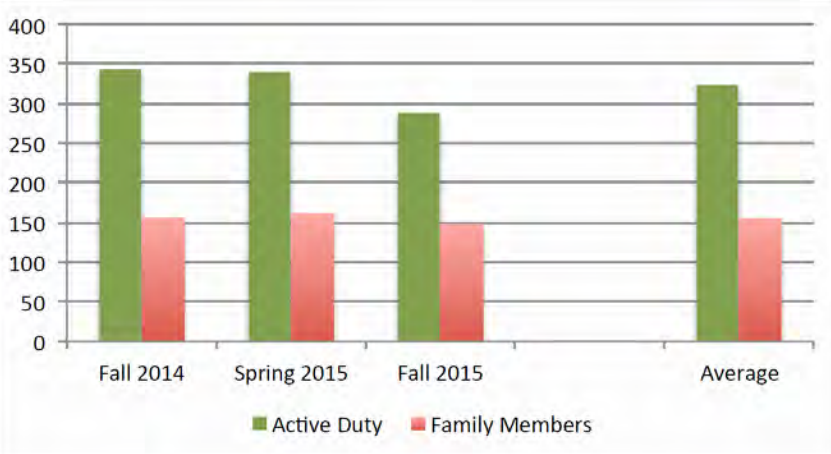
There are now four other postsecondary institutions represented at the Fort: (1) Kaplan University; (2) Park University; (3) American Military University (AMU), and, (4) University of Maryland University College (UMUC).

Currently there are approximately 3,900 active duty service personnel assigned to Fort Irwin who will serve a two to three year tour of duty at the base. With dependents included the 2015 population of the Fort is estimated to be almost 8,900.[21] With the Fort Irwin population smaller than in past years and resources flowing to the College from the State constrained, course offerings and enrollments have declined in recent years. The College staff actively recruits personnel newly assigned to Fort Irwin and the Army has provided an incentive for participation. Army promotion policy recently changed to award 2 points, rather than just 1 ½ points, per semester credit hour earned as part of the promotion evaluation criteria. Therefore, career-oriented enlisted personnel are motivated to pursue a college education.

Barstow College enjoys an ongoing relationship with many military personnel who were once assigned at Fort Irwin but are now located elsewhere. To foster this ongoing relationship the College has established a policy to allow the students who are deployed overseas to continue taking courses online at the established California fee rate if they remain continuously enrolled. From fall 2014 to fall 2015 military personnel and their family members have continued to respond to the outreach efforts from the College. The following table traces the unduplicated headcount of military enrollments, which have averaged 15% of all students at Barstow College.

[21] Jerry Peters, Director of Military Programs at Barstow College. *Interview*. April 27, 2016

Chart 25: Military Personnel and Family Members Attending Barstow College




Source: Barstow College, Admissions and Records Office.

Fort Irwin Staff

The College assigns three full-time faculty members to teach a portion of their normal instructional assignments at Fort Irwin to provide the core of the instructional offerings. Other classes are taught by adjunct or part-time faculty or remotely by instructors at the main campus. A program manager, counselor (faculty member), student service technician, and a student worker are permanently assigned to the Fort Irwin site. The College provides placement services and creates an educational plan for students at the Fort. The College staff is the only location on the high desert that provides a range of testing services for military personnel (CLEP, CANTES supported college admission, and Pearson Inc. exams). The staff has ensured that the College remains a participant in the Servicemembers Opportunity College (SOC) program.

Transition College- The program is a cooperative venture between Barstow College and the Barstow Unified School District. Successful applicants, in their junior and senior year of high school, attend college classes as a cohort during their first hour of their school day and return to the high school to complete their studies. After successful completion of two-years in the program, a student could graduate from high school with 30 college credits.

Library

The mission of the Learning Resource Center is to support the instructional programs of the college and to meet the information needs of the college. The Learning Resource Center is the center for study, research, and leisure reading.

Approximately 42,000 books, 150 magazine titles, and 1,200 audio-visual materials (DVDs, videotapes, and musical recordings) are available for students, faculty, and staff. In addition, the library offers a selection of electronic databases and e-books that can be accessed remotely. The Library web page (http://www.barstow.edu/Library.html) provides the means to search the online catalog, databases, and ask a question of the librarian via email. Most books and some DVDs can be checked out. Reserve and reference items cannot be checked out. The library also has textbooks on reserve for student use.

Adaptive computer equipment is available for disabled student use in the reference area of the Library and large print books are also available.

The Learning Resources Center is also home to the Computer Commons (L-06) with posted open hours. A Computer Commons is also established at the Fort Irwin Campus in Building 285, room C-1.

The Computer Commons is used for proctoring online course tests and assessment placement exams.

Human Resources

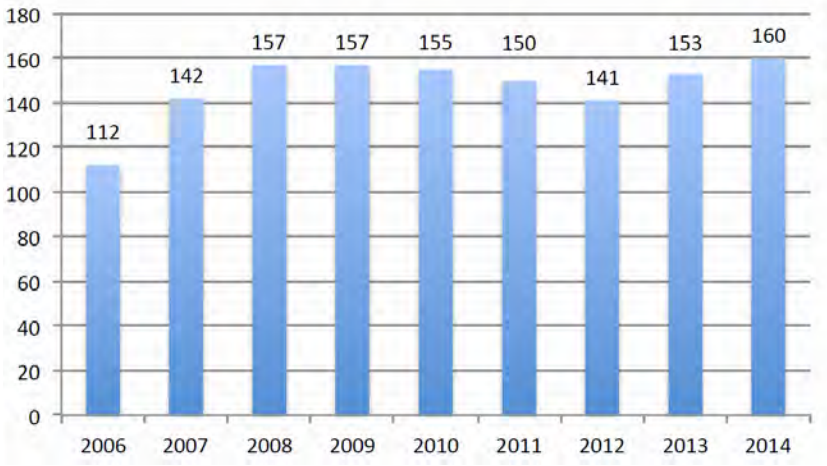
The Human Resources Office supports the instructional program of the College in several ways. It provides new employee orientation sessions, including for student workers, and conducts mandated education sessions in sensitive important topics such as sexual harassment. It promotes participation in regional professional development on a variety of topics about best practices in employee relations. The College has some challenges in recruiting and retaining staff due to its location and pay scales. Long-term stability and satisfaction among the College employees will be healthier for the College and helpful to the students.

The Office also serves as an important tie between instructors and students. There are consistent dialogues between Human Resources and the students concerning harassment, violence, and discrimination. The Human Resources Office is a venue where students can be assured that the College is a safe learning environment. The Director is the Equal Opportunity Officer. He maintains an open door for students to file civil rights (Title VI), gender equity, sex discrimination/harassment (Title IX), or persons with disabilities discrimination (ADA/Section 504/508) complaints.

The College has experienced a 43% increase in the workforce headcount between fall 2006 and fall 2014. Fall 2014 saw the largest headcount at 160 employees. Between fall 2009 and fall 2012 the college purposely reduced the number of employees with the headcount falling to 141 in fall 2012. As the financial situation stabilized, the College increased employees. This was the case in fall 2013 and 2014.

Between fall 2006 and fall 2014 there was a 14% increase (1 position) in educational administrators. Full-time faculty saw a 6% reduction. The biggest gain in employee headcount was from the academic temporary faculty, an increase of 58%. All employee groups experienced an increase in headcount from fall 2012 to fall 2014 and the overall workforce increased by 16% between those two fall terms.

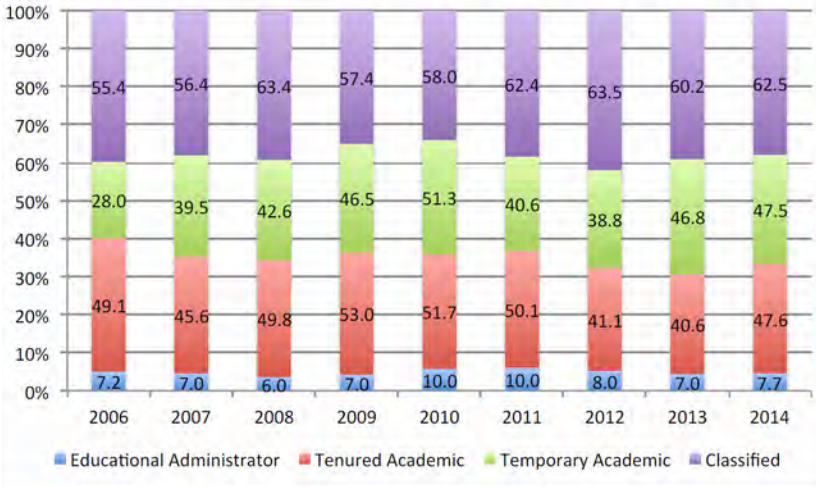
Chart 26: Employee Headcounts, Fall 2006 to Fall 2014




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

Since 2006, the overall full-time workforce, expressed as units of full-time equivalency (FTE), at the College has increased by 18% (25 FTE). The FTE level of tenured faculty has declined 3% (1.5 FTE) while administrative positions has increased by 7% (0.5 FTE) over the past nine fall terms. The full-time equivalent (FTE) number of classified personnel has increased by 13% (7 FTE). The temporary academic faculty members (adjunct faculty) have increased the most with a gain of 70% (19 FTE).

Chart 27: Barstow College, Employee Groups by Full-time Equivalency




Source: Chancellor's Office. *Data Mart, Annual Staff Data Report*; analysis by Cambridge West Partnership, LLC

A second view of the employee headcounts, grouped by age ranges as of fall 2014, reveals that 25% of the educational administrators had reached the typical retirement age range, age 60 to 64. There were no educational administrators working beyond the typical retirement age range, age 65 to 70+.

In contrast, 21% of the tenured faculty members were within the typical retirement age range, and six were working beyond the typical retirement age range. Over the next six years, an additional 16% of the full-time faculty (tenure track and tenured) will reach the typical retirement age.

Although adjunct faculty members are at will employees, they represent a large group of 114 personnel in fall 2014. Within this faculty group 11% were within the typical retirement age range, and 16% were working beyond the typical retirement age range. Over the next six years, an additional 13% of the temporary faculty members will reach the typical retirement age.

Given that 27% of the temporary and 37% of the tenured academic faculty members (31 and 14 faculty members respectively) were of retirement age or working beyond that normal time, the College may need to consider decisions about replacement teaching personnel.

The largest cluster (22%) of classified staff is in the 45 to 49-age range. The normal eligibility age for retirement from CalPERS is 50 years of age with five years of service. Unlike administrators and full-time faculty, 14% of the classified employees fell into the eligible to retire age range, and another 27% were working beyond the normal age for retirement. Over the next six years another 22% of the classified staff will reach normal retirement age. The College may need to consider decisions about replacing some of these key skilled individuals in order to continue the essential support services they provide.

Table 36: Employee Groups by Age Ranges, Fall 2014

| Employee Category | Total | 18 to 34 | 35 to 39 | 40 to 44 | 45 to 49 | 50 to 54 | 55 to 59 | 60 to 64 | 65 to 69 | 70 + |
|---|---|---|---|---|---|---|---|---|---|---|
| Academic, Tenured/Tenure Track | 38 | 5% | 8% | 11% | 13% | 11% | 16% | 21% | 16% | 0% |
| Academic, Temporary | 114 | 16% | 6% | 11% | 11% | 16% | 13% | 11% | 8% | 8% |
| Classified | 65 | 18% | 12% | 8% | 22% | 14% | 14% | 11% | 2% | 0% |
| Educational Administrator | 8 | 0% | 0% | 0% | 0% | 13% | 63% | 25% | 0% | 0% |
| ***Total Employee Headcount*** | ***225*** | | | | | | | | | |

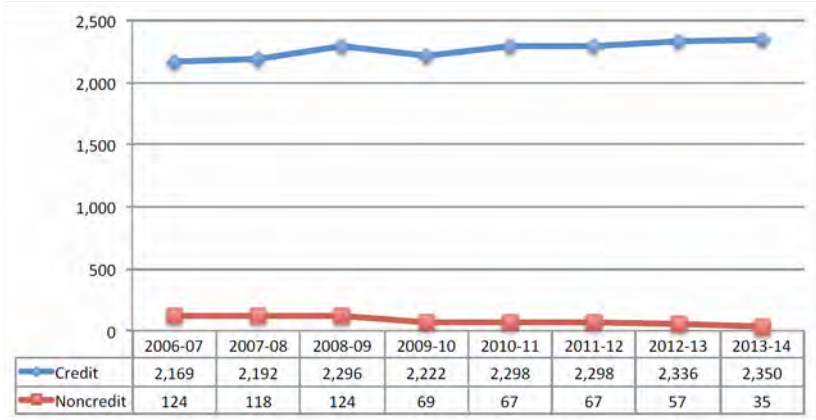
Source: Chancellor's Office. *Data Mart*; analysis by Cambridge West Partnership, LLC

## Budget

Funding stability is the primary external driver for the college budget as the Business Office endeavors to help the College grow and add more services for students. The Business Office advances student success through the procurement of goods and services as well as the processing of payments and paychecks for employees and student workers. All instructional and operational areas of the College area able to contribute to student success because the Business Office staff members provide the ways and means for them to do so.

From 2006-07 to 2014-15 the annual FTES generated by the College has increased by 7.6%. Throughout this time, the College had unfunded FTES in most years with the greatest amount occurring in 2010-11. Starting in 2010-11 noncredit curriculum offerings were gradually reduced and have yet to return to their high point in 2008-09. The College has increased its total FTES by 12% from 2006-07 to 2014-15 or 1.32% annually.

Chart 28: Barstow College Annual, Funded FTES

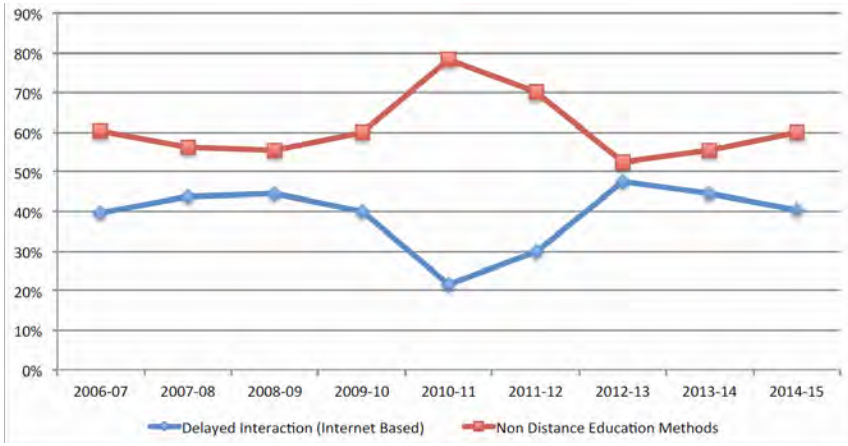



| | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
|---|---|---|---|---|---|---|---|---|
| Credit | 2,169 | 2,192 | 2,296 | 2,222 | 2,298 | 2,298 | 2,336 | 2,350 |
| Noncredit | 124 | 118 | 124 | 69 | 67 | 67 | 57 | 35 |

Source: California Community College Chancellor's Office, Fiscal Services Unit. *Reports of Recalculated Apportionment*; analysis by Cambridge West Partnership, LLC

The College is unique in that a large portion of its FTES is created through distance education offerings. On average, from 2006-07 to 2014-15, 39% of the FTES has come through online, Internet-based instruction.

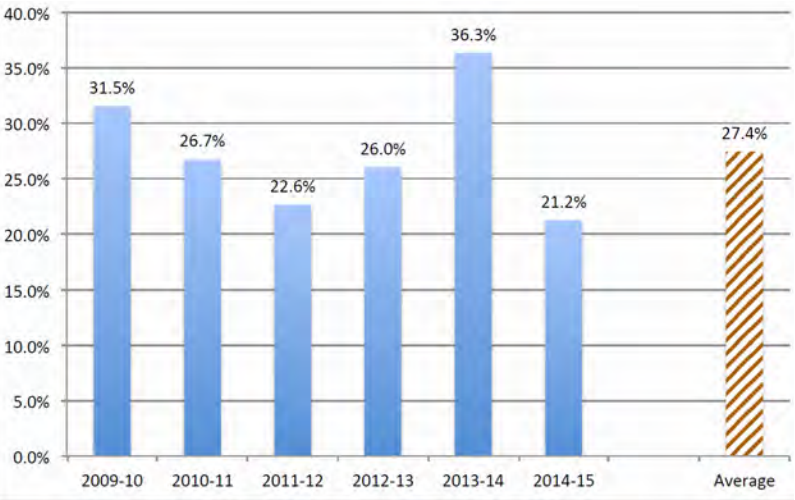
Chart 29: Barstow College Annual FTES by Method of Instruction




Source: Chancellor's Office. *Data Mart and Fiscal Services Apportionment Recalculation Reports;* analysis by Cambridge West Partnership, LLC

The College was able to retain a 27.4% average ending balance over the last six years as illustrated in the following chart. The ending balance significantly declined in 2014-15 due to the funding of the photovoltaic solar field.

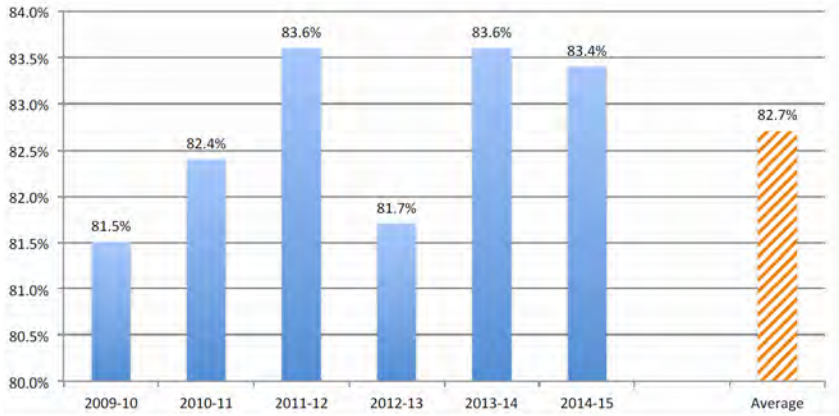
Chart 30: Ending Balance Amounts and As a Percentage of Total Expenditures




Source: California Community Colleges Chancellor's Office, Institutional Effectiveness web pages httpts://misweb.cccco.edu/ie/DistrictRates.aspx, retrieved on January 1, 2016.; analysis by Cambridge West Partnership, LLC

The College was able to maintain an 82.7% average of expenditures on salaries and benefits over the last six years as illustrated in the following chart. The 2012-13 year was an exceptional experience due to workforce reduction.

Chart 31: Salaries and Benefits As a Percentage of Unrestricted General Fund Expenditures




Source: California Community Colleges Chancellor's Office, Institutional Effectiveness web pages httpts://misweb.cccco.edu/ie/DistrictRates.aspx, retrieved on January 1, 2016; analysis by Cambridge West Partnership, LLC

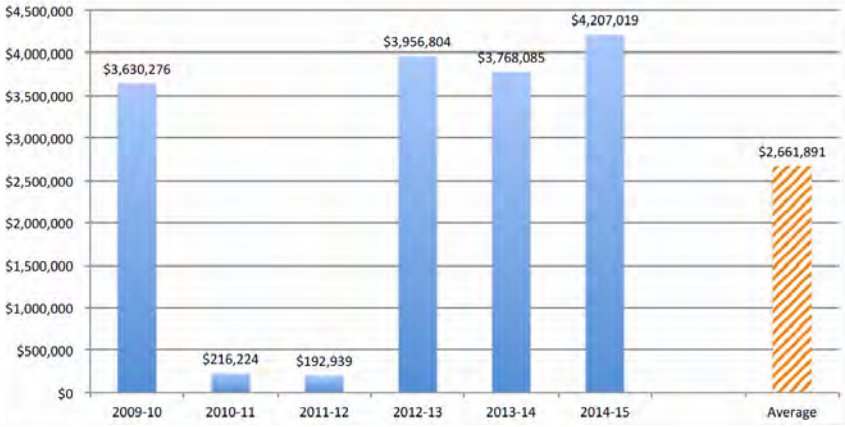
The annual operating excess or deficiency reflects the net increase or decrease in general fund balances. The College was not able to maintain a positive (excess) average over the last six years as illustrated in the following chart. As illustrated, the 2014-15 academic year was a particularly difficult and economically stressful year because the College funded $2.5 million from the reserve to build the solar field.

Chart 32: Annual Operating Excess or Deficiency


Source: California Community Colleges Chancellor's Office, Institutional Effectiveness web pages httpts://misweb.cccco.edu/ie/DistrictRates.aspx, retrieved on January 1, 2016; analysis by Cambridge West Partnership, LLC

The cash balance reflects the unrestricted and restricted general fund cash balance, excluding investments. Two fiscal years, 2010-11 and 2011-12 were exceptional because of deferrals at the state level. The College was able to maintain a positive (excess) average of $2,661,891 over the last six years as illustrated in the following chart.

Chart 33: Cash Balance of Unrestricted and Restricted General Funds




Source: California Community Colleges Chancellor's Office, Institutional Effectiveness web pages httpts://misweb.cccco.edu/ie/DistrictRates.aspx, retrieved on January 1, 2016; analysis by Cambridge West Partnership, LLC

The Board of Trustees must address these fiscal facts in the coming years. Income from Proposition 30 will disappear at the end of calendar 2017, unless the underlying sales and income taxes are renewed by a popular vote. Starting in January 2018 the Affordable Care Act provides financial penalties for "Cadillac" medical benefit plans. Those penalties might one day impact the College. The State's allocations to the districts for FY2015-2016 were unusually generous and were based upon unexpected State revenue growth. The magnitude of growth in State revenue may not be repeated in future years and the unusual level of funding through "one time" money and categorical program dollars may not be repeated. Starting in July 2014 the District's contribution to CalSTRS for each covered employee started to increase from 8.25% to 8.88%. The contribution percentage is scheduled to increase to 19.1% by 2020 and remain at that level until 2046-47.[22] The CalPERS retirement contributions for classified employees will increase from 12.46% in 2014 to 20.4% by 2020-21.[23]

The budget development process at Barstow College historically has been completed as a "rollover" process. The managers of departments were provided with budget development sheets that displayed their discretionary accounts, and they were allowed to move their budget from one category to another to better serve their needs.

Any action plan has to include a request for funding in the program review for the unit or program. The Institutional Effectiveness Committee assesses funding requests based on a rubric that evaluates the requests on the extent to which it addresses linkage to the following:

1. The district mission statement
2. Program review
3. Institutional objectives and action plans
4. Student learning outcomes, administrative unit outcomes, or service area outcomes
5. Assessment measures or evaluation plan

The resource requests are prioritized with recommendations forwarded to the President's Executive Cabinet for final approval and inclusion for funding through the budget process. [24]

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[22] Provisions of AB 1469. Retrieved April 30, 2016 from www.calstrs.com/calstrs-2014-funding-plan

[23] Michael Youril. "Rate Hike Ahead: CalPERS Proposed Strategy Means Contribution Rates Will Continue to Rise for the Foreseeable Future." Retrieved May 2, 2016 from www.calpublicagencylaboremploymentblog.com

[24] Barstow College. *Accreditation Follow-Up Report*. February 28, 2013

Technology

Operational management for technology resources is centralized in three areas: the information technology (management information systems) department (IT), the instructional technology center (ITC) and the computer commons (CC). The Vice President of Administrative Services supervises the IT department. The Vice President of Academic Affairs oversees the ITC and the CC areas.

The College Technology Committee supports planning efforts, discusses present and future technology needs, and prioritizes specific requests made for funding. The College also has a Banner Planning Team that addresses the software issues associated with the enterprise resource planning software. As of spring 2016 the College is undergoing a conversion to the basic Banner software platform. Business Services is anticipating implementation of new software configurations at the San Bernardino County Office of Education whose financial management system the College uses.

Due to severe revenue shortfalls from the State the College neglected to update information technology. Funds and energy are now being devoted to improving the campus infrastructure. BCC continues to move some physical environments into the cloud information technology, such as the library and the laser fiche. A new primary and secondary storage area network (SAN) is being implemented to address some of the aging information technology equipment. The College continues to move toward implementing the Canvas learning management system.

Wireless technology capability will need to be upgraded as more administrators, faculty, staff, and students continue to exercise the Bring Your Own Device (BYOD) onto the campus to access the BCC network. Information technology equipment loaning is another area that will need to be addressed as. The EOPS program has started to loan laptop computers to students in that program. Other platforms should be evaluated for movement into the cloud information technology environment, such as Office 365. That move would also provide a higher level of security and stability to the Exchange system than the College currently has. Information systems and applications should be created to address the students' needs to be successful in their academic careers.

The principles that have been guiding the application of technology at the College are summarized as follows:

1. Increase student success through the use of technology in instructional and support services.
2. Provide training for faculty and staff to ensure that technology is effectively used.
3. Support creative and innovative use of technology.
4. Encourage and expand the use of technological solutions.
5. Provide adequate staff support as new technology and technology programs are adopted.

The 2016-2020 Technology Plan set out the following basic assumptions for the future of technology development at the College.

- The focus is comprehensive, district-wide, and inclusive of multiple instructional sites.
- The plan is a "living document" and will be reviewed and adjusted on an annual basis, as technology and BCC needs evolve.
- The plan is modular in nature and most of the initiatives can be implemented independent of the whole.

These seven common themes appear throughout the Technology Plan.

- Student success and access to current technology are synonymous.
- The quality of our learning environments depends on technological currency.
- Our administrators, faculty, students and staff expect technology to become smaller, faster, and mobile.
- Our installed technology base has greatly expanded and needs to be maintained.
- Wireless technology has become a mature technology able to support learning everywhere.
- The infrastructure that delivers and supports technology must be constantly improved.
- Connectivity, security and bandwidth are the gating factors to end users experience with IT.

Space and Facilities

The Maintenance and Operations Department provides a clean and safe educational environment for students and staff. Half of the campus buildings were constructed over fifty years ago and are in need of significant systems replacement or removal in favor of new buildings. Increases in campus student population and/or the addition of instructional space drive the service they provide.

The Chancellor's Office monitors the use of five types of interior spaces at all community colleges. Any functionally usable interior space that could be assigned to an occupant is described as assignable square footage (ASF). Most interior space is considered assignable, but restrooms, mechanical equipment rooms, janitor's closets, and corridors are not considered assignable. The annual Space Inventory Report is the means by which the College communicates to the Chancellor's Office space utilization changes. Below is a summary of the most recent Space Inventory data.

Table 37: Barstow College, 2015 Space Inventory Data

| Category | ASF |
|---|---|
| Classroom | 13,572 |
| Laboratory | 22,095 |
| Office | 16,989 |
| Library | 18,619 |
| AV, TV, Radio | 846 |
| Physical Education | 36,098 |
| Assembly | 26,619 |
| Inactive | 7,261 |
| All Other | 29,750 |
| ***Total*** | ***171,849*** |

Source: California Community Colleges, Chancellor's Office. *Barstow College Space Inventory.* FUSION Database. Retrieved from fusion.deltacollege.edu on December 4, 2015.

The College is leasing a property at 1501 State Street located in the downtown portion of Barstow. The property is used to teach the trades and industry disciplines of the career and technical education programs of study offered by the college. A small satellite center is operated at the National Training Center, Fort Irwin, using buildings provided by the Army.

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 Weekly Student Contact Hours (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 facility addressed as assignable square footage (ASF). In evaluating the extent to which the College has made good use of the existing lecture and laboratory facilities a comparison is made between the actual WSCH generated vs. the calculated capacity of those instructional spaces.

On the other hand, the formula for evaluating office space is more complicated and different. Office space evaluation compares the ASF to a calculation of the full-time equivalent number of instructional personnel times a constant space value.

With all five types of space a ratio greater than 100% indicates that the institution has more facility capacity than it is using while a ratio lower than 100% indicates that the institution needs additional facility capacity properly to accommodate the students and staff. From the instructional program perspective, the two most important types of facilities are classroom lecture and laboratory space. From the perspective of student services and general administrative offices, perhaps the most important type of facility is office space.

The current status of the cumulative capacity compared to the load creates a ratio. The 2018-19 Five-Year Construction Plan shows he following extent to which the key space types are currently being used.

Table 38: Barstow College Capacity to Load Ratios, 2017-18

| | Analysis for Academic Year 2017-2018 | | | | | | |
|---|---|---|---|---|---|---|---|
| | | Wkly Student Contact Hrs | | | Full-time Equivalent | | |
| | | Actual/Projecte | Cumulative | Capacity/ | Actual/ | Cumulative | Capacity/ |
| Space Type | ASF | WSCH (Load) | Capacity | Load Ratio | Projected | Capacity | Load Ratio |
| Lecture | 13,572 | 25,632 | 28,693 | 112% | | | |
| Laboratory | 22,095 | 18,054 | 9,168 | 51% | | | |
| Office | 16,989 | | | | 137 | 121 | 88% |

Source: California Community Colleges, Chancellor's Office. *Barstow College 2017-18 Five Year Capital Construction Plan.* FUSION Database. Retrieved from fusion.deltacollege.edu on May 8, 2016.

## III. Institutional Effectiveness

### A. Institutional Performance Expectations

Institutional Mission and Effectiveness Scorecard

Barstow College mission is to providing students, the community, and military population with the educational tools to achieve personal goals and professional growth.

The College has evaluated data about its performance with respect to its mission and goals it has established and the accountability framework used by the community college system. The State first introduced an accountability system for the community colleges in the late 1990s. At that time the Partnership for Excellence (PFE) established system-wide goals for performance in exchange for enhanced funding. By 2004 legislative action replaced the PEF initiative with the Accountability Reporting for Community Colleges (ARCC), which created college-specific reporting in addition to system-wide reporting. The framework approached the outcomes measures based on cohort analysis of students whose behavior defined their intentions. Although colleges were encouraged to develop their own goals for improvement on the outcome measures there were no financial incentives or penalties attached to performance.

The outgrowth of the Student Success Task Force (SSTF) initiative was 2012 legislation that fine-tuned the ARCC framework into what has been renamed the Scorecard. Like the ARCC framework, the Scorecard outcomes for Student Progress and Achievement (SPAR), persistence, and 30-units completed, places a student into the cohort if the student:

- Is a first-time student in the academic year
- Has completed six units
- Attempts any level math or English

The difference in the two frameworks is that the Scorecard restricts the students to three years, rather than six years, as was the case with ARCC, to complete the behavior that qualifies them to be in the cohort. Those that do meet the criteria are placed into the denominator used to calculate the various rates.

The Scorecard emphasizes milestones or momentum points in a student's college experience as well as final outcome measures that all colleges are expected to use when planning activities to improve institutional performance. The Scorecard reports student outcomes in these five metrics:

1. Student Progress and Achievement (SPAR)
    a. Earned a AA, AS or certificate of achievement, or
    b. Transferred to a four-year institution, or
    c. Transfer-prepared (earned 60 transferable units with a 2.0 GPA)
2. Persistence
    a. Earned six units,
    b. Attempted math or English, and
    c. Enrolled in credit courses three consecutive primary terms anywhere in the California community college system
3. 30 Unit Completion
    a. Earned at least 30 units anywhere in the California community college system
4. Career and Technical Education (CTE) completion
    a. Completed more than 8 units in a three-year period in the same CTE discipline, and
    b. Earned a AA, AS or certificate of achievement, or

c. Transferred to a four-year institution, or
d. Became transfer-prepared

5. Basic Skills Progress
    a. Attempted a below-college-level English, ESL or math course and successfully completed a college-level course in the same subject area

Students who were qualified to be in the cohort and who also achieve one of the outcomes listed above are counted in the numerator used to calculate the various rates.

Institutional Effectiveness and Program Improvement Goals Framework

Legislation enacted in 2014 (Education Code section 84754.6) required the Board of Governors for the California community college system to adopt a goals framework that will encourage improvement in institutional effectiveness among the colleges. The statute also required that, as a condition of receiving Student Success and Support Program funds, each college must develop, adopt and post a goals framework that addresses the following four identified areas: (1) student performance outcomes, (2) accreditation status, (3) fiscal viability, and (4) programmatic compliance with state and federal guidelines. Other categories may be designated in the future. In spring 2016 five years of appropriate historical data was provided to support a goal declaration for 2016-17 and for a longer-term six-year goal. In accordance with this mandate Barstow College has adopted the required and optional goals detailed in scorecard located at this URL https://misweb.cccco.edu/ie/DistrictSelect.aspx where data is updated annually. The overall framework is summarized as follows.

District Fiscal Viability Indicators

1. Fund balance (required)
2. Salary and benefits (optional)
3. Annual operating excess deficiency (optional)
4. Cash balance (optional)

District Programmatic Compliance with State and Federal Guidelines Indicators

5. Audit findings of financial statement (required)
6. Audit findings of state compliance (required)
7. Audit findings of federal award/compliance (required)

College Student Performance and Outcomes

8. Completion rate- college-prepared students (optional)
9. Completion rate- unprepared students (optional)
10. Completion rate- overall (optional)
11. Remedial rate- math (optional)
12. Remedial rate- English (optional)
13. Remedial rate- ESL (optional)
14. Career technical education rate (optional)
15. Successful course completion (required)
16. Completion of degrees (optional)
17. Completion of certificates (optional)
18. Transfers to four-year institutions (information item only)

College Accreditation Indicator

19. Status (required)

College Fiscal Viability Indicators

20. Full-time equivalent students (optional)

College Choice Indicators

21. College choice student achievement (one required)
    - Completion rate- unprepared students
    - Remedial rate- math
    - Remedial rate- English
    - Remedial rate- ESL

Optional College Choice Indicator

22. College may self-identify an indicator related to any topic

Institutional Set Standards

In response to U.S. Department of Education requirements and ACCJC expectations the College has set a series of minimum student achievement performance standards for the institution as a whole. For 2014-2015 those performance standards are reflected in the table below.

Table 39: Institutional Set Standards

| Student Achievement Institutional-Set Standard Topic | 2014-15 Standard |
|---|---|
| Successful Course Completion Standard | 70% |
| Successful Course Completion, 2014-2015 | 73.5% |
| Completion of Degrees and Certificates Combined Each Year Standard | 239.1 |
| Completion of Degrees Per Year Standard | 233.8 |
| Completion of Certificates Per Year Standard | 6.8 |
| # of Students Who Received a Degree or Certificate in 2014-15 | 268 |
| # of Students Who Received a Degree in 2014-15 | 265 |
| # of Students Who Received a Certificate in 2014-15 | 14 |
| # of Students Who Transferred to a 4-Year School Each Year Standard | 151 |
| # of Students Who Transferred to a 4-Year School in 2014-15 | 211 |
| Does The College Have Certificate Programs That Are Not CTE | no |
| If yes, Please Identify them | n/a |
| # of Career-Technical Education Certificates and Degrees | 19 |
| # of Career-Technical Education Certificates and Degrees That Meet Employment Standards | 1 |
| # of Career-Technical Education Certificates and Degrees For Which The College Has A Standard for Licensure Passage Rates | 0 |
| # of Career-Technical Education Certificates and Degrees For Which The College Has A Standard for Graduate Employment | 0 |
| Other Standards Established By The College- Course Retention | 84.11 |

Source: Barstow College, *2016 ACCJC Annual Report*

The U.S. Department of Education and ACCJC have communicated their expectations that colleges will also monitor the licensure examination pass rates and job placement rates of program graduates. As of 2016 there were too few students (3 students) completing the Cosmetology state examination to be able to obtain the results.

Independent of the State scorecard or other accountability frameworks, the College strategic priorities and goal setting processes identified several key performance areas where the

institution intends to make progress. The strategic priority and goals that are most closely related to the Educational Master Plan include:

Strategic Priority #1: Educational Success[25]

Goal 1. Provide Student Success Support Plan and Equity Plan information to the Enrollment Management and Curriculum Committees to facilitate making educational pathways accessible through course offerings, course timing, and research into student needs.

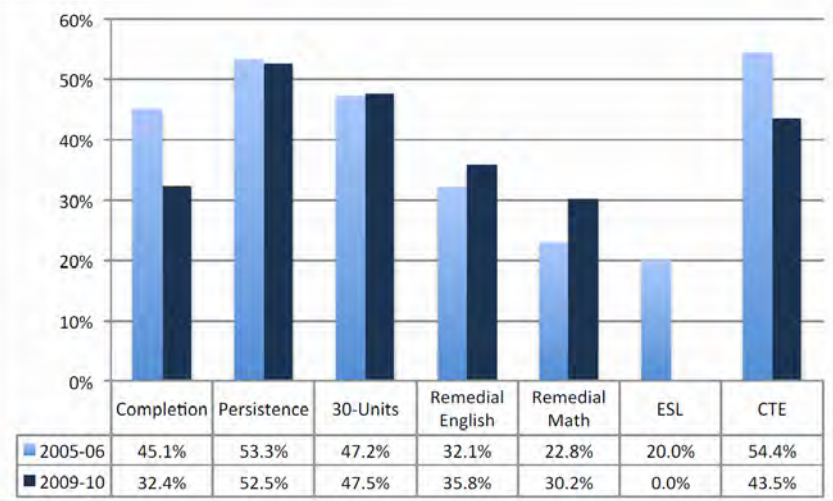
Goal 2. Promote improvement in the success of underprepared and/or at-risk students through instructional support and college services.

## B. Institutional Performance

Each pair of columns in the graphic below represents students who enrolled in a community college during the identified academic year. To be included in the cohort these students, within the first three years of enrollment, complete six units of credit and attempt any level of math or English. The students were followed for a period of six years. They are included in the numerator of the completion rate calculation if they achieved one of four outcomes for the SPAR metric: (1) transfer to a four-year institution; (2) earn an Associate Degree; (3) earn a Certificate of Achievement; or (4) become transfer-prepared in terms of GPA by completing 60 transferable units.

Because student cohorts are being followed for a period of six academic years, the most recent data is the cohort that entered college in 2009-10.

Chart 34: Comparative Scorecard Rates




| | Completion | Persistence | 30-Units | Remedial English | Remedial Math | ESL | CTE |
|---|---|---|---|---|---|---|---|
| 2005-06 | 45.1% | 53.3% | 47.2% | 32.1% | 22.8% | 20.0% | 54.4% |
| 2009-10 | 32.4% | 52.5% | 47.5% | 35.8% | 30.2% | 0.0% | 43.5% |

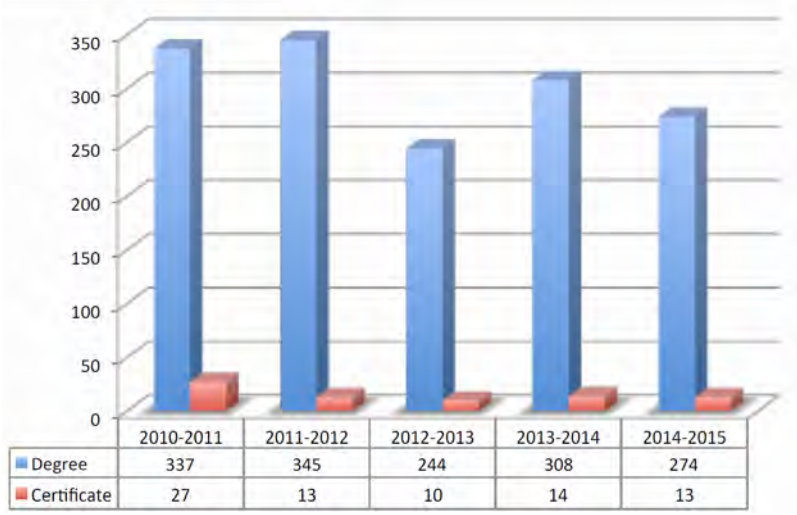
Source: California Community College Chancellor's Office. *2016 Scorecard Report*; analysis by Cambridge West Partnership, LLC

Additional details and trend lines are found in the Barstow College 2014-15 Fact Book.

[25] Barstow Community College District. *2015-2018 Strategic Plan*

The number of program awards, degrees and certificates of achievement, can be identified on an annual basis. These are important final outcome indicators monitored by the College. The numbers of awards has decreased from 2010-11 to 2014-15 by 21%. The greatest category of decrease has been the Associate of Science Degrees.

Chart 35: Degrees and Certificates of Achievement Awarded




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

The broad discipline area in which the college has made these awards is illustrated in the table below. In the past, broadly defined programs of study such as Interdisciplinary Studies, Social Sciences, and Fine and Applied Arts were the degrees of choice for students who wanted a general preparation for transfer. As more discipline-specific Associate Degrees for Transfer are implemented, consistent with the SB1440 legal framework for transfer to the CSU system, the awards in discipline-specific curriculum areas are likely to increase. Additional details on awards granted can be found in the college Fact Books.

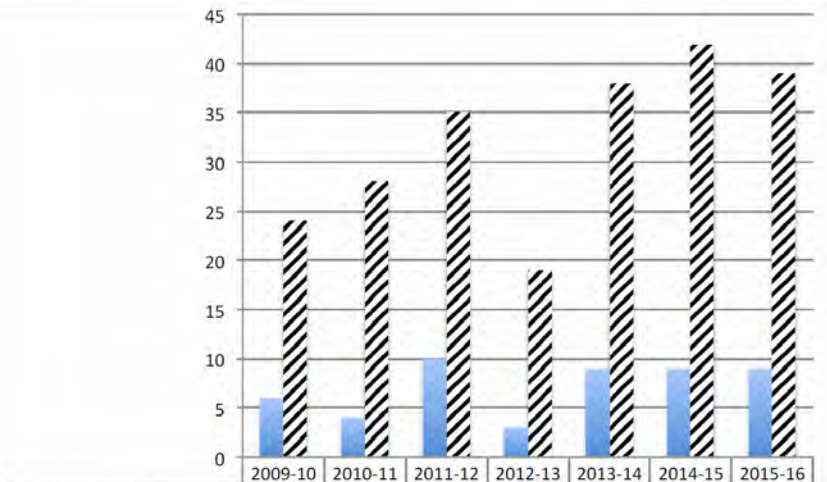
Table 40: Details of the Most Often Awarded Degrees and Certificates

| | Annual Awards of Degrees and Certificates | | | | | | |
|---|---|---|---|---|---|---|---|
| **Broad Disciipline Areas** | **2010-2011** | **2011-2012** | **2012-2013** | **2013-2014** | **2014-2015** | **Total** | **Overall %** |
| Social Sciences | 109 | 126 | 105 | 120 | 111 | 571 | 35.7% |
| Interdisciplinary Studies | 86 | 80 | 55 | 78 | 72 | 371 | 23.2% |
| Business and Management | 76 | 80 | 47 | 57 | 60 | 320 | 20.0% |
| Public and Protective Services | 27 | 21 | 15 | 28 | 18 | 109 | 6.8% |
| Family and Consumer Sciences | 29 | 18 | 9 | 7 | 9 | 72 | 4.5% |
| Engineering and Industrial Technologies | 12 | 18 | 16 | 12 | 11 | 69 | 4.3% |
| Information Technology | 9 | 7 | 3 | 11 | 1 | 31 | 1.9% |
| Commercial Services | 6 | 5 | 1 | 2 | 13 | 27 | 1.7% |
| Health | 7 | 3 | 1 | 3 | 1 | 15 | 0.9% |
| Psychology | | | 2 | 4 | 5 | 11 | 0.7% |
| Fine and Applied Arts | 3 | | | | 2 | 5 | 0.3% |
| ***Total*** | ***364*** | ***358*** | ***254*** | ***322*** | ***303*** | ***1,601*** | |

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

Students who actually transfer to one of the two public university systems in California are counted in the SPAR outcome measure. Between 2010-11 and 2015-16 there has been a 125% increase in the numbers of students who transferred to a University of California (UC) campus and a 39% increase in the numbers of students who completed a transfer to a California State University (CSU) campus. During those years the college has annually averaged 8 students to UC and 34 students to CSU. Fiscal constraints prompted both public university systems to curtail transfer student acceptances, which in turn adversely impacted the numbers shown in the graphic below. Additional details are found in the college Fact Books.

Chart 36: Annual, Full-year Transfers to CSU and UC

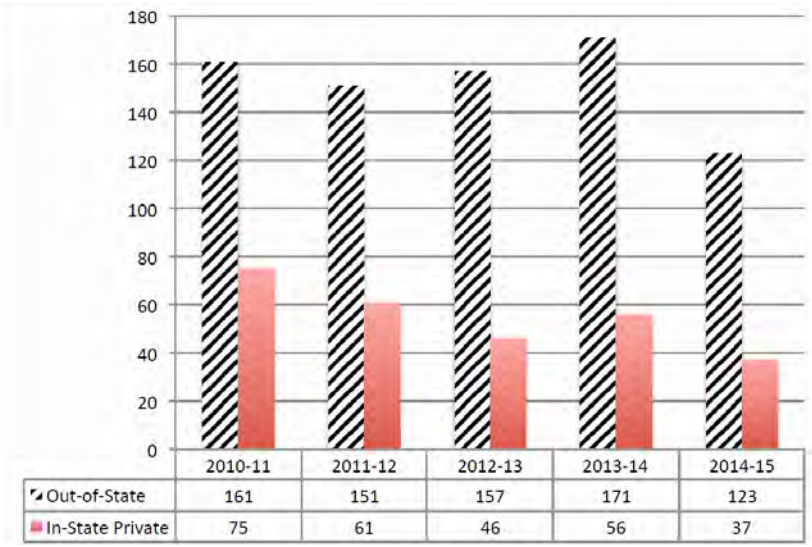



| | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 |
|---|---|---|---|---|---|---|---|
| University of California | 6 | 4 | 10 | 3 | 9 | 9 | 9 |
| California State University | 24 | 28 | 35 | 19 | 38 | 42 | 39 |

Source: California Postsecondary Education Commission, *UC Student Source Files, CSU Student Source Reports;* analysis by Cambridge West Partnership, LLC

As an alternative to the public university systems, some transfer-oriented students from the College have entered either an in-state private or an out-of-state institution. From 2010-11 to 2013-14 (last year of available data) there has been a 51% decrease in the numbers of students attending in-state private institutions and a 24% decrease in the student count of those attending an out-of-state institution. The analysis below considers the transfer event from the perspective of a transition year in which the Barstow College student affects the transfer to a four-year institution by enrolling at the senior institution. The analysis does not consider the length of time it took the student to complete the preparation to transfer or to make the actual transfer. Far and away the most popular in-state private school has been the university of Phoenix while the most popular out-of-state institution has been Park University. Park University, an independent nonprofit private college based in Parkville, MO, maintains an information office and offers face-to-face classes on the Barstow College campus.

Chart 37: Full-year Transfers to Out-of-State (OOS) and In-State Private (ISP) Schools




| | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 |
|---|---|---|---|---|---|
| Out-of-State | 161 | 151 | 157 | 171 | 123 |
| In-State Private | 75 | 61 | 46 | 56 | 37 |

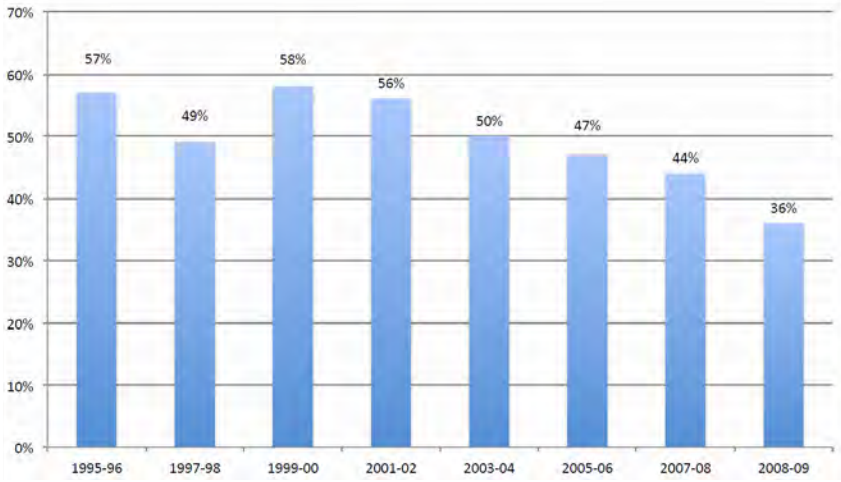
Source: California Community College Chancellor's Office. *Data Mart*; analysis by Cambridge West Partnership, LLC

A transfer cohort methodology has been developed by the Chancellor's Office. The method tracks groups of first-time students for six years to determine if they show a "behavioral intent to transfer." In this methodology students are assigned a cohort year based on the year they first enroll in a California community college and they are attributed to the community college where they earned the most units of credit.

The initial cohort of students is tracked for six years after the initial enrollment to determine if they have completed twelve units of credit and attempted transfer-level math or English. If they have, the student is placed into the cohort and their transfer outcome is considered over a variety of time frames up to sixteen years. The outcome of transfer is monitored through a data match with the National Student Clearinghouse (NSC), UC and CSU.

Past research by the Chancellor's Office has concluded that most students complete the transfer process by the sixth year after initial enrollment. An extended analysis of Barstow College transfer data suggests that indeed after the sixth year, the trend of steady increases in the numbers of students who transfer does drop off. However, some students from those initial cohorts do continue to transfer and they drive the transfer rate higher than is generally acknowledged. As illustrated below, when students are followed for an extended period of time 50% of the cohort does transfer.

Chart 38: Extended Transfer Rates, 1995-96 to 2008-09, Selected Cohorts



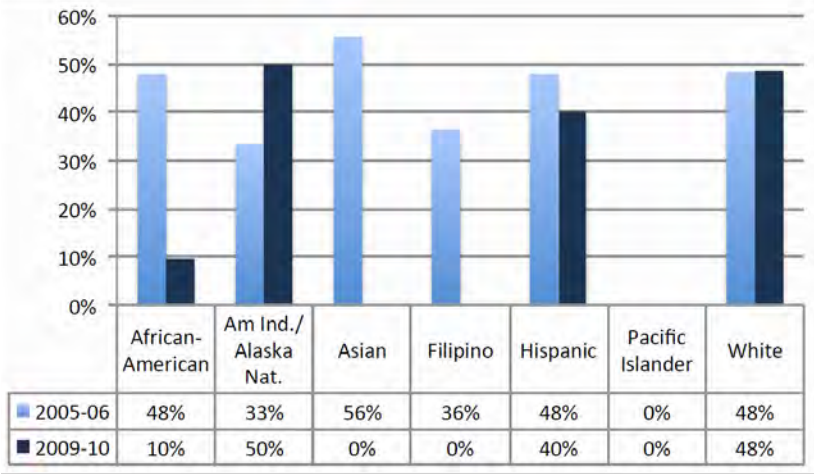

Source: California Community College Chancellor's Office. *Data Mart*; analysis by Cambridge West Partnership, LLC

For students who intend to transfer, completing 30 units is an important and momentous milestone because it indicates that they are halfway to the transfer point. For career and technical education students who neither transfer to a four-year institution nor receive an award from the College, the completion of 30 units translates to substantial gains in wages upon leaving college. Two years after leaving the community college these students have been shown to earn about as much as the vocational student who completes an occupational degree or certificate. For these reasons the accumulation of 30 units of credit was included in the Scorecard as a milestone progress marker.

In the cohorts of students entering the College in 2005-06 and 2009-10 there are documented differences among four of the seven ethnic subpopulations of students who achieved the outcome of completing 30 units of credit. However, data quality problems do not allow comparisons for Asian, Pacific Islander, and Filipino students.

In this analysis the years represent the academic year in which the student entered a community college for the first time. To qualify into the cohort a student must, within three years, complete six units and attempt any level of math or English. Those qualified students are tracked for six years. The numerator in the rate calculation is the number of those qualified students who accumulated 30 units of credit within six years of entering a community college. Because student cohorts are being followed for a period of six academic years, the most recent data is the cohort that entered college in 2009-10.

Chart 39: Percent of Students Who Earned at Least 30 Units, Overall Rates




| | African-American | Am Ind./ Alaska Nat. | Asian | Filipino | Hispanic | Pacific Islander | White |
|---|---|---|---|---|---|---|---|
| 2005-06 | 48% | 33% | 56% | 36% | 48% | 0% | 48% |
| 2009-10 | 10% | 50% | 0% | 0% | 40% | 0% | 48% |

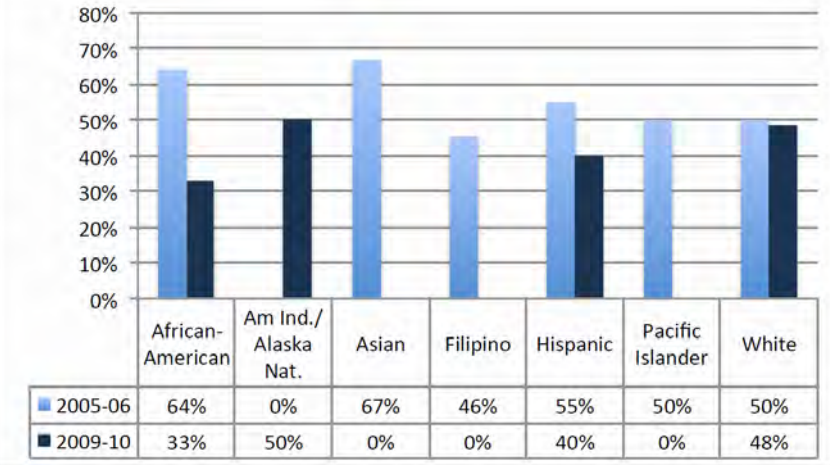
Source: California Community College Chancellor's Office. *2016 Scorecard Report*; analysis by Cambridge West Partnership, LLC

Completing 30 units is an outcome from persistent re-enrollment. The Scorecard and the College are interested in promoting student persistence for at least three consecutive terms. In the graphic below there are persistence differences among three of the seven ethnic groups of students, but two cohorts there were data quality problems that provide no information for American Indian/Alaska Native, Asian, Filipino, and Pacific Islander students.

Again, in this analysis the years represent the academic year in which the student entered a community college for the first time. To qualify into the cohort a student must, within three years, complete six units and attempt any level of math or English. The numerator in the rate calculation is the number of those qualified students who in fact persisted in enrollments during three consecutive terms.

Because student cohorts are being followed for a period of six academic years, the most recent data is the cohort that entered college in 2009-10.

Chart 40: Persistence Over Three Consecutive Terms



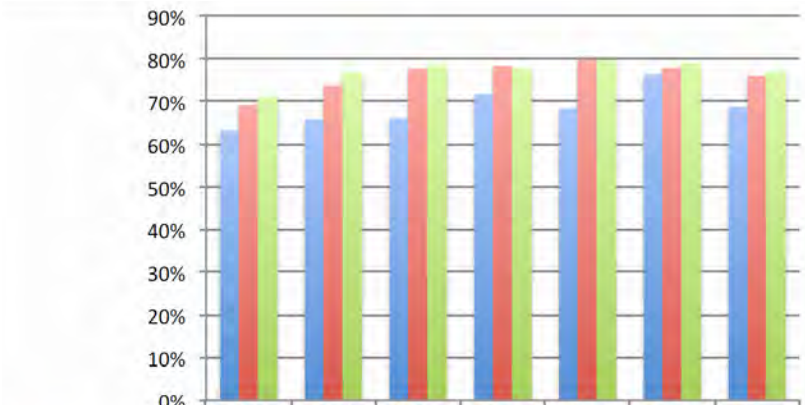

| | African-American | Am Ind./ Alaska Nat. | Asian | Filipino | Hispanic | Pacific Islander | White |
|---|---|---|---|---|---|---|---|
| 2005-06 | 64% | 0% | 67% | 46% | 55% | 50% | 50% |
| 2009-10 | 33% | 50% | 0% | 0% | 40% | 0% | 48% |

Source: California Community College Chancellor's Office. *2016 Scorecard Report*; analysis by Cambridge West Partnership, LLC

A common measure of organizational performance that stimulates persistence and the accumulation of credit units is the success rate of students enrolled in the different categories of credit curriculum. The rate is calculated by comparing the number of students who earned a grade of C or better to the number of all students who were still enrolled in the course after the normal add and drop period ended.

Over the last six fall semesters student success rates have improved in all three categories of curriculum offered in a face-to-face modality. From 2010 to 2015 the greatest absolute change in the success rate was in the basic skills curriculum where the rate increased 13.21%. The average success rate for each category of curriculum is shown in the final set of columns on the right. The graphic below represents enrollments in the fall terms identified and is not a cohort study.

Chart 41: Fall Term Student Success Rates by Type of Course, Face-to-Face Instruction

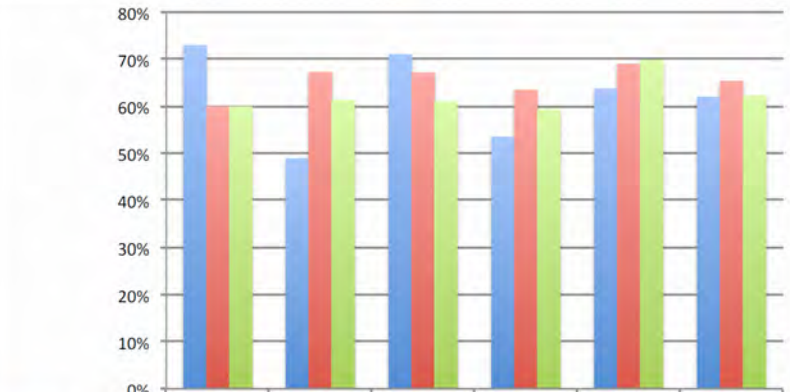



| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | Average |
|---|---|---|---|---|---|---|---|
| Basic Skills | 63.1% | 65.9% | 66.1% | 71.6% | 68.2% | 76.3% | 68.5% |
| Degree Applicable | 69.1% | 73.7% | 77.6% | 78.2% | 79.6% | 77.9% | 76.0% |
| Vocational | 71.2% | 76.7% | 78.6% | 77.7% | 79.6% | 78.8% | 77.1% |

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

A similar fall term analysis was completed for courses offered through distance education. From 2011 to 2015 the greatest absolute change in the success rate was in the vocational curriculum where the rate increased 9.76%. The average success rate for each category of curriculum is shown in the final set of columns on the right. The graphic below represents enrollments in the fall terms identified and is not a cohort study.

Chart 42: Fall Term Student Success Rates by Type of Course, Distance Education




| | 2011 | 2012 | 2013 | 2014 | 2015 | Average |
|---|---|---|---|---|---|---|
| Basic Skills | 72.88% | 48.86% | 71.09% | 53.45% | 63.69% | 61.99% |
| Degree Applicable | 60.00% | 67.19% | 67.16% | 63.43% | 69.01% | 65.36% |
| Vocational | 60.00% | 61.27% | 61.05% | 59.27% | 69.76% | 62.27% |

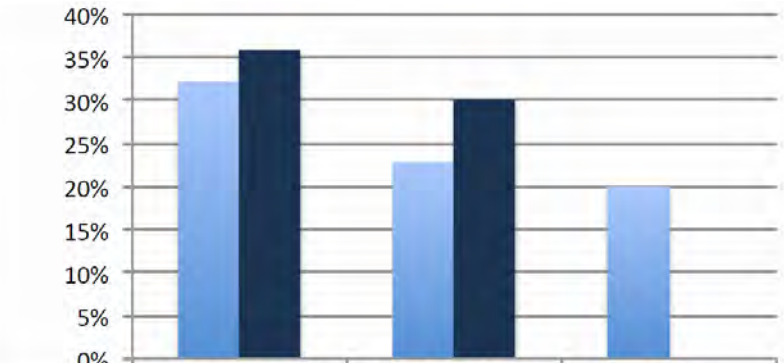
Source: California Community College Chancellor's Office. *Data Mart*; analysis by Cambridge West Partnership, LLC

Additional analysis of course success and retention, on an annual basis, can be found in the annual College Fact Books.

The basic skills curriculum is of particular interest to the College and the Scorecard because so many students begin their college experience in that curriculum. In the Scorecard analysis the years represent the academic year in which the student entered a community college for the first time. To qualify into the cohort a student must, within six years, attempt a math, English or ESL course below transfer level (2-4 levels below for math). The numerator in the rate calculation is the number of those qualified students who, within six years, complete a higher-level course in the same discipline. For English composition it includes completion of a college-level English course. For math the students must complete a college-level math course or a math course that is one level below transfer. The ESL students must complete the ESL sequence or a college-level ESL course.

The experience of basic skills students in English composition, math, and ESL is captured in the graphic below. Both of the cohorts have improved their success rate in English and math. Data for ESL was not recorded after the 2005-06 cohort. Because student cohorts are being followed for a period of six academic years, the most recent data is the cohort that entered college in 2009-10.

Chart 43: Basic Skills Student Migration Success




| | Remedial English | Remedial Math | ESL |
|---|---|---|---|
| 2005-06 | 32% | 23% | 20% |
| 2009-10 | 36% | 30% | 0% |

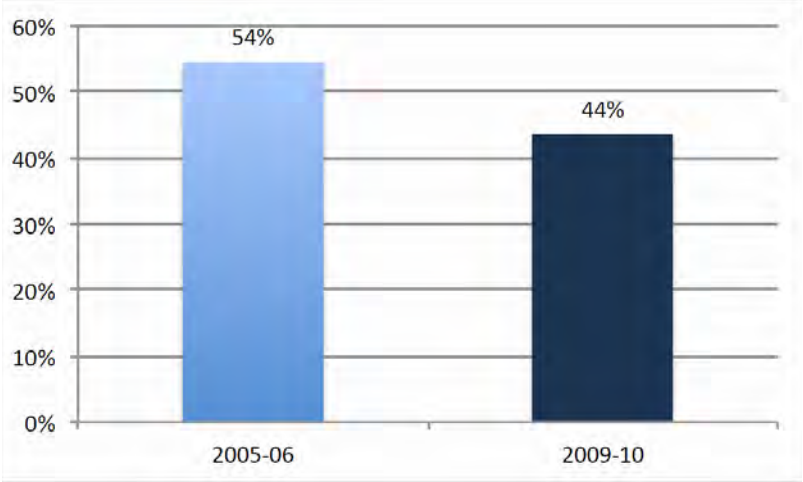
Source: California Community College Chancellor's Office. *2016 Scorecard Report*; analysis by Cambridge West Partnership, LLC

When the accountability framework was redesigned to become the Scorecard a separate metric was created for career and technical education (CTE).

In this analysis the years represent the academic year in which the student entered a community college for the first time. To qualify into the cohort a CTE student must, within three years, complete a CTE course for the first time and then complete more than eight units in a single discipline over the next three years. The numerator in the rate calculation is the number of those qualified students who within six years of entering a community college achieve any one of the following: (1) earn a Certificate of Achievement; (2) earn an Associate Degree; (3) complete a transfer to a four-year institution; or (4) become transfer prepared by GPA and earning 60 transferable units.

For CTE students the success rate between these two cohorts has *decreased* by 11%.

Chart 44: Career and Technical Education Student Success




Source: California Community College Chancellor's Office. *2016 Scorecard Report*; analysis by Cambridge West Partnership, LLC

Particularly for the CTE students, but also for all students the aspiration to attend and succeed in the college experience is in part related to improving the prospects of entering the workforce employed in a field of endeavor that is desired by the student. Although it is not part of the Scorecard framework, the California community college system has developed a reporting tool to demonstrate the efficacy of attending and completing a program of study. The methodology uses the California Employment Development Department Unemployment Insurance (UI) wage data combined with the community college system student records of awards conferred upon students.

Students included in the reporting have received an award anytime over eight consecutive academic years (2002-03 to 2009-10). In addition, the students could not have transferred to a four-year institution, must be older than 21 at the time of the award, and could not be enrolled anywhere in the California community college system after receiving an award.

After combining the eight award cohorts into a single group, the median wage was calculated for the combined cohort by TOP code representing their field of study. The median wages do not represent any single year. Instead, it is the combined median wages for multiple award cohorts. The median wages at three years after completing the award, adjusted for inflation, are displayed in the following table.

In assembling this data the Chancellor's Office acknowledges that students whose employment is not covered by the California EDD UI system are not included nor are students who do not have an SSN. Also, the numbers of hours an individual worked (full-time vs. part-time) is not known.

Table 41: Barstow College Students With An Award Who Go Directly To Work

| | | Award Year 2002-2003 - 2009-2010 | | |
|---|---|---|---|---|
| Taxonomy of Programs Title & Code | Award Categories | Median Wage 3 Years After Award | Total Awards | Award to Wage Match Rate |
| Administration of Justice-210500 | AA/AS Degree Recipient | $56,590 | 69 | 26% |
| Business and Commerce, General-050100 | AA/AS Degree Recipient | $38,519 | 63 | 30% |
| Business Management-050600 | AA/AS Degree Recipient | $57,816 | 170 | 19% |
| Humanities-490300 | AA/AS Degree Recipient | $25,503 | 52 | 29% |
| Social Sciences, General-220100 | AA/AS Degree Recipient | $17,991 | 119 | 29% |

Source: California Community College Chancellor's Office. *College Wage Tracker*; analysis by Cambridge West Partnership, LLC

Some students attending the College are already established in their occupations, but believe they need or want some additional education. Those students enroll at the College for only a few courses and have become known as skill-builder students. The median percentage change in wages for students who completed higher level CTE coursework in 2012-2013 and left the system without receiving any type of traditional outcome such as transfer to a four-year college or completion of a degree or certificate has been used as another outcome measure of institutional effectiveness. In the following table the 2016 data on these 230 former Barstow College CTE students is displayed. The median change in earnings was a 12.6% increase.

Table 42: Skill Builder Students Wage Gains

| Disciplines Studied | Median % Changes in Wages | Total Nbr. Students |
|---|---|---|
| Computer Information Systems | 31.6% | 39 |
| Child Development/Early Care and Education | 6.6% | 36 |
| Emergency Medical Services | 16.4% | 33 |
| Business Management | 29.3% | 32 |
| Administration of Justice | 14.9% | 18 |
| Welding Technology | 25.3% | 17 |
| Accounting | 87.8% | 17 |
| Electronics and Electric Technology | 13.7% | 14 |
| Parenting and Family Education | 39.2% | 10 |
| Office Technology/Office Computer Applications | 64.3% | 10 |

Source: California Community College Chancellor's Office. *2016 Scorecard Report*; analysis by Cambridge West Partnership, LLC

## C. Student Institutional Learning Outcomes (ILO)

The College has adopted five Institutional Learning Outcomes and established a plan to systematically collect evidence of student work that was assessed by the faculty and discussed. Those ILOs are:

Communication-

A. Write

1. Communicate thoughts, ideas, information, and messages in writing.
2. Compose and create documents, such as: letters, reports, memoranda, manuals and graphs with correct grammar, spelling, punctuation, and appropriate language, style and format.
3. Check, edit, and revise written work for correct information, appropriate emphasis, form, style, and grammar.

B. Speak and/or Converse

1. Organize ideas and communicate verbal or non-verbal messages appropriate to the audience and the situation.
2. Participate in conversations, discussions, and group activities.
3. Speak clearly and ask questions.

C. Read

Comprehend and interpret various types of written information in (1) prose and in (2) documentation, such as manuals and graphs.

Critical Thinking and Questioning-

A. Analyze

1. Apply rules and principles to new situations.
2. Discover rules and apply them to solve problems.
3. Check, edit, and revise written work for correct information, appropriate emphasis, form, style, and grammar.
4. Differentiate between facts, influences, assumptions, and conclusions.

B. Compute

1. Use basic numerical concepts, such as: whole numbers, percentages, estimates of math without a calculator.
2. Use tables, graphs, charts, and diagrams to explain concepts or ideas.
3. Use basic geometrical shapes, such as: lines, angles, shapes, and space.

C. Research

1. Identify the need for information and data.
2. Obtain data from various sources.
3. Organize, process, and maintain records of the information collected.
4. Analyze the information for relevance and accuracy.
5. Synthesize, evaluate and communicate the results.
6. Determine which technology resources will produce the desired results.
7. Use current technology to acquire, organize, analyze, and communicate information.

D. Solve Problems

1. Recognize whether a problem exists.
2. Identify components of the problem or issue.
3. Create a plan of action to resolve the issue.
4. Monitor, evaluate, and revise when necessary.

Global Awareness-

A. Analyze

1. The Scientific Method: Apply scientific processes to solve problems and measure and observe natural phenomena.
2. Scientific Observation: Design, perform and analyze experiments and scientific observations.
3. Interconnectivity: Analyze the major differences and connections between social, natural and physical sciences.

B. Global Systems and Civics

1. Cultural: Interface with people from a variety of backgrounds and analyze different cultural beliefs and behaviors.
2. Political, Social and Economic: Recognize important economic and political issues and values in one's own community, state, country and the world.
3. Environmental: Analyze the importance of the natural environment to human well being and the impact of human activity on the well being of global environmental systems.
4. Integrated Systems: Assess and analyze the interconnectivity between social, political, economic, and ecological systems and activities
5. Action: Develop and evaluate strategies and plans for addressing global systems and civics issues.

C. Artistic Variety

1. Arts Awareness: Assess the visual arts, dance, music and literature of one or many cultures.
2. Critical Analysis: Analyze the methods used to create art and interpret its literal and/or symbolic meaning.
3. Creativity: Engage in artistic creative endeavors.

Personal and Professional Development-

A. Self-Awareness

1. Accurately assess his/her own knowledge, skills, and abilities.
2. Self-motivate and set realistic goals.
3. Accept that taking feedback well is important to success.
4. Respond appropriately to challenging situations.

B. Social and Physical Wellness

1. Manage personal health and well being.
2. Demonstrate appropriate social skills in group settings.

C. Workplace Skills

1. Be dependable, reliable, and accountable.
2. Meet deadlines and complete tasks.
3. Maintain a professional attitude.
4. Work as a productive member of a team

These institutional learning outcomes were systematically assessed from 2010-11 to 2013-14 with analysis of the results published in a

series of annual reports. Each year one targeted learning outcome area was analyzed. For that analysis at least five courses were selected to administer an assessment prompt and evaluate student work using a five-point agreed upon rubric. An additional consideration was the number of students enrolled in the selected courses, as there was an effort to include larger numbers of students in the assessment. The following table summarizes those results.

Table 43: Institutional Learning Outcomes Assessment Summary Results

| | Percent Satisfactory or Above | | | |
|---|---|---|---|---|
| **Outcome** | **2010-11** | **2011-12** | **2012-13** | **2013-14** |
| *Communication* | | | | |
| Overall | 81.8 | | | |
| Writing & Reading | 75.8 | | | |
| Verbal | 97.9 | | | |
| *Critical Thinking* | | | | |
| Overall | | 84.0 | | |
| Writing | | 84.0 | | |
| Verbal Presentation | | 83.0 | | |
| *Global Awareness* | | | | |
| Overall | | | 86.0 | |
| Science | | | 88.0 | |
| Non-science | | | 86.0 | |
| *Personal & Professional Development* | | | | |
| Overall | | | | 89.0 |
| Online | | | | 83.0 |
| Face-to-Face | | | | 92.0 |

Source: Barstow College, Student Learning Outcomes Assessment Committee. *2010-11 to 2013-14 ILO Assessment Summary Reports*.

## D. Interventions

To achieve greater student success the College has used a combination of resources from the Basic Skills Initiative (BSI), Student Equity (SE), and Student Success and Support Program (SSSP) funding. At the beginning of 2016 the Student Success and Equity Committee (SSEC) established three workgroups: SSSP, SE, and Connections. The Connections Work Group was developed to establish better connections between the plans and to integrate the planning processes of the College.

The following are some examples of items that have been jointly developed by the membership of the two committees (SE and SSSP):

Student Success Center- A student success center was created to offer comprehensive tutoring, workshops in key basic skills and college success topics, counseling/advising for special populations, and general campus information and college experience navigation. These combined services are now under the Student Services area of the College and are physically located in one building.

NROC (National Repository of Online Courses) This software is the result from a Gates Foundation project. It offers modularized practice for English and math. In spring of 2016, the College began allowing students to use the product. NROC was initially a discussion/project proposed in the SSEC that was then funded by Basic Skills. Discussions of implementation and use continued in Basic Skills.

Basic Skills Coordinator- Although a Basic Skills Coordinator has been in place for a number of years there have been recent

discussions around creating a full-time position to include assessment responsibilities, improved plan coordination, and full-time focus on the needs of students in basic skills areas. This position may be jointly funded from basic skills and equity or SSSP resources. The table below summarizes some of the most recent goals and activities.

Assessment Coordinator- At the start of the 2016-17 academic year a full-time assessment coordinator was named to lead the efforts to prepare the college for the implementation of the common assessment instrument.

Student Success Leadership and Staff- At the start of the 2016-17 academic year the College filled several new positions to provide leadership and assistance to faculty and staff to promote greater student success. A Dean for Student Success and Equity position was filled. A Student Success Program Coordinator was appointed. Two Student Success Advisors were assigned to do targeted follow up work with subgroups of students most at risk of being unsuccessful in the college experience. Because so much of the instructional program is delivered through online classes, the College hired a Dean for Distance Education and Learning Support who will provide leadership and expertise in promoting best practices to increase student success and to enrich the pedagogy used by faculty members teaching in this modality.

Basic Skills Non-credit Curriculum- In both math and English the College faculty members have introduced a series of noncredit courses (191, 192, 193, and 194) to assist students enrolled in those disciplines. The ESL faculty members have offered two noncredit courses (190 and 192) within the six total levels of ESL instruction. The ESL department is considering reducing the 190 and 192 courses from 90 to 54 hours of instruction and introducing an intermediate level course.

Table 44: 2015-16 Basic Skills Initiative Goals and Activities

| Focus Goal for 2015-16 | 2015-16 Activity |
|---|---|
| 1. Increase student engagement, retention, and success rate. | Acceleration in English has been effective in reducing required completion time and increasing successful outcomes |
| 2. Ensure student access to quality support. | Workshops designed to provide support for students are now offered regularly in the Success Center for students taking Basic Skills Math and English |
| 3. Provide training for faculty involved with basic skills courses. | We plan to have orientation workshops for instructors teaching Basic Skills courses. We hope these will help create unity, better understand of the program's aims and better communication between faculty |
| 4. Identify early alert strategies to assist students in a timely manner. | The best way to track and support students falling behind is still being discussed for most effective implementation |
| 5. Offer objective assessment to produce measurable success results. | Norming for English 50 courses will help us evaluate the needs of our students better |

Source: Barstow College. *ESL/Basic Skills 201-16 Online Submission Expenditure Plan.*

Acceleration- Instructional acceleration in math and English has been discussed in Basic Skills. This relates to College emphasis in SSSP and equity to reduce the time to completion for students. For English a new ENGL 50X Intensive Writing Preparation for College course was taught for the first time in summer 2016. It is intended to be an accelerated/compressed hybrid or online course offering. Short-term, compressed offerings as a form of acceleration have had higher completion rates. Math faculty members have offered basic skills courses in a 9-week format instead of the traditional 18-week format. This has eliminated the early exit point when many students do not return for subsequent courses.

Professional development- Faculty members and staff have been involved in several professional development activities to improve basic skills outcomes. They have participated in the California Acceleration project from which ENGL 50X was developed. Also, faculty members have attended Supplemental Instruction workshops.

Supplemental Instruction/Tutoring/Peer Mentoring- Discussions are planned between Academic Affairs and Student Services to establish a framework for supplemental instruction, to embed tutor services in key curriculum areas, and to formalize a peer mentoring program. Science faculty members have been interested in using the supplemental instruction strategy.

Contextualization- ESL faculty members have redesigned the initial ESL noncredit courses to include more life experiences materials-health issues, relationships, American culture, and etc. -as part of the content to make the ESL instruction more concrete.

Student Equity- From the data analysis completed in support of the Student Equity Plan the College documented disproportionate impacts upon several "target" groups of students or educational experiences. Those are summarized in the following matrix.

Table 45: Barstow College Student Equity Target Groups 2015-16

| | Student Equity Success Indicators & Other | | | | | |
|---|---|---|---|---|---|---|
| Target Group | Access | Course Completion | ESL/Basic Skills Completion | Degree and Certificate Completion | Transfer | Other College Initiatives |
| Economically Disadvantaged | X | | | | X | X |
| Current/Former Foster Youth | X | X | | | | X |
| Males | X | | | | | |
| Hispanic | X | | | | | |
| Black or African American | | X | | | | |
| Native Hawaiian/Pacific Islander | | X | | | | |
| American Indian | | | X | X | X | |
| Females | | | X | X | | |
| Disabilities | | | | | X | |
| Distance Education | | | | | | X |

Source: Barstow College. *Student Equity Plan 2015-16*

Across several indicators the economically disadvantaged, current/former foster youth, and American Indian groups were identified in t least three prime indicators, and females in two.

Student equity planning and resources have focused upon a number of intervention activities as summarized in the following outline.[26]

The two activities under the goal to increase student access include:

- Explore partnerships internally and externally that improve campus connections with Hispanics, economically disadvantaged, and current/former foster youth, and males
- Review SSSP core services processes for equity barriers

The three activities under the goal to increase student course completion include:

[26] Barstow College. *Student Equity Plan*. December 7, 2015.

- Develop focused dialogue with faculty and staff about interventions, including expanding campus use and knowledge of the early alert system.
- Augment support for online/distance education by hiring a dean and increase counselor support dedicated to focusing on and improving outcomes for distance education students.
- Establish targeted interventions for disproportionate groups.

The three activities under the goal to increase student ESL and basic skills completion include:

- Partner with Basic Skills and Distance Education Committees to create interventions for underprepared target groups, especially distance education students.
- Identify delivery methods and processes impeding satisfactory completion for target populations.
- Support sustainable long-term progress for distance education target students.

The three activities under the goal to increase student degree and certificate completion include:

- Investigate and identify momentum points to degree and certificate completion and implement interventions, which will tip students' improved completion.
- Research barriers to degree completion including coordination and sequencing of courses, and delivery mode.
- Combine with SSSP efforts to build education plans that take into account the manner and modes of delivery that are most appropriate for the target group populations.

The activity under the goal to increase student transfer is:

- At the time of enrollment build and create value in transfer/baccalaureate education, while further reinforcing the importance at key momentum points along the transfer pathway.

In this area, the focus is to continue to research and support foster youth initiatives started as part of the 2014-15 Equity Plan. The activities for this include:

- Working with local community groups and agencies servicing foster youth.
- Supporting success with programs and services through EOPS and local Aid For School (AFS) programs that offer holistic and intrusive advising and support.
- Review and support services to ensure successful navigation and completion of college processes.

Continued support of the existing program and structure, Aid For School (AFS) program is important to establishing sustainable support for economically disadvantaged students. Emphasis also was placed on continued research on ways to help this target group. Activities in this area include:

- Improving and developing data collection
    - Continued research of issues facing economically disadvantaged students, including:
        - Support systems

        - Processes
        - Course delivery methods
- Continue to support economically disadvantaged students through the AFS program

The goals to improve success in distance education offerings were identified as areas of inquiry in two recent Student Equity Plan cycles. In this cycle, distance education was disaggregated and identified as a significant contributing factor to lower course completion rates. The College has a significant online course commitment, as 50% of the courses scheduled are online. With the success in these courses demonstrating lower success rates, the College has determined that a significant sustainable commitment to improving student success outcomes in this mode of instruction is warranted, especially for disproportionally impacted populations. Activities in this area include:

- Hiring a Dean of Distance Education
- Augmenting current counseling staff with an additional focus on distance education students
- Collaboration between the SSEC and the Distance Education Committee to identify and develop areas of improvement in online education

When the College engaged in several planning processes the unavailability of some data and the suspected reliability of some of the available data became a concern. The College secured an institutional Effectiveness Partnership Initiative (IEPI) grant to address data integrity and enrollment management. That was followed by a major financial commitment of $400,000 to improve the enterprise resource planning (ERP) software system.

Funds to support a Student Success and Support Program Plan have offered an opportunity for the College to engage in focused research, dialogue, and brainstorming to develop interventions to improve student success. The overall goal of the SSSP plan was to make student service goals align with college-wide SSSP goals. Based upon the California statutory and regulatory requirements and the unique issues and challenges at the institution (remote location; large and rich tradition in distance education), the College selected the following target group for focus of the SSSP analysis and discussion:

1. Non-exempt, first time students at Barstow Community College (Title 5, section 55530)
    a. Special Sub-Group: local feeder high school students as part of the face-to-face outreach programs (Barstow High School (BUSD), Silver Valley High School (SVHS), Barstow Central High School (BCHS), Baker High School (BHS), and Excelsior Charter School.
2. Continuing Students (who have failed to complete the SSSP pathway)
3. Returning Students (who have failed to complete the SSSP pathway)

Significant initiatives for the initial year of funding, 2014-15, included:

- The creation of a Student Center that now houses tutorial, the equity based Aid For Students (AFS) program, a campus information counter (based on equity plan), and increased staff for Student Success & Equity programs.
- Major technology upgrades including SARS, Degree Works, and Argos.

- Updated online college orientation with newly purchased software (ComEVO).
- Improved committee focus on IEPI target measures
- Integration of Student Success and Equity in a variety of areas, including training, planning and campus dialog.
- Professional development that incorporates and facilitates a better understanding of Student Success and Equity issues.

SSSP 2015-16 Plan interventions focused on building relationships with partner institutions to provide core services to the prospective and current students. Specific activities to build pathways and provide services include the following:

- A summer Bridge to College program has been offered to recent high school graduates over the past three summer terms. Students in the math course have been sufficiently successful that they have placed higher at the end of the summer experience than the Accuplacer exam indicated, while students in the English course have been judged to be at a level appropriate to their skills.
- The College works with the local high schools to provide opportunities through the Career Technical Education (CTE) programs.
- Barstow Community College is part of a RAMP UP grant. The grant is collaboration with Victor Valley College and the Barstow Unified School District. Among the many opportunities the grant offers is the opportunity for the participating institutions to expand into technology platforms that assist in developing immersive and collaborative teaching.
- CTE provides a summer camp for 60-80 middle school age students in the community. The camp exposes these students to career and vocational skills and fields of study and is also an important first "college campus" experience for many of them. As part of the 2015 summer camp, past participants were invited back for a one-day event.
- In 2015-16 meetings between CTE and the local high schools took place to establish articulation agreements to grant students early college credit and to ease transferability.
- The local charter school, Excelsior, has relocated its program adjacent to the College CTE facility. It named the local operation the Excelsior CTE Academy.
- Through the basic skills curriculum, especially ESL, the College has been working closely with K-12 partners to fulfill the intent of AB 86. This partnership is focused on establishing pathways for admittance into the college.

Several interventions were proposed around the core services within the scope of the SSSP Plan. These are summarized in the following table.

Table 46: Barstow College SSSP Plan Intervention Activities, Goals, and Rationale

| 2015-16 Activity | Goal/Rationale |
|---|---|
| ***Orientation*** | |
| Automate online orientation completion data into the student information system (Banner); Update reporting features to assess and adjust effective orientation delivery | Reduce reporting errors. The ComEVO online orientation has the ability to automatically populate the student information system (BANNER). |
| Improved connection and alignment of curriculum in college orientation course (ORIE 1) to the information topics contained of the Orientation presentations as required by Title 5 | Increased student social capital. Align instructional and student services orientation components to better support student navigation of the college experience. |
| Evaluate the efficacy of core services for continuing and returning students. | Determine the extent to which nonreceipt of SSSP services is a factor in student drop out. |

| 2015-16 Activity | Goal/Rationale |
|---|---|
| ***Assessment/Course Placement*** | |
| Increase and improve test proctoring services for students taking assessment tests outside of the BCC service area. | Reach more students. Outreach to new and existing proctoring resources that cover course proctoring to also cover assessment placement testing. |
| Increase student awareness of testing information, practice and preparation. | Increase the numbers of students who complete placement exams. Better Inform students of placement testing with improved informational materials online. |
| Develop and implement comprehensive communication strategies to better promote and publicize pre-assessment workshops and available tutoring options for students. | Improve placement scores. The College seeks to develop partnerships with the local high schools to create opportunities to take examinations earlier and provide training options for students who merely need a refresher of concepts previously taught. |

| 2015-16 Activity | Goal/Rationale |
|---|---|
| ***Counseling, Advising, Educational Planning Services*** | |
| Close gap in SSSP core services by following-up on students who are missing education plans. | Increase the numbers of students who have and understand an educational plan. Counselors will work with Student Services staff to identify students that are missing education plans. The list of students will be divided among the counseling staff for follow-up beginning fall 2015. |
| Assign a specific cohort of students to each counselor. Hire student success advisors to help. | Reach more students with face-to-face, phone, or email sessions. |
| Expand student success dialog in counseling. | Stimulate new and innovative ideas related to counseling, advising, and student educational plans. Improve and expand dialog among the counseling group to draw new ideas from those who know the work best. |

| 2015-16 Activity | Goal/Rationale |
|---|---|
| ***Follow-Up for At-Risk Students*** | |
| Develop workshops & no credit seminars. | Reach more at-risk students who need follow-up. Intended to improve student success & develop additional counselor contact. |
| Work on data collection and tracking of students on academic or progress, probation, or dismissal. | Increase efficiency and effectiveness of identifying students who need follow-up. Work with IT staff to better identify cohort for tracking. |

Source: Barstow College. *Student Success and Support Program Plan 2015-16*.

## IV. Key Planning Assumptions

The following are the key assumptions to guide future planning activities.

1. National and state goals and policy for postsecondary education will increasingly emphasize:
    a. degree and certificate completion;
    b. transfer to four-year universities;
    c. reduction of achievement gaps among various subgroups of students; and,
    d. containment of institutional costs.

    To promote more effective community colleges some have argued that the institutions should be redesigned.[27] The College may want to explore those arguments and consider some of the policies and practices that the Aspen Institute has identified among the colleges to which it has awarded its $1 million dollar prize for excellence.[28]

2. Whether ACCJC remains or some other entity becomes the accrediting body for the College, an accreditor will likely continue to insist upon adequate capacity to provide educational services and demonstrable commitment to continuous quality improvement. In regard to effectiveness an accreditor will place emphasis on results of both student achievement and learning outcomes.

3. The funding needs for capital projects throughout the California community college system are greater than what the State presently provides. Currently, key public policy makers are reluctant to ask the public to consider additional general bond obligation debt for those purposes. However, were State capital construction bond funds made available, preference in allocation most likely would be given to colleges demonstrating good use of their facilities and growing in face-to-face instructional contact. Therefore, the College must strive for more efficient use of existing facilities.

4. A significant change in public policy regarding the CSU transfer process has been implemented with the SB 1440/440 legislation. The UC has started a similar transfer pathway framework. The College has responded to those public policy changes by adopting five Associate Degrees for Transfer (AD-Ts). The ongoing challenge will be to connect students to those pathways and perhaps cautiously expand the number of AD-Ts when they can be sustained and are a good fit for the local needs.

5. The recommendations made by the Board of Governor's Task Force on Workforce, Job Creation, and a Strong

[27] Bailey, Thomas, et. al. *Redesigning America's Community Colleges: A Clearer Path to Student Success.* Harvard University Press, 2015. American Association of Community Colleges. *Reclaiming the American Dream: Community Colleges and the Nation's Future. 2012*. See also. Completion by Design at http://www.completionbydesign.org/.

[28] Wyner, Joshua. *What Excellent Community Colleges Do: Preparing All Students for Success.* Harvard Education Press, 2014.

Economy may translate into a series of new policy, program, and funding initiatives for career and technical education.[29]

6. The current and future planning environment is very fluid (e.g., resources and legislative mandates). The state of California, and by extension the community college system, has a set of revenue generation laws, policies, and practices that result in volatile levels of revenue. During the Great Recession the revenue reductions were unprecedented in both the steepness of the decline and in the number of consecutive years in which they were sustained. Elements of performance-based funding are working their way into categorical program and workforce development program funding. The College will need to be nimble and collaborative by engaging in interdepartmental dialogue on the campus. Additionally, the College will need to continue to be fiscally prudent and to use revenues efficiently.

7. Technology can be a disruptive factor both in the broader society and in higher education. It represents an evolving challenge to faculty members who need to teach some students how to use it while offering instruction in the same class to some students who may be very skilled in using the technology.[30] A variety of technological applications for the classroom and instruction are promising, but faculty must learn to use them and the effectiveness of the technology needs to be empirically evaluated. The current State-sponsored Online Education Initiative holds great promise for the improvement of the online instruction experience for learners and faculty members. Technology is also a force with which to be reckoned in the delivery of administrative and instructional support services. [31]

8. Transferable core abilities, commonly expressed in the learning outcomes associated with general education, will likely never go out of fashion and are highly valued by employers.[32] However, weaving a coherent curriculum that effectively fosters those talents is an ongoing challenge for any higher education institution.

9. Change in late adolescent and adult demographics (racial composition, ethnic identities, age cohorts) is the future of the effective service area. The primary college age cohort (18 to 24) will become proportionately a little smaller in effective service; but the group's size will average 48,665 potential students. The College will always have to "sell itself" to the community of prospective students.

10. Substantial numbers of residents are limited in their ability to participate in the local economy due to shortcomings in

[29] California Community College Chancellor's Office. *Board of Governors Task Force on Workforce, Job Creation, and a Strong Economy: Report and Recommendations*. November 2015.
[30] Carl Straumsheim. "Digital Distractions," *Inside Higher Education*. January 26, 2016.
[31] Ryland, Jane N. (President Emerita, CAUSE). *Technology and the Future of the Community College*. Retrieved from http://www.aacc.nche.edu/Resources/aaccprograms/pastprojects/Pages/technologyfuture.aspx on January 15, 2016; Massachusetts Institute of Technology. *Online Education: A Catalyst for Higher Education Reforms*. April 2016.
[32] Hart Research Associates. *Falling Short? College Learning and Career Success*. January 2015 (survey conducted on behalf of the Association of American Colleges and Universities).

their academic capital (English language learners and low educational attainment) and poverty. The decision and resources required for outreach to recruit these adults and/or their college-age children will be an ongoing opportunity for the College as well as a challenge to "make room" for them and to help them succeed.

11. The implementation of the common core curriculum in K-12 districts may favorably impact the extent to which future students are "college-ready" upon graduation from high school. Currently, substantial portions of those high school graduates who complete the placement assessment exams are recommended to basic skills courses. What brings about these results? Is it the students, the assessment process, poor instruction or a little of all?[33] The College may want to revisit the issue of "college ready," consider strategies to improve the academic talent of prospective students, and explore additional approaches to the process of course placement assessment.

12. An important public service and an ongoing challenge for the College will be to align instructional programs to the occupations with the greatest job opportunities, some of which will require a bachelor's degree while others will not.[34] Considerable commitment and a willingness to change with the times will be required to design terminal associate degrees and certificates of achievement that culminate in an industry-recognized certification or adequate preparation of students for the examinations to earn those licenses and certifications.
    a. Eighty-six percent of all projected nonfarm job growth opportunities (2012-2022) in Riverside and San Bernardino County is concentrated in five industry sectors:
        i. The private educational services, health care and social assistance industry. This is the fastest growing sector (18% of all new jobs).
        ii. The professional and business services sector. It represents 15% of all new jobs.
        iii. Trade, Transportation, Utilities. As an industry it will provide 24% of all new jobs.
        iv. Leisure and hospitality. This sector will contribute 14% of all new jobs.
        v. Construction. This sector supplies 15% of the new jobs.

13. The ability to measure and track data is necessary to identify trends in student outcomes achievement. Robust data sets provide faculty, administrators, and staff with timely feedback and information about student outcomes. Exploration of robust data sets allows them to alter or enhance instructional programs and support services. Some have called this process a "culture of evidence." It can be a challenge to know how to use this information well. That is

[33] Hanover Research. *Planning for the Future in Community Colleges*. December 2013.
[34] American College Testing. *Changing Lives, Building a Workforce*. 2015; Public Policy Institute of California. *California's Future: Higher Education.* 2016; California Community Colleges. Chancellor's Office. *System Strategic Plan. 2013*; California Community Colleges. Chancellor's Office. *Board of Governors Task Force on Workforce, Job Creating, and a Strong Economy*. 2015.

to say, it is not enough to collect data, but the College must know how to analyze and use the data to make "informed decisions for the classroom, student services, and human resources."[35]

[35] Lorenzo, George (editor-in-chief of the SOURCE on Community College Issues, Trends, and Strategies). *Eight Important Questions for Eleven Community College Leaders: An Exploration of Community College Issues, Trends, and Strategie*s. May 2011.

## V. Opportunities for the Future

### A. Future Labor Markets

Within Riverside and San Bernardino Counties roughly 55,000 annual job openings are projected between 2012-2022 due to retirements and new jobs created through growth in the economy. As is commonly the case, most of the openings require a high school diploma or less education for entry, but 14% of the anticipated occupational openings require a Bachelor's degree or higher for entry. Many of these occupations are detailed in the tables found at Appendix F

Occupations with the most job openings are forecasted to generate more than 33,000 jobs annually, roughly 60% of all job openings. The top three occupations with the most openings are: (1) retail salespersons; (2) laborers and freight, stock and material movers; and (3) combined food preparation and serving workers, including fast food. However the median wage for these jobs ranges from $9 to $12 per hour.

Table 47: Riverside and San Bernardino County Projected Annual Job Openings 2012-2022

**EDD Average Annual Occupational Openings Projections 2012-2022**

| Entry Level Education | Average Annual Total | % of Total | % of Total | 2014 Median Annual Salary |
|---|---|---|---|---|
| Less Than High School | 22,782 | 41.9% | | $22,331 |
| High School Diploma or Equivalent | 18,172 | 33.4% | | $35,105 |
| | | *Subtotal* | 75.3% | |
| Some College, No Degree | 610 | 1.1% | | *$35,511* |
| *Postsecondary Certificate* | *3,370* | *6.2%* | | *$44,284* |
| *Associate's Degree* | *1,655* | *3.0%* | | *$58,414* |
| | | *Subtotal* | *10.4%* | |
| Bachelor's Degree | 6,282 | 11.6% | | $70,335 |
| Master's Degree | 680 | 1.3% | | $75,332 |
| Doctoral or Professional Degree | 824 | 1.5% | | $90,483 |
| | | *Subtotal* | 14.3% | |
| **Total** | **54,375** | | | |

Source: California Employment Development Department. *Labor Market Information*; analysis by Cambridge West Partnership, LLC

Over the last six years the Inland Empire has added more blue-collar, middle-range paying jobs that has been the case throughout California.

Table 48: Where the Blue Collar Jobs Are

**Annual Salaries, New Jobs Added 2011-2016***

| Location | Low Pay $30,000 & Under | Blue Collar $45,-$55,000 | Office Jobs $45-55,000 | High Pay Over $55,000 |
|---|---|---|---|---|
| Inland Empire | 39% | 41% | 17% | 3% |
| California | 47% | 20% | 15% | 18% |

Source: John Husing, Economics and Politics Inc. and California Economic Development Department

In an effort to identify new program areas that would meet labor market needs in either Riverside or San Bernardino County, an analysis was completed of the occupations expected to provide 50 or more job openings annually through 2022. The list was sub-divided using the Bureau of Labor Statistics' training-level definitions with a focus on those occupations requiring between a high school diploma and a bachelor's degree. The most promising occupations are those with the highest number of projected annual average total jobs. The tables were sorted in descending order on that data column and are located in the Appendix F of this Plan.

Using the Standard Occupational Classification (SOC) codes and Taxonomy of Programs (TOP) codes the occupations that meet the criteria were mapped, to Associate Degree and Certificate of Achievement programs offered by the College and eleven other community colleges in the region (Barstow, Chaffey, Copper Mountain, Crafton Hills, College of the Desert, Moreno Valley, Mt. San Jacinto, Norco, Palo Verde, Riverside City, San Bernardino Valley, and Crafton Hills). In each table the TOP code has been placed in bold if Barstow College has an established program of study that is aligned to the occupation.

Because some of the occupations mapped to more than one of the TOP codes used by the community college system, there can be multiple programs using different TOP codes offered for each occupation. For that reason, some of the occupations have more than one row in the tables. Details regarding the requisite knowledge, skills, and abilities for each occupation can be found at the U.S. Bureau of Labor Statistics website https://www.onetonline.org.

By way of summarizing the detailed tables included in Appendix F, the following tables provide a quick overview of the projected job openings grouped first by expected educational preparation then by major occupational groups. Middle-skills occupations are defined as those that require more than a high school diploma but less than a Bachelor's Degree as preparation for entry-level positions. EDD projects 5,600 new job openings as the average annual count of these middle skills occupations in the Riverside and San Bernardino County region.[36]

Table 49: Projected Job Openings by Occupational Family

| Major Occupational Group Description Bachelor's Degree Required (expected) | 2012-2022 Annual Average Openings | 2014 Typical Median Annual Salary |
|---|---|---|
| Management Occupations | 1,803 | $91,466 |
| Business and Financial Operations Occupations | 1,521 | $62,064 |
| Computer and Mathematical Occupations | 248 | $81,619 |
| Architecture and Engineering Occupations | 321 | $83,424 |
| Life, Physical, and Social Science Occupations | 140 | $66,734 |
| Community and Social Service Occupations | 140 | $53,043 |
| Education, Training, and Library Occupations | 1,337 | $63,330 |
| Arts, Design, Entertainment, Sports, and Media Occupations | 345 | $50,075 |
| Healthcare Practitioners and Technical Occupations | 54 | $76,227 |
| Personal Care and Service Occupations | 85 | $21,413 |
| Sales and Related Occupations | 174 | $66,357 |
| Farming, Fishing, and Forestry Occupations | 6 | $48,441 |
| Transportation and Material Moving Occupations | 23 | $113,494 |
| ***Annual Total*** | ***6,197*** | |

[36] California Employment Development Department. *Labor Market Information, Occupational Projections for Riverside and San Bernardino Counties.* Retrieved July 14, 2015 from http://www.labormarketinfo.edd.ca.gov

| Major Occupational Group Description Associate Degree Required (expected) | 2012-2022 Annual Average Openings | 2014 Typical Median Annual Salary |
|---|---|---|
| Computer and Mathematical Occupations | 47 | $58,447 |
| Architecture and Engineering Occupations | 111 | $55,801 |
| Life, Physical, and Social Science Occupations | 98 | $42,094 |
| Legal Occupations | 56 | $51,142 |
| Education, Training, and Library Occupations | 153 | $30,058 |
| Healthcare Practitioners and Technical Occupations | 1,126 | $65,072 |
| Healthcare Support Occupations | 32 | $65,487 |
| Personal Care and Service Occupations | 3 | $73,478 |
| Installation, Maintenance, and Repair Occupations | 23 | $59,012 |
| Transportation and Material Moving Occupations | 6 | N/A |
| ***Annual Total*** | ***1,655*** | |

| Major Occupational Group Description Postsecondary Certificate Required (expected) | 2012-2022 Annual Average Openings | 2014 Typical Median Annual Salary |
|---|---|---|
| Business and Financial Operations Occupations | 3 | $57,098 |
| Legal Occupations | 7 | $85,530 |
| Education, Training, and Library Occupations | 62 | $36,938 |
| Arts, Design, Entertainment, Sports, and Media Occupations | 46 | N/A |
| Healthcare Practitioners and Technical Occupations | 505 | $42,767 |
| Healthcare Support Occupations | 901 | $34,344 |
| Protective Service Occupations | 108 | $73,615 |
| Personal Care and Service Occupations | 337 | $19,242 |
| Installation, Maintenance, and Repair Occupations | 317 | $52,072 |
| Production Occupations | 89 | $40,206 |
| Transportation and Material Moving Occupations | 995 | $42,398 |
| ***Annual Total*** | ***3,370*** | |

Source: California Employment Development Department. *Labor Market Information*; analysis by Cambridge West Partnership, LLC

The nature of the economy in Barstow has evolved over the last fifteen years as evidenced by the numbers of individuals employed in the occupational families shown at Appendix D. From 2001 to 2015 the only decline was the number of people employed in the arts, design, entertainment, sports, and media occupations. The greatest gain was in the food preparation and food serving related occupations followed by sales and sales related occupations, then office and administrative support occupations. Other areas of gain were found in healthcare practitioners and technical occupations, business and financial operations, and transportation and material moving occupations.

The College currently offers an array of instructional programs, some of which may address these expressed interests. An inventory of the instructional programs offered by Barstow College is found in the College Fact Books. Barstow College offers nine instructional programs that were a direct match to occupations requiring a bachelor's degree. The College offers twenty-five instructional programs that were a match to occupations requiring from a high school diploma to an associate degree. The most popular fields of study at Barstow College are Social Sciences and Humanities.

The following table, organized by level of education expected for entry-level positions in the Riverside-San Bernardino County region, provides summary counts of the occupations and College programs available.

Table 50: Occupations By Level of Education and Barstow College Program Coverage

| | Riverside-San Bernardino Region 2012-2022 | | |
|---|---|---|---|
| **Education Level** | **Number of Occupations With 50 Or More Average Annual Openings** | **Number of Barstow College Programs** | **% Coverage (Programs vs. Occupations)** |
| Bachelor's | 32 | 9 | 28% |
| Associate | 4 | 1 | 25% |
| Certificate | 16 | 5 | 31% |
| Some College | 2 | 1 | 50% |
| High School | 89 | 18 | 20% |
| ***Total*** | ***143*** | ***34*** | ***24%*** |

Source: California Employment Development Department. *Labor Market Information* and California Community College Chancellor Office, Academic Affairs *Program Inventory*; analysis by Cambridge West Partnership, LLC

Some of the programs of study offered by Barstow College are intended to facilitate transfer to a California State University (CSU) campus. The Legislature enacted and the Governor signed the Student Transfer Achievement Reform Act (SB 1440) in September 2010 in an effort to streamline transfer to the California public university system where most California community college students migrate. The act enables these two public systems to collaborate on the creation of Associate Degree transfer (AD-T) programs. Upon completion of the Associate Degree, the student is eligible for transfer with junior standing into the CSU system with guaranteed admission and priority consideration when applying to a particular program of study that is similar to the student's community college major.

The Most Popular California State University (CSU) Majors

The following table lists some of the most popular CSU majors. As of spring 2016 there were 36 transfer model curriculums (TMC) upon which the faculties of the community college and CSU systems had agreed. Three of the thirty-six are uniquely appropriate for more rural community colleges with an agriculture curriculum. An updated, complete listing is available at this C-ID URL https://c-id.net/degreereview.html.

The extent of curriculum alignment between the programs of study at Barstow College and some of the most popular fields of study throughout the California State University (CSU) where transfer model curricula have been established is noted in the following table.

Table 51: Associate Degrees for Transfer Established at Barstow College

| Associate Degree- Transfer | TOP | Barstow College Established | Barstow College Faculty Interest | Total |
|---|---|---|---|---|
| Administration of Justice | 210500 | X | | 1 |
| Art History | 100100 | X | | 1 |
| Biology | 040100 | | yes | 1 |
| Business Administration | 050500 | X | | 1 |
| Chemistry | 190500 | | yes | 1 |
| Communication Studies | 150600 | | yes | 1 |
| Computer Science | 070600 | | yes | 1 |
| Early Childhood Education (ECE) | 130500 | X | | 1 |
| Elementary Teacher Education | 490120 | | yes | 1 |
| English | 150100 | X | | 1 |
| Geology | 191400 | | yes | 1 |
| History | 220500 | X | | 1 |
| Mathematics | 170100 | | yes | 1 |
| Music | 100400 | | yes | 1 |
| Political Science | 220700 | X | | 1 |
| Psychology | 200100 | X | | 1 |
| Sociology | 220800 | X | | 1 |
| Studio Arts | 100200 | | yes | 1 |
| ***Total for College*** | | ***9*** | ***9*** | ***18*** |

Source: California Community College Chancellor's Office, Academic Affairs Division. *SB 1440 Legislation Update*. August 24, 2016; interviews and analysis by Cambridge West Partnership, LLC

<u>The Most Popular University of California (UC) Majors</u>

In summer 2015, the University of California announced a new academic roadmap for California community college students who planned to transfer to a UC campus. It is intended to simplify the admissions process and help students better prepare for transfer to the university and graduate within two years of admission. Although the pathways curricular directions are not a guarantee of admission, they are intended to help the university achieve its goal of a 2:1 ratio of freshmen to transfer students.

The extent of potential curriculum alignment between the programs of study at Barstow College and the most popular fields of study throughout the University of California (UC) is noted below.

Table 52: Most Popular UC Majors and Associate Degrees for Transfer Established at Barstow College

| Transfer Model Curriculum (AD-T) Established at Chancellor's Office | UC Transfer Pathway | Barstow College AD-T Scorecard | | |
|---|---|---|---|---|
| | | Established | Faculty Interest | Potential |
| Anthropology | X | | | 0 |
| Biology | X | | X | 1 |
| | Biochemistry | | | 0 |
| Business Administration | X | X | | 1 |
| | Cell Biology | | | 0 |
| Chemistry | X | | X | 1 |
| Communication Studies | X | | | 0 |
| Computer Science | X | | X | 1 |
| Economics | X | | | 0 |
| | Electrical Engineering | | | 0 |
| English | X | X | | 1 |
| Film, Television, Electronic Media | X | | | 0 |
| History | X | X | | 1 |
| Mathematics | X | | | 0 |
| | Mechanical Engineering | | | 0 |
| | Molecular Biology | | | 0 |
| Philosophy | X | | | 0 |
| Physics | X | | | 0 |
| Political Science | X | X | | 1 |
| Psychology | X | X | | 1 |
| Sociology | X | X | | 1 |
| ***Total*** | ***21*** | ***6*** | ***3*** | ***9*** |

Source: Retrieved April 29, 2016 from Admission.universityofcalifornia.edu/transfer/preparation-paths/index.html; California Community College Chancellor's Office, Academic Affairs Division. *SB 1440 Legislation Update.* June 22, 2016; interviews and analysis by Cambridge West Partnership, LLC

## B. Planning for Potential New Programs

The College has a well-established curriculum review and approval process. A shared-governance Curriculum Committee provides oversight to the process that includes both a technical and a substantive review of new curriculum ideas. Faculty members and division instructional deans propose new courses and programs, the Curriculum Committee and College administration critique, evaluate, set priorities and recommend proposals to the Board of Trustees. The criteria used to evaluate the visions for future curriculum within the College are similar to those adopted by the Chancellor's Office as discussed below.

Given the current California higher education public policy environment, priority should be given to programs intended for transfer preparation that have been developed around the Transfer Model Curricula (TMC). Priority should be given to career and technical education programs that fall within the primary areas of emphasis agreed upon through regional discussions. The labor market data analysis provided in the initial segment of this chapter and the evolving list of TMCs developed around the most popular majors within the CSU system point to the primary areas for future program development that would serve students well.

The Chancellor's Office has a set of long-established criteria to use when evaluating new instructional program proposals. They encourage individual colleges and districts to use the same or similar criteria when evaluating a curriculum proposal. Those five criteria are as follows:

Appropriateness to the Mission
The proposed program and required courses must be aimed at the first two years of postsecondary instruction. The curriculum has to be congruent with the mission of the California community colleges as described in Education Code section 66010.4 and with the mission statement and master plan of the college and district. The proposal must clearly articulate the content or skills whose mastery forms the basis of the student learning outcomes. The proposed

program must also address an occupational or transfer area that is valid for the region and institution. The courses and program must not be primarily avocational or recreational. Non-instructional activities and services are not considered to be courses and are not supported by apportionment.

Need

New curriculum must reflect the engagement of an educational planning process resulting from systematic program review that includes assessment of future needs and goals of the educational programs of the institution. The proposed program application must document the transfer applicability as meeting lower division requirements for a major program of study at a baccalaureate institution.

The need for noncredit college preparation or career development curriculum is presumed to exist if there is a student demand for the program and either their transitions to credit work or its fulfillment of labor market needs has been documented.

Career and technical education (CTE) program proposals intended to prepare students for entry level employment must provide labor market data or a recent employer survey that documents a need for the program and substantiates the opportunity for program graduates to secure future employment in the region. Statewide or national labor market evidence is considered as supplementary information. Industry or regional economic studies may be helpful validation. Letters from employers attesting to the need in the area and minutes of advisory committee meetings may be added for confirmation but only in conjunction with other collected evidence. Additional supporting documentation includes applicable studies or data from licensing agencies or professional associations and job advertisements for positions in the service area. The CTE program proposals must also secure the approval of the regional consortium of occupational deans so that duplication of programs is minimized. Additional suggested areas of discussion for labor market analysis are located in Appendix E of this Plan.

Curriculum Standards

The local curriculum committee, governing board, and program accreditor (when applicable) must apply the standards set forth in the Course and Program Approval Handbook and in the Title 5 Regulations. The college curriculum committee and the district governing board must approve all courses and new program proposals. The career and technical education regional consortia subsequently must review all CTE curriculum and new program proposals. The proposed program must also be consistent with requirements of any accrediting agencies where applicable.

The college must provide a description of the local approval process along with supporting documentation from advisory committees, local industry, and/or transfer institutions. The proposal process should ensure that the program is designed so that successful completion of the program requirements will enable students to meet the program goals and learning outcomes. Program-required courses should be integrated with courses selected to effectively meet the program goals and learning outcomes.

The Academic Senate for the California Community Colleges (ASCCC) provides useful additional information about best practices for curriculum development. Unless the web link has changed, curriculum resource materials are available as of fall 2015 at www.asccc.org/directory/curriculum-committee.

Adequacy of Resources
The institution must demonstrate that it has the resources to realistically maintain the contemplated program at the level of quality described in the proposal. That includes funding for qualified faculty to teach the curriculum of the proposed program, sufficient and adequate facilities and equipment, and essential library and learning resources to support the instruction. The institution must also commit to offering the required courses in the program at least once every two years and have faculty available to sustain the proposed required courses. It is incumbent upon the proposing college to carefully ascertain the space/facilities needs for a new program using the State facilities space standards.

Compliance
The design and proposed operation of the program may not be in any conflict with any licensing, state or federal law or regulation.

Although not required, the current thinking among occupational educators is that programs leading to industry-recognized certifications and programs designed with stackable certificates are highly desirable attributes of proposed CTE programs.

## C. Faculty and Staff Visions for Curriculum and Delivery of Support Services

A listing of future curriculum visions articulated by faculty members in each discipline was developed. Student services and administrative colleagues were also asked to identify their future visions for service delivery and student support. The future curriculum and service delivery visions were based upon responses to a questionnaire, interviews and listening sessions, open house events, and inspection of recent comprehensive program review documents The ideas were divided into two groups: (1) those for which some curriculum or administrative work had been started, recently approved, or lately modified and (2) those for which the idea was still percolating with an undetermined action/implementation date. These visions helped to spot interests in potential additional facilities and to recognize aspects of the current facilities that were not working well for the programs and services. Faculty members, student services professionals, administrative support specialists, and deans were also asked to identify their future interests in technology. The lists and discussions below summarize those visions of a potential future and perceptions about facilities and technology.

Academic Affairs Career and Technical Education Team Visions

- Curriculum Started, Recently Approved or Modified
    - Faculty members in the automotive discipline are working to make diesel a separate program by expanding the curriculum offerings.
    - Two new certificate programs have been proposed to the Chancellor's Office
        - Industrial Maintenance Mechanic & Technology and
        - Industrial Maintenance Electrical & Instrumentation
    - A separate diesel mechanics program has been approved by the Chancellor's Office.
    - Welding faculty members are preparing to offer a pipe-welding curriculum.
    - To better serve the CTE students who attend at the State Street facility, the College is going to offer

English, math, and computer courses at that location.
    - Faculty members are working to restructure the curriculum in accounting, business administration, economics, management, and computer information to create a synchronized program focused in entrepreneurship.
    - Photography faculty members have changed some existing curriculum, and have introduced new courses, certificates, and a degree. Two new courses are being reviewed in the Chancellor's Office.
    - The Warehouse and Logistics program has submitted a request to change its name change to Supply Chain Management.

- Ideas Percolating, Undetermined Implementation Date
    - The Administration of Justice faculty members are considering which new courses to offer to meet the needs of law enforcement and corrections agencies. Options include fingerprinting, forensics, and crime scene investigation.
    - The Allied Health program needs to be completely restructured.
    - The Building and Construction Trade program needs to be revitalized along the lines suggested by the advisory committee as construction employment opportunities are emerging in the region. Local industries have indicated that there is a need for trained electricians.
    - Faculty members in welding have been thinking about ways to expand the numbers of internships available to the students in that program.
    - Faculty members in the Supply Chain Management discipline are exploring areas to modify curriculum to better adapt to contemporary workforce needs.
    - It is recognized that advanced manufacturing requires specialized training and industry is changing in unpredictable ways. Faculty members are seeking to identify and evaluate ways to keep up with those changes and to offer specialized training.
    - Faculty members in child development, administration of justice, management, and business administration are exploring ways to get more satellite courses presented at Ft. Irwin.
    - Faculty members in child development are interested in proposing an AD-T in Elementary Teacher Education.
    - Faculty members in the division would like to find more qualified tutors to work with students in the career and technical education programs.

Perceptions About Facilities

It would be very beneficial to centralize all of the CTE programs in one area. The need for a CTE building on campus has been acknowledged. It would be ideal to have the ground floor replicate all of the bays at the State Street facility plus office and meeting room areas. The second and third floors could be dedicated to the balance of the programs.

The State Street facility lacks appropriate power capacity, computer networks, and Internet support for instruction. If all welding equipment is turned on, the circuits blow out. As a result, other classes that need electrical power cannot be offered concurrently in the other bays.

Additional growth in the Administration of Justice program is constrained by the currently available facilities that limit student enrollments to 24. The program could grow if larger spaces were provided.

The College has an agreement with the Victor Valley Community College District to share the use of the Regional Public Safety Training Center located in Apple Valley.

If enrollments in the Cosmetology program grow, the program will need additional space, more electrical power support, and equipment tailored to a salon environment.

In order to compete with other colleges, a child development lab should be provided to facilitate practicum experience for students as well as meeting the needs of Barstow College students who have children. Additional growth in this program is constrained by the current facility class size maximum of 24 students.

Perceptions About Technology
A number of the links on the College web pages are not working which undermines that resource as a marketing strategy.

Technology has been added to support instruction at the State Street facility. A virtual classroom has been created and satellite equipment/tools are being used to reach out to students at Fort Irwin. It would be helpful if more classrooms had smart boards and simulator programs to provide students with hands-on experiences.

Academic Affairs Liberal Arts Areas, Basic Skills Instructional Group Visions

- Curriculum Started, Recently Approved or Modified
    - ESL faculty members have revised courses to include content-based instruction that ties language learning to topics in culture, health, relationships, and American culture.
    - There are plans to expand the Bridge to College Success and workshop offerings.
    - The Basic Skills Initiative Coordinator is seeking to promote more coordination among English faculty members.

- Ideas Percolating, Undetermined Implementation Date
    - English faculty members plan to review the Basic Skills pathway for English that is currently in place. It is possible that a class or two might be eliminated if the accelerated classes prove successful.
    - English faculty members have discussed the possibility of creating co-requisite curriculum to teach reading along with composition.
    - ESL faculty members would like to explore ways to build relationships with the Career and Technical Education programs in order to further support the ESL students in those programs.

- ESL faculty members are considering ways to add cross-listed classes in grammar with the English Department.
- ESL faculty members have expressed an interest in professional development on a supplemental instruction (SI) program to employ advanced or former ESL students to support the beginning or intermediate level students.
- Three clear curriculum pathways are being discussed by ESL faculty members: (1) transfer preparation; (2) career and technical education; and (3) personal growth via noncredit instruction.
- Faculty members have considered developing a course for individuals who wish to join the military to help with English language skill development.
- There has been some consideration of offering ENGL 50 and MATH 55 at the high schools in lieu of offering those basic courses at the College.

Perceptions About Facilities
English faculty members indicated that a writing center would be of great assistance to the basic skills program students. The writing center staff would require different training that is currently provided to tutors.

ESL faculty members expressed concern that the currently used classroom will not be adequate as enrollments in the discipline grow over the very long term.

Reading program instructors indicated an interest in establishing a learning center for basic skills instruction. It is anticipated that the laboratory would incorporate individualized assessment, instruction, Internet access, and a variety of learning tools and materials for all aspects of basic skills.

Perceptions About Technology
There is an interest among ESL faculty members in evaluating the possibility of creating a satellite link to ESL students at Fort Irwin in order to provide instruction to them.

ACSK faculty members expressed needs for new, networked computers and a new projector for the instructional space in which they are currently operating. They also indicated an interest in acquiring access to an online program to provide practice in reading and math, such as Learn Zillion or a similar program.

Academic Affairs Liberal Arts Areas, Fine Arts and Humanities Instructional Group Visions

- Curriculum Started, Recently Approved or Modified
  - English faculty members will be offering English 50X, an accelerated (compressed) course, as a hybrid or online offering.
  - Based upon the documented success and high completion rates, more sections of short term, staggered classes during the semester, such as English 50/1A and 1A/1C, will be offered.
  - A glass studio module is being added to the ceramics course.
  - Speech 3, Interpersonal Communications, needs to be restructured as a face-to-face class or in a hybrid format so that it can be reinstated as a qualifying course for the IGETC pattern and included in the CSU “Golden Four” curriculum.

- Some dance curriculum has been removed from archived status.
- Music faculty members have submitted the follow-on sequenced classes in chamber singing and jazz ensemble for approval at the Chancellor's Office.

- Ideas Percolating, Undetermined Implementation Date
  - English faculty members are considering how to schedule the literature courses to be taught in a two-year cycle as part of the AD-T in English.
  - There is an interest in offering more learning communities and exploring the option of supplemental instruction for the accelerated classes.
  - Art faculty members are considering proposing figure drawing, basic design, Asian art history, and intermediate sculpture courses to the curriculum, developing an AD-T in Studio Art, and would like to increase the number of art history courses provided as online offerings.
  - It would be helpful for the development of the performing arts program to eventually offer some dance and some technical theater curriculum.
  - If additional faculty were available, Speech curriculum could be expanded to include argumentation and debate, oral interpretation of literature, intercultural communication, small group discussion, parliamentary procedure (1 unit), and a noncredit Speech 50 for fearful people. Most of these offerings would build toward an AD-T in Communications.

Perceptions About Facilities

English composition has second claim on rooms with computers if the CBIS and CSIS curriculum does not need the room. The current configuration of desktop computers in rooms B-3, B-6 and B-16 is distracting and problematic for English composition instruction. In future plans for classroom equipment using a class set of laptop computer units or desks configured to store a computer below the desktop until the computing equipment is needed might work better. (see technology implications below).

Art faculty members indicated that they need more instructional and storage space as well as a permanent area for exhibits. They also have an interest in having a projector and built-in screen installed for power point and video projections.

The pit area of the Performing Arts building is not efficient as it was constructed only three feet below the main stage and there is no easy access point to the area.

Speech instruction would be dramatically improved if technology were available to videotape student speeches and if an adjacent room were available to use for immediate play back of the speech and subsequent further critique.

Perceptions About Technology

Canvas has been adopted as the College learning management system and English faculty members are shifting materials to that platform. All English faculty members have been provided professional development instruction through the @One workshops. English faculty members anticipate a need for online and personal tutoring support for students in remedial courses.

It would be helpful to rearrange classrooms that have in-place computers located so that the equipment takes up less space, perhaps by replacing the current units with smaller laptops or store the computer below the desktop area.

Improved Internet connectivity would greatly assist the use of live videos and allow students to access resources during class time.

Improved email filters are needed so that faculty members receive emails from their students and SPAM is reduced.

ESL faculty members are making good use of MyEnglishLab Azar-Hagen software.

Academic Affairs Liberal Arts Areas, Math-Science Instructional Group Visions

- Curriculum Started, Recently Approved or Modified
    - Biology faculty members are restructuring several courses to ensure they can transfer to UC. They have proposed a pre-nursing certificate that may need to be revised to meet Financial Aid requirements.
    - Chemistry faculty members are restructuring several courses to ensure they can transfer to a nursing program at a local university.
    - Earth science faculty members are taking advantage of additional C-ID descriptors in the geology discipline to restructure current courses to align with those descriptors and ensure transferability.
    - An additional astronomy lecture course (ASTR2) is being developed.
    - Computer science faculty members have proposed certificates of achievement in programming, web development, and management information systems to tie into industry-recognized certificates.

- Ideas Percolating, Undetermined Implementation Date
    - Biology faculty members have discussed the feasibility of adding for science majors more UC and CSU transferable courses such as plant biology, general zoology, and cellular biology. The addition of these courses could lead to an AD-T in Biology. The use of online laboratories is a sticking point regarding transfer, but hybrid formats may be viable. Another alternative is to split the curriculum into two courses, one lecture delivered online, the other laboratory done on the campus. That is the practice in astronomy.
    - Chemistry faculty members have discussed a long-term goal to develop an AD-T in Chemistry with the addition of several courses such as first and second semester general chemistry, first and second semester organic chemistry, and an introductory chemistry course. Consideration is being given to offering an introductory course in a hybrid format.
    - Biology and Chemistry faculty members are interested in supporting supplemental instruction.
    - The earth science faculty members have discussed adding courses for transfer in the four broad areas of the discipline- astronomy, geology, oceanography, or physical science. The feasibility of historical geology and environmental geology courses are being explored. There are also plans to

evaluate other appropriate science courses for online delivery.

- Faculty members in this instructional group have discussed the desirability of adding a physics component to the curriculum.
- The computer science faculty members are exploring the feasibility of re-creating the CSIS degree with revisions, updating certificates in the field, and working on the AD-T in the discipline.
- Math faculty members have discussed developing a math AD-T by adding linear algebra or differential equations courses. These additional courses would help STEM majors.
- Math faculty members would like to explore the STATS pathway acceleration idea.

Perceptions About Facilities

Students often require more time to master a biology laboratory concept than is available in their allotted lab time. It would be useful if the College had the space to offer open lab times for students to utilize around their schedules so they could master content. It would be beneficial if there were spaces to house tutoring where the science labs are taught so that the tutors could utilize models/equipment when appropriate to aid student learning. Biology faculty members would like to add a cadaver lab space to better prepare future nurses. Lab spaces specific to biochemistry and microbiology would excellent additions. Microbiology currently needs to expand its facilities to house appropriate microbiology equipment (freezer, refrigerator, autoclave).

Expanding the chemistry curriculum will require more laboratory space and equipment. Currently the chemistry laboratory does not have adequate fume hood space, or a designated chemical area that is easily accessed by the students in the lab. If the College were to offer organic chemistry, it would be absolutely necessary to have a new lab space where every student had his/her own fume hood in which to work. Additionally, for organic chemistry, a significant amount of equipment including laptop computers would need to be stored when not in use.

There is also a major need for additional storage space associated with the earth science laboratory room and classrooms.

The Space and Technology Center has been identified as a future project in the current Five-Year Plan of the Facilities Master Plan. The project would satisfy the current and future need for additional lecture and laboratory science classroom space while also addressing the concerns about the future of the astronomy curriculum. The current astronomical observatory is a temporary, fiberglass structure that has a limited lifespan. It will probably last, at best, another five years. It was purchased eight years ago under the assumption that a permanent brick and mortar observatory building would be constructed in the near future. A planetarium would allow students to "observe" the sky at all hours of the day. Astronomy would no longer only be taught only as an evening class. It would also allow students to study many other important celestial objects that are just too distantly remote to be observed with a modest observatory telescope. A planetarium would allow the College to do more public outreach.

The size of the some classrooms in which math is taught is adequate for now. However, S11a and S2 are very small, seating only 24 students, and not adequate to facilitate larger enrollments attracted

to math. When math enrollments increase these facilities may not be adequate in the future.

Perceptions About Technology
Teaching and learning in biology increasingly relies on data-driven activities requiring the use of software on computers or tablets. Students are incorporating more math and chemistry into their study of biology. In some courses reliable Internet connections to access web-based resources is needed, perhaps through classroom laptop computers.
The biology faculty members expressed a need for a class II Biological Safety Cabinet in which to safely house organisms that are commonly used in undergraduate microbiology courses.

Smart classrooms, with reliable Wi-Fi, would be a welcomed addition.

The 16 computers in the Earth Science laboratory were replaced with a server that has not worked well. Students regularly complain of slow Internet speed, programs not working, and peripherals being non-operational. This means timely technical assistance is difficult to secure when it is most needed. It might be helpful to the College if 4-10 computers were added to room T14 where earth science and biology/chemistry are predominately taught. If that were done, math curriculum that needs access to computers could use the room in off-laboratory times.

Academic Affairs Liberal Arts Areas, Physical Education/Athletics Instructional Group Visions

- Curriculum Started, Recently Approved or Modified
    - Some courses have been re-established from archived status (Body Conditioning, Fitness Walking, Fitness Walking for Seniors, Jogging)

- Ideas Percolating, Undetermined Implementation Date
    - Athletics and Physical Education faculty members plan to restructure athletics courses to meet the California Community College Athletics Association (CCCAA) requirements.
    - Faculty members in this division plan to expand PEAC and PELC course offerings to meet student needs through both face-to-face and online instruction. The plans are to revive or write new curriculum such as: a tennis course, add spin cycling, and introduce a variety of aerobic classes (Zumba/step aerobics/Pilates/P90X).
    - The Athletics staff is exploring the feasibility of adding two women's intercollegiate programs (soccer and volleyball).

Perceptions About Facilities
The College currently does not have a soccer facility or a track. Adjacent public recreation facilities are used as needed.

Safety screens and a number of equipment items are needed to support the instructional program in the new wellness center. Storage for equipment needs to be provided. The classroom located on the mezzanine areas of the new Wellness Center seat 20 students, but it is crowded to do so.

The faculty members indicated that the tennis courts needed to be refurbished.

Perceptions About Technology
The PEAC/PELC classrooms in the new wellness center lack multimedia technology such as a projector and/or a “smart” television or monitor.

Academic Affairs Liberal Arts Areas, Social Science Instructional Group Visions

- Curriculum Started, Recently Approved or Modified
    - Psychology curriculum is using a flipped classroom strategy to engage students in the learning process and give them practice in doing group work and help them to develop better communications skills.
    - Political Science faculty members have introduced two new courses and secured approval for the AD-T in that discipline.
    - History faculty members are seeking to provide web tools for students to develop writing, research, and public speaking skills in addition to learning history.
    - History faculty members have secured an AD-T in that discipline.
    - All of the faculty members in the social sciences have worked on aligning their curriculum to the C-ID descriptors.

- Ideas Percolating, Undetermined Implementation Date
    - Faculty members in sociology are considering additional courses in specific areas of contemporary concern such as Lesbian, Gay, Bisexual, Transgender, Questioning sexual identity (LGBTQ) and Gerontology.

Perceptions About Facilities
Currently classrooms are poorly designed for active learning pedagogy, as they do not have moveable chairs. It would be helpful if the lighting in B Block classrooms could be dimmed near the projector screens rather than entirely on or entirely off. Having thermostats in the classrooms that would allow for modest adjustments of the room temperature would be appreciated.

An adjunct faculty office hub needs to be established in the S-Building. One of the doors for room S-9 does not work properly and often has a large rock to prop it open.

Faculty members expressed an interest in having one or more rooms semi-dedicated to the disciplines in the division so that wall space could be used for discipline appropriate materials and scheduling.

Perceptions About Technology
Faculty members in Sociology indicated a need for additional professional development in the use of classroom technology.

Psychology faculty members expressed an interest in additional support for face-to-face instruction through the learning management software. It would be helpful if all courses each term automatically had access to the learning management system.

Projection equipment in S-11 does not fit the screen and the audio controls are not consistently set. The view of the screen is blocked for some students in parts of the room.

Academic Affairs Liberal Arts Areas, Library- Student Academic Support Services Visions

- Ideas Percolating, Undetermined Implementation Date
    - Remove outdated materials from the library.
    - Once this is done, make physical changes to library furniture and its functions. (as detailed above)
    - Create and upload instructional materials to college learning management system so as to give distance education students better access to information literacy instruction.
    - Create a scaffold system of library tutorials for students who have substantial research assignments to complete and persuade faculty to accept the new system.
    - Create more specifically targeted library assignments for one-shot tutorials.

Perceptions About Facilities
The library staff would like to have College staff offices returned to student study rooms.

Perceptions About Technology
Individual study carrels with charging stations would be very useful additions to the library.

Fort Irwin Program Visions

- Curriculum Started, Recently Approved or Modified
    - The program management team has designed and presented that to College senior management a two-year schedule of classes that would meet the needs of the military personnel and dependents at Fort Irwin.
    - The program management team is matching the ten most common Military Occupational Specialty (MOS) designations to the degree programs of study offered at the College. To the extent there are matches the information will be used to recruit additional soldiers to enroll at Barstow College.
    - The program manager has continued to actively recruit U.S. Marine Corps personnel from the San Diego area to enroll in online courses offered by Barstow College.

Perceptions About Facilities
The current facilities used for the instructional program and student services support are in need of replacement. The program management leadership is exploring other facility options at the Fort.

The instructional program at Fort Irwin needs a laboratory course periodically offered to meet degree requirements, but there is no laboratory facility available at this time. Online science laboratories might be a means to bring laboratory instruction to Fort Irwin; however, security and man-hours issues would have to be negotiated.

Perceptions About Technology
The Career and Technical Education program has expanded the use of the teleconferencing facility on campus in Building D to deliver instruction to Fort Irwin students. The academic programs should

pursue access to that space when it is available or add an additional virtual classroom on campus and at Fort Irwin. The ESL prioritized classroom is one option that has been discussed. Adding a virtual (teleconferencing) classroom at Fort Irwin and on campus may be one way to deliver a broader variety of classes in areas that do not have larger enrollments such has higher math, etc. Expanding teleconferencing offerings may necessitate a dedicated aide to assist students and instructors in using the teleconferencing equipment.

General Administrative Offices Visions

- Initiatives Started, Recently Approved or Modified
    - Anticipated changes next year in San Bernardino County Office of Education software will impact the way in which the College handles scholarships, disburses financial aid, processes purchase requisitions, and manages accounts receivable. Almost two-dozen employees will need training and support on how to use the new software. The College will become the administrator of the system for College employees needing access.
    - The Budget Analyst and Business Office staff are providing professional development to budget managers as those individuals are now expected to track their expenditures and are being held responsible to not over expend their budgeted funds.
    - Maintenance and operations is working to launch a new work order system to streamline the communications between requestor and the support team.
    - Funds and energy are now being devoted to improving the campus information technology infrastructure, Internet and network switches primarily.
    - BCC continues to move some physical environments into the cloud information technology, such as the library and the laser fiche (document imaging).
    - The College continues to move toward a decision to adopt the Canvas learning management system.
    - A new primary storage area network (SAN) is being implemented to address some of the aging information technology equipment. A secondary storage area network will be implemented when additional components are available.
    - The Public Information Office is now promoting events presented in the Performing Arts Center.

- Ideas Percolating, Undetermined Implementation Date
    - With the increase in grants and restricted funds the Business Office needs to provide additional financial support and oversight. Additional staff will be needed to provide those internal controls.
    - Wireless technology capability will need to be upgraded as more administrators, faculty, staff, and students continue to exercise the Bring Your Own Device (BYOD) onto the campus to access the BCC network.
    - Information technology equipment loaning is another area that will need to be addressed as, that seems to be the trend with other institutions, and K12. The EOPS staff has currently has a set of 15 loaner laptop computers.

- Other platforms should be evaluated for movement into the cloud information technology environment, such as Office 365. That would also provide a higher level of security and stability to the Exchange (email) system than the College currently has.
- Information systems and applications should be created to address the students' needs to be successful in their academic careers.
- Public Information is considering alternative ways to improve calendaring and promotion of campus events and services.

Perceptions About Facilities

It would be helpful if the offices of the Vice President for Administrative Services, the Budget Analyst, and the Business Office were in closer proximity so that they might share equipment and storage areas and facilitate close collaboration. Additional space is needed for the current and future Business Office staff and for a professional expert to have a work area near the Budget Analyst's office. Discussions in the current Business Office area become distracting to the work of the whole office. One plan option discussed is to repurpose the former fitness center for use by Maintenance and Operations and Information Technology staff groups then repurpose their current office areas in the Administration Building for Human Resources, the Business Office, and the Vice President for Administrative Services.

Additional meeting rooms are needed throughout the College.

Human Resources identified a need for additional office space, filing space, testing/interview space and conference room space.

When the Information Technology group moves into new spaces, secure storage areas in which to place all of the technical equipment will be required.

The Public Information Office would like some additional space to support student workers.

The Institutional Research, Development, and Planning staff are currently using student study room areas in the Learning Resources Center as their offices.

The Central Plan has been losing a gallon of hot water per hour for many years and needs to be repaired.

The College has never had a Facilities Director to do any planning, archive accurate building plans, or infrastructure project locations.

Perceptions About Technology

The College adopted the Banner Student Information System around 1994 but is now going back to implement the Banner baseline product so that customizations are minimized. The College did not adopt the Human Resources or the Financials modules of that system.

The College would benefit from a phone system that could handle the anticipated future call volume and be able to store messages that might accumulate over several days of absence. Half of the college phones are analog while the others are on the digital network.

The email system needs to be upgraded so that older emails can be preserved and larger attachments received.

Human Resources Information System software is needed to support improvements in applicant tracking, position control, training, evaluation tracking, and file management. They currently use four different stand-alone applications, two of which are tied to the County Office of Education software systems (EPIC and ELPS). Enterprise Software Solutions (ESS) is also used. Neo Gov software has been purchased for tracking recruiting and hiring processes but is not implemented.

The Information Technology group anticipates that over the next five to ten years technology used today will become obsolete and will need to be replaced. Ongoing training for the College workforce will be associated with that relentless technology change process.

Virtual reality is something predominates in the gaming industry. However, some aspects of this technology are emerging in education. BCC already has a virtual reality application in the welding department. The College will need to monitor this technology so that BCC will continue to be the leader in the technologies that the students need in order to be successful in their academic careers.

The campus surveillance camera system is outdated and overage is inconsistent. Some of the units are on analog lines while others are on the digital network.

Student Services Division Visions

- Curriculum or Services Started, Recently Approved or Modified
    - The Financial Aid Office is doing more outreach events to new groups such as foster youth (CAFYES) and offering specialized workshops on topics such as financial literacy using the c
    - Chancellor's Office web resource- cash course.
    - Staff members in the Special Programs unit are endeavoring to expand services and interventions to students who are placed onto probation.
    - Collectively the units within Student Services are working to improve completion and practice the three "Cs" (collaboration, communication, caring).

- Ideas Percolating, Undetermined Implementation Date
    - The Admissions and Records staff would like the College to explore the implementation of software to accept electronic transcripts and integrate the data directly into the student information system.
    - It would be helpful and more economical if the College were able to find a way to provide interpreters for deaf students rather than relying on an agency in San Bernardino.
    - The counseling faculty members would like to see more English and math workshops provided in the Student Success Center.
    - Following up with all incomplete applicants is a topic under discussion by the counseling faculty members.
    - The counseling staff members are exploring ways to build more connections with the local community and creating a list of resources for students to use.
    - Student Equity and Student Success and Support Programs are exploring options and viability to:
        - Formalize an early alert system;
        - Start a first year experience program;

- Influence two-year course scheduling and the patterns used to schedule selected key gatekeeper courses;
- Formalize a peer mentoring program;
- Help implement the State online education initiative (OEI) resources on the campus for advising and support services, especially for online students;
- With assistance from Institutional Research, discover additional barriers student face to their success;
- Expand faculty knowledge of the program and services offered as well as pedagogies that would lead to better student outcomes; and
- Discuss with the K-12 districts the possibility of a joint application for an Upward Bound grant.

Perceptions About Facilities
Currently, there is no place for student clubs to meet. Also, the College does not have a large multipurpose room that could accommodate more than 75 people for an event.

Additional office and storage space has been identified as needed for the Financial Aid Office.

The Special Programs and Services unit has added staff and resources from categorical grants. It needs additional office space for those personnel. The Special Programs unit needs additional space for storage of school supplies, gem cart and scooters. The unit members also identified a need for quiet rooms for testing and office areas for the staff.

It is anticipated that with the receipt of more categorical grant funds more students will be provided services and those service centers, such as the tutoring area, will no longer be of sufficient size.

Perceptions About Technology
In general the Student Services units would like to see more technology used in their area for the benefit of students. The units now use SARS and have purchased, but not implemented a phone application called Grad Guru. It would be helpful if all students could be issued a Barstow College student email account.

Admissions and Records plus Counseling urgently need a multi-purposed degree audit and educational planning software implemented on campus and tied into the College student information system. The state-sponsored educational planning software will not limit the disbursement of financial aid to curriculum that is applicable to a Barstow College degree or certificate nor will it help clear a petition for graduation. A locally installed product is essential to allow the College to meet expectations from the Student Success Task Force legislation and help the staff speed up the degree clearance process. It is anticipated that the state-sponsored software will allow students to run “what if” scenarios and monitor their progress toward completion.

Student Services professionals are anticipating that the Starfish software, part of the State OEI, will be available to them in summer 2017.

The College is currently using outdated Laserfiche technology as the college-wide document scanning system. It would be more efficient to move to a more robust scanning system, such as DocUScan, that integrates with Banner so that documents can be scanned real-time, uploaded to Banner, and the original returned to the student.

## D. Opportunities for New Initiatives, Improvement or Expansion of Programs

### *1. General Areas of Opportunity*

Several general areas of opportunity are available to the College at this point in time (academic year 2016-17). These are offered in support of the College goals previously cited in this Plan.

Senate Bills 1440/440

The 2010 enactment of the Student Transfer Achievement Reform (STAR) Act, aka SB 1440, provides the California community colleges with an opportunity to adjust some of the transfer-oriented programs that had been offered and to introduce new ones. The legislation requires a community college district to grant an Associate Degree for Transfer (AD-T) to a student in his/her field of study once the student has met degree and transfer requirements for a particular major. Once the transfer associate degree is earned (awarded), the student is eligible to transfer with junior standing into a local California State University (CSU) campus. Students will be given priority when applying to a particular program that is similar to his/her community college field of study. The bill prohibits a community college district or campus from adding local course requirements in addition to requirements of the STAR Act, and prohibits the CSU from requiring transferring students to repeat courses similar to those taken at the community college that counted toward their associate degree for transfer.

The statewide strategy to implement the STAR Act is to develop transfer-model curriculums (TMC) through inter-segmental faculty dialogue using the structure of the course identification numbering system (C-ID) as much as possible so that statewide common course descriptions will be used as building blocks. The initial focus of the project is on the most popular transfer majors within the CSU. The goal is to reach agreements on a model curriculum that all community colleges will adopt for each particular major.

A subsequent amendment in 2013 (SB 440) required community colleges, by the start of the 2015-16 academic year, to create before the start of the 2013-14 academic year an associate degree for transfer in every major offered by the college that has an approved transfer model curriculum. Furthermore, the community colleges are required to create an associate degree for transfer in specified areas of emphasis before the start of the 2016-17 academic year. Two area of emphasis, Global Studies and Social Justice Studies, TMCs were added in fall 2015.

Three additional model curricula have been created to promote a greater degree of standardization for community college associate degrees where the discipline does not fit the 60 lower-division units plus 60 upper-division units structure of the STAR Act. These are not TMCs within the SB1440/440 framework. They are in the fields of: (1) Engineering; (2) Information Technology; and, (3) Nursing.[37]

As of spring 2016, thirty-six model curriculums had been approved that covered the CSU majors selected by roughly 80 percent of the community college transfer students, and individual colleges throughout the community college system response is from only 5 AD-Ts up to 28 AD-Ts. The results indicated that 20,600 community college students earned the new AD-T in 2014-15.[38] Some 7,000

[37] For additional information see https://c-id.net/degreereview.html

[38] California Community College Chancellor's Office. *Press Release.* December 10, 2015.

students were accepted at a CSU, an encouraging acceptance count that was up from previously only 450 in 2011-12.[39]

The SB1440 legislation is a major policy shift for California higher education as it seeks to finally provide a cleaner and clearer path for easier transfer from the community colleges to the CSU where most students transfer. It eliminates the campus-by-campus and major-by-major transfer requirements and represents an unparalleled opportunity for the community colleges to facilitate the transfer process.

The University of California (UC) has also taken steps to simplify the process for transfer students, as it has articulated specific pathways for transfer into its 21 most popular majors. UC anticipates identifying pathways that are closely aligned with the AD-Ts established between the community colleges and the CSU system. In addition, the UC has pledged to meet the goal of a two-to-one ratio of incoming freshmen to transfer students by 2017-18.[40]

Completed questionnaires and faculty interviews indicated an interest in expanding the number of transfer degrees offered. Those potential new areas are noted in the tables appearing with the previous discussion of the popular majors in the CSU and UC systems.

[39] Carl Lariveral. "Easier Path From Community College to Cal State, Report Says," *Los Angeles Times*. February 2, 2015.
[40] Nicole Freeling. "UC Offers Community College Students A Clear Path to Transfer," *Press Release.* July 8, 2015; Department of Finance. *Higher Education Highlights to the May 2015-16 Revise Budget Proposals;* University of California Transfer Information. Retrieved April 29, 2016 from http://admission.universityofcalifornia.edu/transfer/preparation-paths/index.html

One possible new transfer degree discipline that meets an urgent regional labor market need is Elementary Teacher Education. The potential utility of that degree offering is based on the observation that public sector employment in education is a significant factor in the economy of the service area. There are substantial projected employment opportunities in the region for public school educators as EDD has projected just over 1,000 annual average openings out to 2022 (582 in elementary school teaching, 175 in middle school teaching, 204 in secondary school teaching, and 50 in special education/kindergarten teaching). Both the Silver Valley and the Barstow Unified School Districts have experienced difficulty in recruiting and retaining teaching faculty. A regional collaboration with CSUSB has been established through a memorandum of understanding for a cohort of students to go through the Liberal Studies/teacher credentialing curriculum taught on the high desert by CSUSB faculty members. The students in the cohort are currently teaching assistants in the Barstow Unified School District but want to secure full-time teaching jobs. Victor Valley Elementary School District, Victor Valley Union School District, and Victor Valley College may be interested in joining in this regional effort. The College regularly offers most courses listed in the Elementary Teacher Education TMC template. Upon initial review it appears that the College might need to add only three more courses to provide the required core curriculum of 48 units. It may be useful for the College to accelerate the development of curriculum and a proposal to the Chancellor's Office for authority to offer this transfer degree.

Assembly Bill 86- Assembly Bill 104 Block Grant
The Legislature provided the community college system with an opportunity to serve new students and advance the interests of the State. The May 2015 revision of the Governor's proposed 2015-16 budget included $500 million to establish an Adult Education Block

Grant program that provides funds to school districts and community colleges. Of that total $350 million is earmarked for adult schools to maintain their level of effort in providing services while $150 million is set aside for consortia work. The AB 86 program seeks to strengthen coordination of adult education services among adult schools, community colleges, local workforce investment boards, libraries, social service agencies, public safety agencies, etc. by reducing redundancy and providing the services to adult learners more effectively.

Regional consortia proposed a transparent governance structures that were jointly approved by the Superintendent of Public Instruction and by the Chancellor of the Community College System. The language in the 2015-16 State Budget assures funding certainty and consortia are required to engage in robust planning at least once every three years. The Superintendent and Chancellor developed a plan using the consortia structure in future years to distribute Workforce Innovation and Opportunity Act (WIOA), federal Title II, and Perkins funding.

In broad terms the Barstow Adult Education Consortium set out four goals: (1) expand student access and outreach; (2) develop pathways specific to the region; (3) develop programs for special needs students; and, (4) further develop child development courses to train adults to work with elementary school children. The goals were addressed by

1. Improving web pages to contain application forms, student planning guides, and career assessments. Both guidance counselors in the K-12 districts and community college staff at the Student Success Center were enlisted to assist students.
2. Integrating Basic Skills Training (IBEST) training, curriculum development and work with employers, ROP, and WIOA programs.
3. Adding of Best Industries to the leadership team and work with curriculum.
4. Adding child development curriculum offered by all districts through the virtual classroom at the College.

During the 2014-15 academic year, the goal was to expand and articulate services to English Language Learner (ELL) students and support ESL programs targeting elementary and secondary skills. Software programs were installed and teachers were trained in their use. In 2015-16 the intent was to purchase materials and develop curriculum for a citizenship program, open a GED center, and work to contextualize instruction to ELL students in career technology classes.

The AEBG allocation of just over $712,000 for 2015-16 was divided among the three K-12 districts with the bulk of the funds designated to sustain adult basic education and career and technical education efforts. Some of the funds were used to purchase equipment and software for the Baker Unified School District as it is the most remote and isolated of the three K-12 districts and had expressed an interest in receiving college curriculum delivered via this modality. The long-term intent was to use the virtual classroom (room D 108) at the College to deliver ESL and other instruction. There was discussion to fund College ESL faculty to collaborate with K-12 counterparts to develop content specific modules and lessons. The College has been directing students to the adult education GED or high school preparation programs when appropriate. Additional details are contained in the Annual Plan for 2015-16, the AEBG Consortium Member Allocation and the AEBG Consortium

Performance Measures documents.[41] The College may want to pursue some of the AEBG block grant funding to support the expansion of the CTE and ESL curriculum areas as well as the delivery of general education college courses to students in the Baker Unified School district. The College may want to explore proposing the existing ESL noncredit courses as a college preparation or career development certificate that would qualify for additional levels of FTES funding.

California Online Education Initiative (OEI)

The third general opportunity is the OEI project launched in 2013 that seeks to re-invigorate online instruction within the California community college system by addressing some of the known shortcomings in distance learning. The Initiative has the Governor's backing and a $56.9 million budget over 55 months.

The 27-member steering committee includes representatives from a variety of constituencies that have been organized into workgroups to address: (1) professional development; (2) consortium operations; (3) student support services; (4) a common course management system; (5) basic skills; and, (6) academic affairs. With the grant funding, the OEI promises to provide colleges with incentives to participate.

Future students are promised online learning readiness materials, tutoring and basic skills support, counseling/advising, and streamlined access. Twenty-four pilot colleges have tested solutions for student readiness; tutoring support strategies; and, the use of the common course management system.

OEI has offered no-cost or low-cost tools such as a course management system, course design resources, a re-designed California Virtual Campus website and catalog, and professional development for faculty. College faculty members and administration have expressed some interest in adopting Canvas, the state-recommended course management system.

OEI has also offered faculty resources for curriculum design, professional development in teaching in the online environment, peer review feedback of instructional design and pedagogy ideas, resources to help work with the course management system, example policies for effective practices, and proctoring assistance.

One of the most promising aspects of the OEI is the Exchange. It is often challenging for colleges to ensure that all students have access to the courses they need at the times that best fit their busy schedules. The goal of the Exchange is to facilitate progress toward completion by providing access to courses across colleges. Students enrolled at colleges in the Exchange will be able to seamlessly register for Exchange courses, often those high-demand or difficult-to-fill courses. To ensure that course credits are recognized by a student's home college, all participating colleges will become members of the OEI Consortium. Membership will require the college to change business processes to make registration seamless, host technology-based mechanisms to carry out those processes, sponsor courses designed to a set of exemplary online education standards, recruit faculty who are committed to excellence in online learning and teaching strategies, and offer courses students need to complete their educational goals. The vision for the Exchange has been dubbed the "Herculean" task of the OEI as it may be the most

[41] Barstow Adult Education Consortium. *Adult Education Block Grant Annual Plan 2015-16; Consortium Performance Measures Form; and Consortium Member Allocations Form.* October and November 2015

complex work undertaken in the overall effort, but it portends great dividends for the students.

As noted in the internal scan portion of this Plan, the College has been an active participant in online instruction. Online instruction holds a promise to reach students outside the region as well as those who live in the service area but who cannot come to the campus. It also provides an option for students at the institution who were unable to enroll in a class they need in order to progress through their chosen program of study. It is clearly a means to reach a broader audience. The College recorded online instruction as early as fall 2003 (410.38 FTES), which it represented only 28% of all FTES that year. Over the period of fall terms 2003 to 2015 the volume of FTES attributed to online instruction steadily grew to 458.81 FTES representing on average 32% of FTES at the College. From the earliest year on record (fall 2000) the volume of statewide FTES generated by online instruction compared to the total statewide FTES grew from .03% (130.76 FTES) to 9.5% (49,582.43 FTES) in fall 2015. The College is one of the leading providers of online instruction in the state system.

Participation in the OEI is voluntary on the part of the colleges, faculty, and students. Barstow College has seized the opportunity to participate by adopting the Canvas learning management system, participating in the pilot efforts with student readiness materials and tutoring, and by arranging for faculty to complete workshops in on online course design and pedagogy offered through the @One network. The College recently hired a Dean for Distance Education and Learning Support.

Over the years a great deal has been learned about the challenges to effective learning through an online environment. The OEI appears to be offering solutions to those known challenges.[42] The course credit exchange component of OEI may be a way to help the College attract even larger numbers of students to its offerings. Therefore, while the College has a long tradition of online offerings, the College may want to continue promoting this opportunity as a means to help faculty hone skills to teach in the demanding online instructional environment and to improve student success in the extensive number of online classes being offered.

Acceleration Instructional Design

The instructional strategy known as acceleration has taken on multiple forms among community colleges throughout the nation. In part, accelerated courses arose because the well-intended established designs of basic skills curriculum sequences often create unintended consequences. Traditional multiple exit points lead many students to get discouraged and leave college.[43] Large-scale research studies outside and within California have demonstrated that when a student needs to complete more levels of developmental courses the student is less likely to ever complete college-level courses in English and math.[44]

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[42] Hans Johnson. et. al. *Successful Online Courses in California's community Colleges.* Public Policy Institute of California. June 2015

[43] Juan Calcagno and Bridget Long. *The Impact of Postsecondary Remediation Using a Regression Discontinuity Approach.* National Center for Postsecondary Research, April 2008; Thomas Bailey, Dong Jeong, Sung-Woo Cho. *Referral, Enrollment, and Completion in Developmental Education Sequences in Community Colleges.* Community College Research Center, Teachers College, Columbia University. Working Paper # 15, 2009.

[44] Nikki Edgecombe. *Accelerating the Achievement of Developmental Education Students.* Community College Research Center, Teacher's College Columbia University. Working Paper #30, 2011; Peter Bahr, et. al. *Course-Taking Patterns, Policies, and Practices in Developmental Education in the California Community Colleges.* Ed Source. June 2010.

Other reasons for the increasing popularity of acceleration strategies emerged from national research that raised questions about the efficacy of making placement decisions based primarily upon the results from a single examination experience.[45] Still other national research has pointed to the ability of high school transcript data to predict success in college.[46] These research efforts opened a "new door" for acceleration initiatives.

The term "acceleration" has been given various definitions, or different labels, or descriptors. For purposes of this discussion four definitions/strategies have been identified as follows:

1. Compressing the pace of instruction by teaching the same course content over a shorter period of time.
2. Changing placement policies by adjusting placement exam cut scores and using more robust multiple measures data.
3. Implementing co-requisite models.
4. Redesigning remedial courses.

Compressing the pace of instruction as a strategy is perhaps inspired by the experience of faculty who teach a summer session of the same course they offer during the fall or spring term. Course retention and success are thought to be higher during the summer session experience. But, is that because students attending during the summer are better prepared and more motivated, or are the results due to the shorter period of time and the more intense instruction and contact with the subject matter? This scheduling strategy during a primary term arranges two levels of remedial curriculum in the discipline so that one course in the sequence follows the other, each using half of the weeks in the primary term. Typically the sequenced courses are taught on the same day and hour pattern with the same instructor.. In some cases students are automatically enrolled in both courses to guarantee a place in the classes for the entire term of instruction. The College English and mathematics faculty members are to be commended for efforts to offer compressed basic skills course instruction during the primary terms. The College has been using some version of this strategy in English composition and basic mathematics courses and has experienced some increased success

Changing placement policies using robust multiple measures, such as the high school transcript data, broadens access to transfer-level courses and makes outcomes equitable for multiple subgroups of students. While currently only 19% of entering students are eligible under existing practices, national research estimates that 64% of entering students could succeed in college transfer-level English if allowed to enroll directly. Half of entering students could succeed in college math if allowed to enroll directly while only 25% are eligible under existing practices.[47] The California Multiple Measures Assessment Project found that 72% of community college students could be placed into college English using the overall high school

[45] Judith Scott-Clayton. *Do High Stakes Placement Exams Predict College Success?* Community College Research Center, Teacher's College Columbia University. Working Paper #41, 2012; Olga Rodriguez, et. al. *Remedial Placement Testing in Community Colleges.* Community College Research Center, Teachers College, Columbia University. Working Paper # 73, 2014.

[46] Clive Belfield and Peter Crosta. *Predicting Success in College: The Importance of Placement Tests and High School Transcripts.* Community College Research Center, Teachers College, Columbia University. Working Paper #42, 2012.

[47] Judith Scott-Clayton. *Do High Stakes Placement Exams Predict College Success?* Community College Research Center, Teachers College, Columbia University. Working Paper #41, 2012.

GPA and English course GPA data.[48] At least two pioneering California community colleges (Butte and Long Beach) are testing this concept. Reports are favorable. Access to college English was doubled at Butte and quadrupled at Long Beach with success rates that remained steady and equity gaps narrowed.[49] In the Virginia Community College system, completion of college-level math tripled after implementation of a pathways approach to placement.[50] The College is scheduled to implement the common assessment system in 2017-18. A new full-time position has been created as Assessment Coordinator and that person is leading the process of mapping competencies tested to the College curriculum so that the cut scores used for course placements are revisited in academic year 2016-17. Given the reported positive outcomes from the California and national research, additional consideration to the proposed changes in placement practices such as using the high school variables (GPA and grade in discipline-specific courses) may be a worthy effort for the College to undertake.

The strategy of using co-requisites allows students who are characterized as being "below transfer level," to enroll in a transfer-level course that is in a co-requisite relationship with a support class commonly taught by the same instructor. The positive outcomes in multiple states have been impressive.[51] Using a controlled experimental design the City University of New York found that the majority of students passed college statistics with supplemental instruction, and the pass rate was nearly 29% higher than in the control group of students who initially enrolled in elementary algebra.[52] Four North Carolina community colleges found that completion for college English was 1.6 to 2.3 times higher than in traditional remediation, and equity gaps narrowed or disappeared completely.[53]

Some institutions have successfully pursued a strategy of embedding basic skills instruction into discipline courses. Another common approach, contextualization, uses concrete applications in a specific context that is of interest to the students.[54] The teaching process is built on the recognition that some students learn more effectively when they are taught in a hands-on, real-world context rather than in an abstract manner. The currently popular reading

[48] Craig Hayward, John Hetts, Terrance Willett, et. al. *Using Decision Trees to Predict Course Success in the Multiple Measures Assessment Project.* Presentation at the Research and Planning Group Annual Conference, April 2015.
[49] Leslie Henson and Kati Hern. *Let Them In.* Research and Planning Group Perspectives. November/December 2014; Long Beach City College. *Promising Pathways.* 2014. Retrieved from http://www.lbcc.edu/promisepathways
[50] Olga Rodriguez and Nikki Edgecombe. *Early Findings From Statewide Developmental Education Reform in Virginia and Florida.* Presentation at the League for Innovation annual conference, March 9, 2015; Hoori Kalamakarian, Julia Raufman, and Nikki Edgecombe. *Statewide Developmental Education Reform: Early Implementation in Virginia and North Carolina.* Community College Research Center, Teachers College, Columbia University. May 2015.
[51] Complete College America. *Corequisite Remediation: Spanning the Completion Divide.* Spring 2016; Iris Palmer. *How to Fix Remediation at Scale- Colorado Example.* New America. March 2016; *Is Corequisite Remediation Cost Effective- Early Findings from Tennessee*. Community College Research Center, Teachers College, Columbia University. Research Brief #62, 2016.
[52] Alexandra Logue et. al. *Elementary Algebra or Statistics.* Paper delivered at the American Educational Research Association Conference. April 19, 2015.
[53] Dawn Coleman. *Replicating the Accelerated Learning Program.* Center for Applied Research. 2015.
[54] C. Mazzeo. *Supporting Student Success at California Community Colleges.* Career Ladders Project. 2008. Dolores Perin and Rachel Hare. *A Contextualized Reading-Writing Intervention for Community College Students.* Community College Research Center, Teachers College, Columbia University. May 2011. Elaine Baker, Laura Hope, Kelley Karandjeff. *Contextualized Teaching & Learning: A Faculty Primer.* Research and Planning Group. 2009.

apprenticeship initiative is perhaps another example of this embedded approach.

Redesigning remedial courses is a strategy of acceleration that seeks to better align English and math sequences with transfer-level curriculum. A 2014 evaluation of the California Assessment Project (CAP) initiative observed that throughout the California community college system only 7% of the students successfully completed a transferable math course within three years if they begin at three levels below transfer level. The comparable cohort of students in English composition is 19%. However, all of the first 16 California community colleges offering redesigned accelerated remediation reduced the students' time in remediation by at least one semester without making any changes to transferable courses. The study found that students' odds of completing a transferable math course were 4.5 times greater in an accelerated pathway than for students in traditional math remediation course, and completion rates for English composition courses were at least 1.5 times greater and 2.3 times greater in a high-acceleration implementation model than for students in traditional English composition remediation.

Acceleration was found to work for students of all backgrounds and at all placement levels, but implementation strategies did impact the final results.[55] The College may want to consider additional acceleration strategies (changing placement practices, contextualization, corequisites, redesigning remedial courses) beyond compression as means to promote greater student success.

The extraordinarily high proportion of entering students placed into remedial math (99%) in combination with the analysis of the most common math course required for the transfer degrees (Statistics) points to another acceleration strategy that should merit attention. The Carnegie Foundation for the Advancement of Teaching has sponsored a national program, Statway, to improve the completion of transfer-level math. Evaluation of that program concluded that, among the 26 pilot colleges, completion rates more than tripled in half the time (49% in one year vs. 15% in two years).[56]

The California Acceleration Project (CAP) has been in place since 2010-11 as a response to the basic skills performance challenge and was a curricular design effort at some California community colleges years before the project formally began. The CAP seeks to promote curricular redesign to reduce the sequence length and eliminate "exit points" in the basic skills educational experience. It also promotes a reconsideration of curricular content to focus on what is taught and how it is taught with the guiding question of what students truly need to succeed in college English or math. As of June 2011, more than 80 colleges had participated in the CAP professional development activities.

The general concept of acceleration has been discussed as part of the Adult Education Regional Consortium initiative.

Statistics is the most common transferable mathematics course listed as required among the implemented AD-Ts at the College. Therefore, the institution might want to explore and consider assisting transfer-oriented students with an accelerated path that

[55] Craig Hayward and Terrence Willett. *Curricular Redesign and Gatekeeper Completion: A Multi-College Evaluation of the California Acceleration Project.* April 2014

[56] Nicole Sowers and Hiroyuki Yamada. *Pathways Impact Report.* Carnegie Foundation for the Advancement of Teaching. 2015.

requires less than a full-semester of instruction in Intermediate Algebra before entering Statistics. This acceleration strategy, sometimes described as Statway, is now fully accepted by the University of California and the California State University systems.[57]

If there is curriculum alignment between the Algebra II course taught in the high schools and the Intermediate Algebra course taught at the College, there may be a basis for a credit by examination opportunity. The College might want to consider the possibilities of developing a credit-by-examination experience for high school students who are completing the Algebra II course in high school student. If successful, those students might be granted College credit (Intermediate Algebra) for that high school course.

At least one college, Antelope Valley, has had significant success in administering a math diagnostic exam, modularizing the basic skills math sequence, and allowing students to move forward with self-paced instruction using EducoSoft learning materials.[58] Barstow College is one of five community colleges in California that has implemented EdReady software materials from the National Repository of Online Courses to provide modularized practice in English and math topics. The College might want to carefully evaluate this option as an alternative to the basic skills ACSK courses.

Dual Enrollment- AB288

The most recent legislation to promote collaboration, AB 288 that took effect in January 2016, authorizes the governing board of a community college district to enter into a College and Career Access pathways (CCAP) partnership with the governing board of a school district. The partnerships offer or expand dual enrollment opportunities for students who may not already be college bound or are from groups underrepresented in higher education. The goal is to develop a seamless pathway from high school to community college for career-technical education or preparation for transfer, by improving high school graduation rates or helping high school students achieve college and career readiness. The following are the highlights of the legislation:

- Community colleges can assign priority "no fee" enrollment and registration to high school students in a CCAP;
- Community college courses during the regular high school day can be restricted to high school students and do not have to meet the normal open enrollment standard;
- Courses with no available seats on campus cannot be offered at high schools through the CCAP because the public must have access to the course;
- Basic skills math and English can be offered through CCAP, but only for students who are not at grade level in that subject; and,
- Community colleges can claim FTES if the high school student is qualified for full high school apportionment without using hours of the college course.

[57] UC/CSU Path Cleared for Statistics Pathways, October 20, 2015. Retrieved from http://cap.3csn.org/2015/10/20/uccsu-path-cleared-for-statistics-pathways/. See also Office of the Chancellor. California State University. *Statistics Pathways in CSU Quantitative Reasoning.* October 20, 2015 and University of California. *Special Regulations for Courses in Specific Subject Areas*. Retrieved October 20, 2015 from http://ucop.edu/transfer-articulation/transferable-course-agreements/tca-policy/regulations-by-subject-area.html#s.

[58] Bonnie Suderman, Vice President for Academic Affairs, Antelope Valley College. *Board Goals Progress Presentation*. May 10, 2016.

The College engaged in a dual enrollment program with the Barstow Unified School District to offer courses during the morning hours to vocational students enrolled in industrial maintenance career and technical education. The College might want to explore ways to use the CCAP concept to expand the CTE curriculum areas into additional partnerships.

Improving High School Preparation- As long ago as 2003, a task force of high school teachers and CSU faculty members developed the Expository Reading and Writing Course (ERWC). It is a rigorous, rhetorically based, full-year college preparatory English course designed to support college-readiness in English for high school seniors. It has been adopted by upwards of 700 comprehensive high schools, including Baker Unified School Districts, but not the Barstow or Silver Valley Unified School Districts. The topic of the ERWC course was discussed at the Dinner and Dialogue meetings described below. A faculty member from the Baker Unified School District made the presentation. The UC has approved the ERWC for area B credit of the A-G requirements and the course meets college preparatory requirements for CSU.[59]

CSU San Bernardino (CSUSB) has started a math teacher education initiative and is seeking state grant funding to support the effort. Throughout the CSU system, and at CSUSB in particular, there is now a keen interest in developing in-service professional development materials for middle and high school math teachers. In addition, the CSU System Office and CSUSB leadership have an interest in developing a mathematics course for high school seniors that would be like the ERWC course for English.

[59] *Expository Reading and Writing Course*. Retrieved May 7, 2016 from www.calstate.edu/cap/englishcourse

The College may want to consider discussions to encourage the Barstow Unified School District to embrace and implement the ERWC curriculum. The College also may want to consider encouraging all three public school districts in the College service area to monitor the CSUSB math initiative and seek opportunities to have their faculty participate.

The College may want to consider revising public relations materials to highlight preparation for industry certifications, where they exist, and to strengthen those programs of study that do not currently align to an industry-recognized and valued certificate. The relationships between career and technical programs and industry-recognized certifications could become a major marketing tool for the College.

### *2. Possible Areas of Policy and Practice Modification*

Industry Recognized Certifications- The California Community College Association of Occupational Education (CCAOE) and the Chancellor's Office initiative Doing What Matters along with the Workforce and Economic Development Division have developed a perspective on industry certifications. The perspective from these leadership groups is that career and technical education programs of study designed for immediate job entry should align with industry-recognized certifications that have labor market value. Several of the career and technical education programs in the College 2016-2017 Catalog state that the program of study leads to an industry certification, but others do not.

Federal Grants- Annually, the U.S. Department of Education and Labor award several grants that award large sums of money to

higher education institutions that apply and are successful recipients. The College does not have a grants office or any personnel assigned to write grant applications. One staff member, the Dean for Career and Technical Education and Workforce Development, has been successful in securing state grants to advance that curriculum area and build relationships with the public schools and other entities in the region. In the recent past the College has hired external expertise to help with grant applications. Given the characteristics of the student body and the residents in the official college service area, pursuing some of these federal grants may be an option that the College might want to consider. The College has started initial steps in the process of preparing an application for the Upward Bound grant.

The Federal TRiO Programs are outreach and student services programs designed to identify and provide services for individuals from disadvantaged backgrounds. They are administered, funded, and implemented by the United States Department of Education. TRiO includes eight programs targeted to serve and assist low-income individuals, first-generation college students, and individuals with disabilities to progress through the academic pipeline from middle school to post-baccalaureate programs. TRiO is not an acronym, but its name honors the first three programs (Upward Bound, Talent Search, Student Support Services) implemented that owe their existence to the federal Higher Education Act of 1965.

The eight programs currently administered are (in order of creation):

Upward Bound (UB) The goal of Upward Bound is to provide certain categories of high school student with better opportunities for attending college. The categories of greatest concern are those with low income, those with parents who did not attend college, and those living in rural areas. The program works through individual grants, each of which covers a restricted geographic area and provides services to approximately 50 to 100 students annually.

Talent Search (TS) identifies junior high and high school students who might benefit from intervention strategies meant to increase the chances of the student pursuing a college education. There are currently more than 475 TS programs in the U.S. serving more than 389,000 students. At least two-thirds of the students in each local TS program must be from low-income economic backgrounds and from families where parents do not have a bachelor's degree. Local programs are required to demonstrate that they meet federal requirements every five years in order to maintain funding.

Student Support Services (SSS) receives funding through a federal grant competition. Funds are awarded to institutions of higher education to provide opportunities for academic development, assist students with basic college requirements, and to motivate students toward the successful completion of their postsecondary education. SSS projects also may provide grant aid to current participants who are receiving Federal Pell Grants. The goal of SSS is to increase the college retention and graduation rates of its participants.

The Educational Opportunity Centers program (EOC) provides counseling and information on college admissions to qualified adults who want to enter or continue a program of postsecondary education. The program also provides services to improve the financial and economic literacy of participants. An important objective of the program is to counsel participants on financial aid

options, including basic financial planning skills, and to assist in the application process. The goal of the EOC program is to increase the number of adult participants who enroll in postsecondary education institutions.

Veterans Upward Bound (VUB) is designed to motivate and assist veterans in the development of academic and other requisite skills necessary for acceptance and success in a program of postsecondary education. The program provides assessment and enhancement of basic skills through counseling, mentoring, tutoring, and academic instruction in the core subject areas. The primary goal of the program is to increase the rate at which participants enroll in and complete postsecondary education programs.

The purpose of the Training Program for Federal TRiO Programs (TRiO Staff Training) is to increase the effectiveness of TRiO programs through staff training and development. Through a grant competition, funds are awarded to institutions of higher education and other public and private nonprofit institutions and organizations to support training to enhance the skills and expertise of project directors and staff employed in the Federal TRiO Programs. Funds may be used for conferences, seminars, internships, workshops, or the publication of manuals. Training topics are based on priorities established by the Secretary of Education and announced in Federal Register notices inviting applications.

The Ronald E. McNair Post-Baccalaureate Achievement Program, often referred to as the McNair Scholars Program, is a United States Department of Education initiative with a goal of increasing "attainment of PhD degrees by students from underrepresented segments of society," including first-generation low-income individuals and members from racial and ethnic groups historically underrepresented in graduate programs.

Upward Bound Math-Science (UBMS) was first authorized through the Higher Education Act of 1965 and reauthorized in the Higher Education Opportunity Act of 2008. Participating students must have completed the eighth grade and be low-income or "potential first-generation college students", with two-thirds of selected applicants meeting both of the criteria. The program provides counseling, summer programs; research, computer training, and connections to university faculty with the goal of improving students' math and science skills and helping them obtain degrees and careers in the math and sciences. Students in the summer program attend five weeks of English, math, and science classes in the summer months. Mathematics classes include algebra; geometry, pre-calculus, calculus, and science courses are held for biology, chemistry, and physics. After completing the program, the student receives one college credit from the associated institution.

College Promise- The Kalamazoo Promise is a pledge by a group of anonymous donors to pay up to 100 percent of tuition at any of Michigan's state colleges or universities for graduates of the public high schools of Kalamazoo, Michigan. The program, unveiled at a November 10, 2005, Kalamazoo Board of Education meeting, is also viewed as an economic development tool for Kalamazoo. Research published by the Upjohn Institute in 2015 shows that the Kalamazoo Promise significantly increases college enrollment, college credits attempted, and credential attainment, and the researchers

conclude that such scholarships can both increase educational attainment and provide net economic benefits.[60]

Among California community colleges, the Long Beach College Promise was established in 2008 to offer a clear pathway for Long Beach Unified School District students starting with high quality early childhood education, transitioning seamlessly from grade school to higher education by providing incentives, services, and support while removing barriers. Long Beach City College offers the first semester free of fees to a graduate from the Long Beach Unified School District who is enrolled as full-time students in the fall semester following graduation. That incentive is funded by the Long Beach City College Foundation and saves each student more than $600. In fall 2015 the tuition-free offer was expanded to cover the first full year for students in good academic standing.[61] In September 2016 Governor Brown signed AB 1741 that incentivizes partnerships between local school districts and higher education institutions.

Legislative bodies in Tennessee, Oregon, and Minnesota have enacted legislation to establish similar programs. More than 150 communities in 37 states have implemented similar programs. In his 2015 State of the Union address President Obama articulated a vision for America's College Promise to make two years of community college free. The American Association of Community Colleges joined that vision by announcing a commitment to the College Promise Campaign.

[60] Timothy Bartik, et. al. *The Effects of the Kalamazoo Promise Scholarship on College Enrollment, Persistence, and Completion*. Upjohn Institute Working Paper 15-229. Kalamazoo, MI. W.E. Upjohn Institute for Employment Research, 2015.
[61] Long Beach College Promise. *Annual Report to the Community.* September 2015

In November 2015 the Board of Trustees adopted a resolution supporting the America's College Promise proposal. On several occasions the Superintendent/President has discussed the proposal with the service area public school district superintendents. College and Barstow Unified School District leadership plus the Barstow mayor attended a state California Promise conference on August 30, 2016 to learn more about this idea. The College should continue to explore the College Promise idea. If public funding of the College Promise proposal does not materialize, the College may want to explore the viability of launching a private fundraising campaign to implement a Barstow Promise program.

Regional cooperation- Regional collaboration and building partnerships has been a College action agenda item since 2012. College initiatives to advance regional coordination and strengthen partnerships included these examples, which should be continued and expanded were possible:

- Teaching Collaborative: BCC has entered into a partnership with local K-12 districts and California State University-San Bernardino to establish a cohort of education paraprofessionals who intend to pursue a teaching credential. BCC will provide services such as college transcript review (if any), placement assessment, and education plans to achieve transfer to CSUSB and assist students in completing the requirements to become credentialed teachers. So far, 50 people from the local area have shown interest in this program. This partnership forms the foundation for the suggested new AD-T in Elementary Education described below.
- CSUSB Math Initiative: CSUSB has invited math faculty from BCC to participate in a collaborative effort to establish a

recommended fourth-year math program for high school students. This curriculum is intended for high school math students and would be similar to the Expository Reading and Writing Course (ERWC) that was developed for fourth-year high school English. The initiative also seeks to provide professional development to middle and high school math faculty.

- Dinner & Dialog: Barstow College math and English faculty meet with their counterparts at all of the local high schools to have dialog around curriculum alignment, and basic skills issues. The ERWC course idea was one of the discussion topics.
- The Barstow Community College Superintendent/President meets jointly on a monthly basis with the local K-12 Superintendent/Presidents. This has resulted in two joint board meetings between the largest local district, Barstow Unified (BUSD), and Barstow Community College. Further, it has inspired a multi-district board meeting of all local high school feeder districts with the Barstow Community College Board of Trustees during the 2015-16 year.
- Collaboration with Victor Valley College has also begun. This effort has resulted in a joint board meeting between the Boards of Trustees for both institutions. Both boards have indicated interest in further meetings. These meetings have created an opportunity for the Administration of Justice program to access the regional public safety training center facility operated by Victor Valley College. Barstow College will provide the classroom instruction for Administration of Justice, Fire, and Emergency Medical Technician, but the hands-on instruction will be done at the regional Public Safety Center. Conversely, if students at Victor Valley College are unable to access classroom instruction in these disciplines they will be welcome to join classes at Barstow College.
- Desert University- Ft. Irwin. The College has a long-standing partnership with the cadre of Army personnel at Ft. Irwin. The senior Command leadership has renewed its support for Desert University. The College has reinvigorated the schedule of classes at the Fort and is aggressively outreaching to prospective students. Adjunct faculty members are being recruited from among the staff and families at the Fort. The number of class sections offered via satellite connections have been tripled with new offerings in Administration of Justice and Management.

The College and community are well served by these efforts to leverage scarce resources and to address common regional needs.

### *3. Possible Areas of Curriculum Expansion/Modification*

Several curriculum areas in which the College may want to consider some adjustments. These suggestions are offered in support of the previously cited College.

Home Health Aide/Personal Care Assistant or Caregiver- The projected regional occupational openings for these occupations are strong and the occupation has been cited as one of the fast growing jobs in the region.[62] The projections of age ranges in the primary cities within the official District service area, with the exception of Ft. Irwin, suggests that the elderly now and into the future will represent a considerable part of each community. No community

[62] Employment Development Department, Labor Market Information. *Occupational Projections for Riverside and San Bernardino 2012-2022* and Centers of Excellence. *Health Occupations in the Inland Empire- Key Findings*, 2014.

college in the region offers the a program for Home Health Aide and the only college in the region that once offered it is Palo Verde, but it has allowed the program to lapse. There are few private institutions in the region offering a program for Home Health Aide. The term Personal Care Assistant or Caregiver is used interchangeably with Home Health Aide. The California Department of Health Services regulates instructional programs and individual licensing. The San Bernardino County Workforce Investment Board included this occupation in their strategic plan in an effort to increase the number of direct care workers.

Home Health Aide program of study is sometimes a subset of a Certified Nursing Assistant program. The College had been offering an Associate Degree curriculum for Certified Nursing Assistants under the title of Allied Health: Nursing Assistant II. However, the curriculum has not been recently offered. In the region Chaffey, Palo Verde and Riverside City Colleges offer low-unit programs of study and five private institutions also offer programs of study. In the last three academic years these public and private institutions have produced an average of 593 Nursing Assistant program graduates. The Inland Empire labor market analysis prepared in 2014 by the Center for Excellence indicates job openings are expected in future years due to the life experiences of an aging population and the provisions of healthcare reform. Employment will be most likely found in ambulatory and long-term care facilities. However, EDD projections of openings in Riverside and San Bernardino County only anticipate an average of 328 annually out to 2022. The San Bernardino County Workforce Investment Board included this occupation in their strategic plan in an effort to increase the number of direct care workers. The College may want to consider revisiting the home health aide program topic.

Business Curriculum Re-Focus-
The College has a business curriculum available and provides an AD-T in Business Administration designed for transfer to the CSU. The College also offers Associate Degrees in Accounting, Business, and Management. Questionnaire responses and group interviews expressed intent to focus the business programs on entrepreneurship.

- Retail Management- In Barstow, occupations in retail sales comprise the second greatest area of employment growth since 2001. The California community colleges have an established retail management curriculum with the Western Association of Food Chairs (WAFC), but many colleges have their own distinct retail and office management curriculum offerings to assist those who enter the workforce to advance into supervisory positions. Occupational projections in Riverside and San Bernardino County for sales and related occupations are anticipated to provide almost 7,000 openings annually out to 2022. The College may want to consider exploring this possibility with local businesses.

- Customer Service- The College has a business curriculum in place and visions expressed in the questionnaires and group interviews suggested that the future direction of offerings might be toward supporting entrepreneurial interests. The City of Barstow is located along historic Route 66 and the main highway to Las Vegas. The city experiences a great deal of vehicular traffic and retail and hospitality (restaurants and hotel/motels) is a major segment of the local economy. People touring parts of the western states are a portion of the vehicular traffic. At a recent symposium on the economic development of Route 66, participants

identified short-term training in customer relations/customer service for employees interacting with visitors as a significant need to advance economic development.[63] For communities in which retail and hospitality were major parts of the economy a municipal economic development expert has suggested that the College might create a customer service academy and/or hotel management program.[64] In light of the recently increased California minimum wage, employers may prefer to hire individuals whose educational background suggests that they can provide the most value to the prospective employer. The College may want to consider exploring this possibility with local businesses.

- Small Business Needs- The College has a business curriculum in place and visions expressed in the questionnaires and group interviews suggested that the future direction of offerings might be toward supporting entrepreneurial interests. In 2014 the Inland Empire Center of Excellence sponsored a survey of small business owners. The vast majority of the surveyed businesses was owner-operated or employed no more than 10 people in retail or manufacturing industries. While the most important level of education required for entry-level employment was a high school diploma with on-the-job training, 44% of the respondents believed that some level of post-secondary education was somewhat important. The skills that employers described as lacking in their employees were: (1) written communications (52% of employers indicated this skill); (2) leadership (49% of employers indicated this skill); (3) critical thinking (46% of employers indicated this skill); (4) computer applications (42% of employers indicated this skill); (5) problem solving and creativity/innovation (41% of employers indicated each of these skills); (6) oral communication and self-direction (40% of employers indicated each of these skills); and, (7) professionalism or work ethic (37% of employers indicated this skill).[65] The recently released skill builders wage success data indicate that employed students who return to the College to learn additional accounting or business management skills experience a substantial salary increase. The College may want to reflect on the student learning outcomes for the current curriculum to consider the extent to which the curriculum as a whole nurtures these skills.

- Business Information Worker- Office and administrative support occupations was one of the families of jobs that experienced the greatest growth in Barstow between 2001 and 2015. Much of the local economy is composed of small businesses. The results of the 2014 survey of establishments administered by the Centers of Excellence indicated that they needed employees who understood basic office productivity software applications. The Doing What Matters initiative has established a pattern for business information worker curriculum that consists of three clusters of skills and jobs within the industry area of Information and Communications Technology and Digital Media. The three

[63] Lynne Miller, Symposium Organizer. *Personnel Correspondence*. June 17, 2016
[64] Gaither Lowenstein, City of Barstow Economic Development and Planning. *Personal Correspondence*. April 21, 2016

[65] Lori Sanchez. Centers of Excellence for Labor Market Research- Desert/Inland Empire Region. *Small Business Survey.* November 2014.

clusters of skills/jobs were developed with funding from the SynED, Chancellor's Office, and the Centers of Excellence. Each was related to one or more industry-valued certifications. The College offers a curriculum in computer applications and computer information science and is reported as a venue for the BIW level 1 courses. However, the program of study does not clearly appear in the catalog and may not be widely advertised. The recently released skill builders wage success data indicate that employed students who return to the College to learn additional computer information systems or office technology/office computer applications skills experience a substantial salary increase. The College may want to consider aggressively marketing this program of study and expanding that curriculum to include some of the skills expected at the level 2 of this emerging occupation.

Automotive Technology- The College offers a certificate and degree in this discipline. A related program of study, Diesel Technology, is described in the catalog as preparing graduates to earn an Automotive Service Excellence (ASE) certification. That certification requires two years of work history, unless the candidate graduates from a National Automotive Technicians Education Foundation (NATEF) accredited program. In those cases the expected work history is cut in half. That accreditation requires educating more students than is currently the case or is potentially possible. It is considered a difficult accreditation to accomplish. However, a graduate of the Automotive Technology program could participate in the ASE examination process and, if successful, put the awarding of the certificate on hold until the requisite work history is developed. Additional visions for specialized certifications such as smog testing were articulated in the questionnaire responses and group interviews. However, the current College CTE facilities at State Street are limited. The College may want to consider offering one or more courses in ASE test preparation with curriculum built around the studies guides.

The future direction of automotive technology programs in the California community colleges is moving in the direction of training in alternative fuels. The College may want to consider expanding the program to teach students to troubleshoot and repair automobiles that use the more popular alternative energy sources.

Welding- The College offers a certificate and degree in welding. The recently released skill builders wage success data indicate that employed students who return to the College to learn additional welding skills experience a substantial salary increase. A few colleges have created a testing center for American Welding Society (AWS) examinations. An instructor who teaches the examinee cannot administer the AWS certification test, as it must be a neutral third party who is trained and certified to administer the examinations. Much of the equipment required for the testing may be currently available at the welding program laboratory. The nearest AWS testing centers are located in Fontana, California. However, the current College CTE facilities at State Street are limited. The College may want to consider this option when proper facilities are available.

Heating, Ventilation, and Air Conditioning (residential)- The College offers a few courses in this subject as part of the industrial maintenance program. Labor market projections for Riverside and San Bernardino County indicate that there will be an annual average of 184 openings for mechanics and installers out to 2022. Programs at College of the Desert, Riverside, and San Bernardino community

colleges have only produced an average of 71 graduates in the last five years. With an established welding and fabrication curriculum and an industrial maintenance program plus the desert location, the HVAC curriculum with a residential emphasis may be a viable option. The College may want to consider exploring this option when proper facilities are available.

### *4. New Career and Technical Education Possibilities*

There is a limited number of career and technical education programs of study the College may want to evaluate as potential new programs of study. These suggestions are offered in support of the College goals previously cited in this Plan and are in addition to the one new associate degree for transfer programs of study previously discussed in this Plan.

Medical Records and Health Information Technician- Medical Records and Health Information Technicians play a vital and unseen role in the quality of health care. They manage patient information and health care data ensuring privacy, security of protected health information, and compliance with electronic data interchange standards in order to advance the delivery of quality health care. Managing health information has evolved from working with paper medical records to ensuring electronic information is accessible, accurate, and secure. Health Information Coders are responsible for coding patients' medical information for reimbursement and research purposes. They assign diagnosis and procedure codes using software that calculates the diagnosis-related group (DRG). The DRG determines the hospital's reimbursement for services for Medicare inpatients and some third-party payers. The impact of healthcare reform has created an immediate supply challenge because all coding professionals are required to learn a new coding system (ICD-10) (effective as of October 2015). The numbers of coding options changed from 17,000 to 140,000 with the introduction of the ICD-10 taxonomy. In a survey conducted by the Centers of Excellence (CoE) many employers requested that community colleges provide training and education on medical billing codes and the new ICD-10 coding system. In that CoE survey 53% of ambulatory and long-term care employers and 82% of the hospitals reported difficulty finding qualified employees for entry-level medical coding positions. Most employers do not require certification, but those that do favor the Certified Coding Associate or the Certified Coding Specialist/Physician-based certifications.[66]

Information Technician- In addition to the Business Information Worker career path, the state has developed a second career pathway emphasizing more of the technical aspects of information technology. A report from the Centers of Excellence distinguished three stages of career development: (1) computer retail sales; (2) help/desk/user support; and, (3) information technology technician. Occupations clustered into the first option of retail computer sales are subsumed within various types of sales representative occupations in the EDD occupational projections. An occupation, such as computer user support specialist, is projected to have 103 average annual openings in the Riverside and San Bernardino region. An occupation in the third option, such as computer systems analysis is projected to have an average of 64 openings annually, but commonly requires a bachelor's degree for entry-level employment. The College currently offers several of the courses recommended as preparation for the first option of computer retail sales and support. The state vision anticipates that students following this option would pass the ComTIA A+ certification exam. The second and third options in this pathway envision a series of more technical courses addressing networking and security of

[66] Centers of Excellence. *Medical Coders in the inland Empire/Desert Region*. 2014

information systems, similar to the CISCO academy curriculum commonly offered by community colleges around the state, and culminating in completion of industry certifications.[67] The second and third option curriculum area may be beyond the capacity of a small institution to support. Only a handful of colleges have been identified as offering curriculum for the information technology technician pathway. Riverside City College is the only college in the region on that listing.

Truck Driving- One of the occupations in several regions throughout the state that always projects numerous job openings is Heavy and Tractor-Trailer Truck Drivers. In the Riverside-San Bernardino region the EDD has projected an annual average of 995 job openings in this occupation out to 2022. Community colleges do not offer programs of study for this occupation as it is more commonly provided exclusively by private proprietary trade schools with high fees. However, one college, Long Beach City, has approached education for this occupation as a workforce development activity that educates, certifies, and licenses students for employment as a short-haul Class A Commercial Truck driver, including training in hazardous freight transportation and a CSA 2010 safety review. As is the case with Long Beach City, a workforce-training program in this field cannot be operated without a partner representing a large trucking firm or an association. One important hurdle to implementation is the lack of Department of Motor Vehicles for commercial driver's license (CDL) testing in the high desert area as opposed to San Bernardino. A second important hurdle to implementation is locating a trucking firm whose equipment could be accessed via an instructional service agreement (ISA) as a partner in this effort.

Teacher Assistant and Teacher Assistant-Bilingual- The Taxonomy of Programs for the California community colleges provides a distinct entry for each of these occupational areas, but the EDD occupational projections does not. The College has some potentially related curriculum in its child development program. Three colleges in the region (Chaffey, Riverside City and Moreno Valley) offer the program and have averaged 20 graduates in the last three years. One private institution for which data is available offers the program and has averaged 25 graduates in the last two years. The College may want to consider the teacher assistant occupation in light of labor market projections and as an initial step for someone who is interested in becoming a public school teacher. Projections for openings throughout the State indicate an average annual opportunity for 4,470 openings. For Riverside and San Bernardino Counties the projections average 442 annual job openings out to 2022.

National Academy of Railroad Sciences (NARS)- In the 2015-16 academic year the Burlington Northern Santa Fe Railway (BNSF) and a partner, Johnson County Community College (JCCC) in Overland Park, Kansas, approached the College to join the collaborative in providing NARS curriculum in Barstow. The NARS provides a specific curriculum to train individuals seeking to join the railroad industry. Presently, the curriculum is offered as six weeks of intensive instruction at JCCC. This opportunity is a possible new CTE area for Barstow College, but the College is waiting to receive the NARS curriculum from JCCC.

[67] Centers of Excellence and the Information and Communication Technology and Digital Media Sector Navigation Team. *Information Technology Technician Pathway Labor Market Analysis.* November 2015

The transportation industry, NAICS Code 48, has shown a strong upward trend in employment in CA since January 2010, and it has average projected growth of 18% by 2020, based on data collected by EDD. There is substantial demand for new & replacement positions in the targeted occupations. The percent change between 2010 and 2020 in transit related occupations range from 12% to 22%.

Data from the California Employment Development Department (2014) indicates the following job trends:

- Bus & Truck Mechanics + 14%
- Diesel Engine Specialists + 14%
- Rail Car Repairers + 20%
- Rail Operations Technicians + 22%

Based on "real-time" data from Economic Modeling Specialists International (EMSI), current and short-term projections for the targeted occupations show job growth in the next three years; it is projected that in Los Angeles, there will be over 900 jobs available in the next three years, taking into consideration growth and replacements needed due to retirements and promotional opportunities of current workers (Economic Modeling Specialists International, 2014).[68]

The Southern California Association of Governments authored the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategies study. It points to over 4,000 transportation projects planned for the six-county region (Los Angeles, Orange, Riverside, San Bernardino, Ventura, and Imperial). Collectively, those projects are projected to create 540,000 average total jobs per year out to 2040. Approximately 72,600 of the annual average jobs are projected to be in San Bernardino County.[69]

Nationally, up to 50 percent of the transportation workforce will be eligible to retire in the next ten years. Concerns have been expressed that young people are making career decisions before they learn about the transportation industry. In addition, there are some competencies for which training still needs to be developed and other areas where it is too broad leaving the job applicants without key specialized transportation skills. Increased reliance on Intelligent Transportation Systems (ITS) and other technologies will continue to impact the skill set that candidates and current employees need.[70]

[68] Transportation Workforce Institute, Los Angeles Trade Technical College. *Transit and Transportation Industries Experience Significant Growth and Needs*. Retrieved July 6, 2016 from http://twi.latt.edu

[69] Southern California Association of Governments. *The 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy*. April 2016

[70] National Transportation Workforce Summit. *Summary of Results- Framework for Action*. Council of University Transportation Centers, 2012.

## VI. Acknowledgements for the Educational Master Plan

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- Taylor Puryear, Physical Education/Athletics Trainer
- Michael Karpel, Physical Education

President's Shared Governance Council

- Deborah DiThomas, Superintendent-President
- Stephen Eaton, Vide President Academic Affairs
- Khushnur Dadabhoy, Vice President Student Services
- George Walters, Vice President Administrative Services
- Clint Dougherty, Associate Vice President Human Resources
- Scott Bulkley, Academic Senate
- Kyri Freeman, Academic Senate
- Lewis Goldstein, Barstow College Faculty Association
- Christ Clarke, Director, Public Relations, Communications, and Marketing
- Morgan Bohnsack, Director of Information Technology
- Richard Hernandez, Director of Maintenance, Operations, and Safety

Social and Behavioral Science Team

- Penny Shreve-Smith, Dean of Instruction
- Gustavo Bento, Psychology
- Dawn Howey, Sociology

Student Government, Associated Students

- Arthur Ramirez
- Tara Guiffrce
- Rajanae stone
- Joann Garcia

Student Services Team

- Khushnur Dadabhoy, Vice President Student Services
- Kim Young, Student Equity and Success and Assessment Coordinator
- Joann Garcia, Director of Student Life, Student Development & Outreach
- Samera Kabir, Transfer Center
- Wendy Packer, Financial Aid
- Lindada Pugliese, ACCESS
- Melissa Meadows, Student Success and Equity
- Christina Calderon, Director of Special Programs and Services
- Lesia Louro, Special Programs
- Apineru Lealofi, Counselor
- Kathi Brant, Counselor
- Emily De Bruhl, Counselor
- Robbie Evans, Advisor
- Aleah Jameson-Goodvich, Advisor
- Jamie Rodriguez, Counselor
- Samera Kabir, Advisor
- Randy Christensen, Counselor
- Tonia Teresh, Dean Student Success
- Heather Minehart, Director of Enrollment Services

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# CHAPTER 02

# FACILITIES MASTER PLAN

# 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 the current curriculum, instructional delivery modes, learning environment, and necessary support structures with a comprehensive program of campus development. The extent and direction of future curriculum development is uncertain, but the visions of future curriculum in the *Opportunities for the Future* chapter will be balanced against 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.

The current and immediate future economic indicators are improving. By the year 2020 the number of new student enrollments should begin to increase and the College will return to its previous growth pattern. Therefore, planning must involve developing a long-term vision as well as meeting short-term goals.

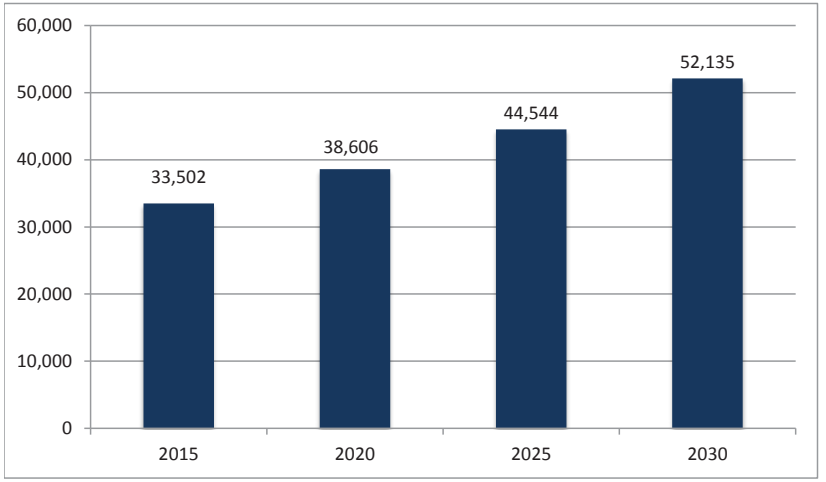
As a dynamic process, educational planning involves a mixture of methods and a variety of assessments. Looking to the future, a master plan must strive to:

- 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 established for the College at an average annual rate of 3.1%. 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 for sufficient facilities that are flexible enough to accommodate additional enrollments when they do materialize.

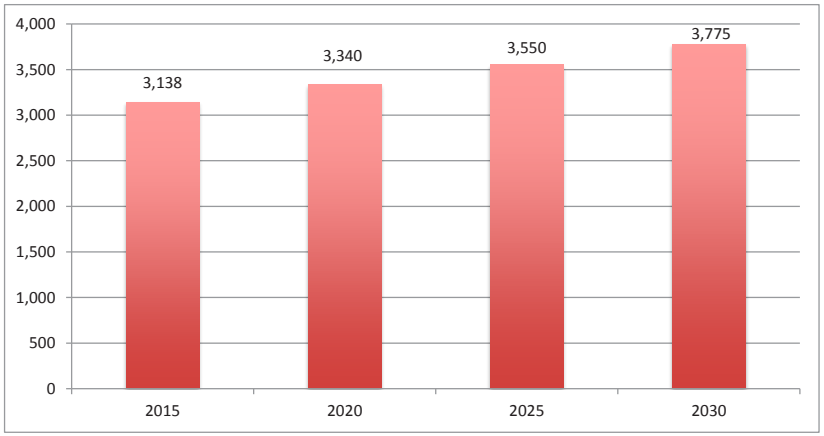
*Chart 45: Barstow College Weekly Student Contact Hours (WSCH)*




Source: Cambridge West Partnership, LLC

The projected unduplicated fall term student headcount is expected to grow at an annual rate of 1.27% over the fifteen-year period. The trend of the projection is illustrated on the following table.

*Chart 47: Barstow College Projected Fall Term Unduplicated Student Headcount*




Source: Cambridge West Partnership, LLC

## B. BASELINE TERM ANALYSIS

The fall 2015 program of instruction provided a snapshot in time used as a baseline for this EMP. To address the capacities for the future, a planning model was created. This planning model, or baseline, provided the foundation from which a future program of instruction could be projected.

*Table 53: Barstow College On Campus Baseline, Fall 2015*

| Division/Department | N Sec | Seats | S/Sec | WSCH | CH/Sec | FTES | Lec | Lab | % Lec | % Lab | Lec WSCH | Lab WSCH | ASF Lec | ASF Lab | Total ASF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Basic Skills*** | | | | | | | | | | | | | | | |
| *Academic Support 4900* | 4 | 97 | 24.25 | 388.00 | 97.00 | 12.93 | 12.0 | 4.0 | 75% | 25% | 291.0 | 97.0 | 137.6 | 249.3 | 386.9 |
| *Education 0800* | 2 | 222 | 111.00 | 1.90 | 0.95 | 0.06 | 26.0 | 0.0 | 100% | 0% | 1.9 | 0.0 | 0.9 | 0.0 | 0.9 |
| *ESL 4930* | 9 | 89 | 9.89 | 301.97 | 33.55 | 10.07 | 27.0 | 4.0 | 87% | 13% | 263.0 | 39.0 | 124.4 | 100.1 | 224.5 |
| *Orientation 4930* | 7 | 218 | 31.14 | 607.20 | 86.74 | 20.24 | 21.0 | 0.0 | 100% | 0% | 607.2 | 0.0 | 287.2 | 0.0 | 287.2 |
| *Reading 1500* | 1 | 15 | 15.00 | 60.00 | 60.00 | 2.00 | 3.0 | 1.0 | 75% | 25% | 45.0 | 15.0 | 21.3 | 22.5 | 43.8 |
| ***total*** | ***23*** | ***641*** | ***27.87*** | ***1359.1*** | ***59.09*** | ***45.30*** | ***89*** | ***9.0*** | **91%** | **9%** | ***1208.1*** | ***151.0*** | ***571.4*** | **371.9** | **943.4** |

Source: Barstow College Office of I titutional ecti eness, analysis by Cambridge West Partnership, LLC

| Division/Department | N Sec | Seats | S/Sec | WSCH | CH/Sec | FTES | Lec | Lab | % Lec | % Lab | Lec WSCH | Lab WSCH | ASF Lec | ASF Lab | Total ASF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***CTE Programs*** | | | | | | | | | | | | | | | |
| *Accounting 0500* | 1 | 17 | 17.00 | 51.00 | 51.00 | 1.70 | 3.0 | 1.0 | 75% | 25% | 38.3 | 12.8 | 18.1 | 16.3 | 34.4 |
| *Admin of Justice 2100* | 3 | 48 | 16.00 | 144.00 | 48.00 | 4.80 | 9.0 | 0.0 | 100% | 0% | 144.0 | 0.0 | 68.1 | 0.0 | 68.1 |
| *Allied Health 1200* | 10 | 186 | 18.60 | 270.40 | 27.04 | 9.01 | 276.0 | 12.8 | 96% | 4% | 258.5 | 11.9 | 122.3 | 25.6 | 147.8 |
| *Automotive 0948* | 9 | 172 | 19.11 | 594.00 | 66.00 | 19.80 | 18.0 | 18.0 | 50% | 50% | 297.0 | 297.0 | 140.5 | 2542.3 | 2682.8 |
| *Business Administration 0500* | 1 | 28 | 28.00 | 84.00 | 84.00 | 2.80 | 3.0 | 0.0 | 100% | 0% | 84.0 | 0.0 | 39.7 | 0.0 | 39.7 |
| *CBIS 0700* | 6 | 54 | 9.00 | 305.30 | 50.88 | 10.18 | 23.0 | 27.0 | 46% | 54% | 140.4 | 164.9 | 66.4 | 282.2 | 348.7 |
| *Child Care 1300* | 3 | 32 | 10.67 | 96.00 | 32.00 | 3.20 | 3.0 | 0.0 | 100% | 0% | 96.0 | 0.0 | 45.4 | 0.0 | 45.4 |
| *Cosmetology 3000* | 5 | 106 | 21.20 | 1551.60 | 310.32 | 51.72 | 10.0 | 60.0 | 14% | 86% | 221.7 | 1329.9 | 104.8 | 2846.1 | 2950.9 |
| *Electrical Technology* | 1 | 6 | 6.00 | 12.00 | 12.00 | 0.40 | 2.0 | 0.0 | 100% | 0% | 12.0 | 0.0 | 5.7 | 0.0 | 5.7 |
| *Industrial Main Mech 0945* | 13 | 122 | 9.38 | 233.60 | 17.97 | 7.79 | 19.5 | 21.5 | 48% | 52% | 111.1 | 122.5 | 52.6 | 471.6 | 524.2 |
| *Management -0500* | 2 | 23 | 11.50 | 68.10 | 34.05 | 2.27 | 6.0 | 0.0 | 100% | 0% | 68.1 | 0.0 | 32.2 | 0.0 | 32.2 |
| *Photography 1000* | 1 | 26 | 26.00 | 195.00 | 195.00 | 6.50 | 3.0 | 4.0 | 43% | 57% | 83.6 | 111.4 | 39.5 | 286.4 | 325.9 |
| *Welding* | 6 | 144 | 24.00 | 720.00 | 120.00 | 24.00 | 12.0 | 18.0 | 40% | 60% | 288.0 | 432.0 | 136.2 | 1386.7 | 1522.9 |
| *Workforce* | 5 | 46 | 9.20 | 46.00 | 9.20 | 1.53 | 5.0 | 0.0 | 100% | 0% | 46.0 | 0.0 | 21.8 | 0.0 | 21.8 |
| ***total*** | ***66*** | ***1010*** | ***15.30*** | ***4371.0*** | ***66.23*** | ***145.70*** | ***393*** | ***162*** | **71%** | **29%** | **1888.6** | **2482.4** | **893.3** | **7857.2** | **8750.5** |
| ***Fine Arts & Humanities*** | | | | | | | | | | | | | | | |
| *Art 1000* | 4 | 102 | 25.50 | 672.00 | 168.00 | 22.40 | 11.0 | 13.0 | 46% | 54% | 308.0 | 364.0 | 145.7 | 935.5 | 1081.2 |
| *English 1500* | 17 | 518 | 30.47 | 966.40 | 56.85 | 32.21 | 51.0 | 12.0 | 81% | 19% | 782.3 | 184.1 | 370.0 | 276.1 | 646.2 |
| *History 2200* | 8 | 262 | 32.75 | 645.00 | 80.63 | 21.50 | 24.0 | 0.0 | 100% | 0% | 645.0 | 0.0 | 305.1 | 0.0 | 305.1 |
| *Humanities 1500* | 1 | 34 | 34.00 | 102.00 | 102.00 | 3.40 | 3.0 | 0.0 | 100% | 0% | 102.0 | 0.0 | 48.2 | 0.0 | 48.2 |
| *Music 1000* | 3 | 43 | 14.33 | 127.00 | 42.33 | 4.23 | 6.0 | 9.0 | 40% | 60% | 50.8 | 76.2 | 24.0 | 195.8 | 219.9 |
| *Philosophy 2200* | 3 | 54 | 18.00 | 209.70 | 69.90 | 6.99 | 9.0 | 0.0 | 100% | 0% | 209.7 | 0.0 | 99.2 | 0.0 | 99.2 |
| *Religious Studies 2200* | 2 | 24 | 12.00 | 72.00 | 36.00 | 2.40 | 6.0 | 0.0 | 100% | 0% | 72.0 | 0.0 | 34.1 | 0.0 | 34.1 |
| *Spanish 1100* | 1 | 28 | 28.00 | 168.00 | 168.00 | 5.60 | 4.0 | 0.0 | 100% | 0% | 168.0 | 0.0 | 79.5 | 0.0 | 79.5 |
| *Speech 1500* | 7 | 190 | 27.14 | 570.00 | 81.43 | 19.00 | 21.0 | 0.0 | 100% | 0% | 570.0 | 0.0 | 269.6 | 0.0 | 269.6 |
| *Theatre Arts 1000* | 2 | 37 | 18.50 | 135.80 | 67.90 | 4.53 | 6.0 | 12.0 | 33% | 67% | 45.3 | 90.5 | 21.4 | 232.7 | 254.1 |
| ***total*** | ***48*** | ***1292*** | ***26.92*** | ***3667.9*** | ***76.41*** | ***122.26*** | ***141*** | ***46*** | **75%** | **25%** | **2953.1** | **714.8** | **1396.8** | **1640.1** | **3036.9** |

Source: Barstow College Office of I titutional ecti eness, analysis by Cambridge West Partnership, LLC

| Division/Department | N Sec | Seats | S/Sec | WSCH | CH/Sec | FTES | Lec | Lab | % Lec | % Lab | Lec WSCH | Lab WSCH | ASF Lec | ASF Lab | Total ASF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Natural Science/Math*** | | | | | | | | | | | | | | | |
| *Astronomy 1900* | 2 | 45 | 22.50 | 135.00 | 67.50 | 4.50 | 4.0 | 3.0 | 57% | 43% | 77.1 | 57.9 | 36.5 | 148.7 | 185.2 |
| *Biology 0400* | 11 | 272 | 24.73 | 1363.00 | 123.91 | 45.43 | 39.0 | 27.0 | 59% | 41% | 805.4 | 557.6 | 381.0 | 1310.3 | 1691.3 |
| *Chemistry 1900* | 4 | 74 | 18.50 | 444.00 | 111.00 | 14.80 | 12.0 | 12.0 | 50% | 50% | 222.0 | 222.0 | 105.0 | 570.5 | 675.5 |
| *CSIS 0700* | 4 | 125 | 31.25 | 408.00 | 102.00 | 13.60 | 12.0 | 12.0 | 50% | 50% | 204.0 | 204.0 | 96.5 | 348.8 | 445.3 |
| *Mathematics 1700* | 15 | 452 | 30.13 | 1608.30 | 107.22 | 53.61 | 45.0 | 0.0 | 100% | 0% | 1608.3 | 0.0 | 760.7 | 0.0 | 760.7 |
| *Physical Sciences 1900* | 1 | 30 | 30.00 | 90.00 | 90.00 | 3.00 | 3.0 | 0.0 | 100% | 0% | 90.0 | 0.0 | 42.6 | 0.0 | 42.6 |
| ***total*** | ***37*** | ***998*** | ***26.97*** | ***4048.3*** | ***109.41*** | ***134.94*** | ***115*** | ***54*** | **68%** | **32%** | **3006.9** | **1041.4** | **1422.2** | **2378.4** | **3800.7** |
| ***Physical Education*** | | | | | | | | | | | | | | | |
| Athletics 0835 | 12 | 208 | 17.33 | 670.10 | 55.84 | 22.34 | 0.0 | 36.0 | 0% | 100% | 0.0 | 670.1 | 0.0 | 2151.0 | 2151.0 |
| Health 1200 | 10 | 370 | 37.00 | 1104.60 | 110.46 | 36.82 | 30.0 | 0.0 | 100% | 0% | 1104.6 | 0.0 | 522.5 | 0.0 | 522.5 |
| Physical Edu Activities 0835 | 11 | 199 | 18.09 | 565.80 | 51.44 | 18.86 | 0.0 | 33.0 | 0% | 100% | 0.0 | 565.8 | 0.0 | 1816.2 | 1816.2 |
| Physical Education Lecture 0835 | 1 | 28 | 28.00 | 84.00 | 84.00 | 2.80 | 3.0 | 0.0 | 100% | 0% | 84.0 | 0.0 | 39.7 | 0.0 | 39.7 |
| Physical Education Theory 0935 | 1 | 21 | 21.00 | 86.40 | 86.40 | 2.88 | 1.0 | 3.0 | 25% | 75% | 21.6 | 64.8 | 10.2 | 208.0 | 218.2 |
| ***total*** | ***35*** | ***826*** | ***23.60*** | ***2510.90*** | ***71.74*** | ***83.70*** | ***34*** | ***72*** | **32%** | **68%** | **1210.2** | **1300.7** | **572.4** | **4175.2** | **4747.7** |
| ***Social Sciences*** | | | | | | | | | | | | | | | |
| *Ethnic Studies DE 2200* | 1 | 32 | 32.00 | 96.00 | 96.00 | 3.20 | 3.0 | 0.0 | 100% | 0% | 96.0 | 0.0 | 45.4 | 0.0 | 45.4 |
| *Economics 2200* | 2 | 58 | 29.00 | 172.4 | 86.20 | 5.75 | 6.0 | 0.0 | 100% | 0% | 172.4 | 0.0 | 81.5 | 0.0 | 81.5 |
| *Political Science 2200* | 4 | 140 | 35.00 | 417.70 | 104.43 | 13.92 | 12.0 | 0.0 | 100% | 0% | 417.7 | 0.0 | 197.6 | 0.0 | 197.6 |
| *Psychology 2000* | 10 | 255 | 25.50 | 663.00 | 66.30 | 22.10 | 30.0 | 0.0 | 100% | 0% | 663.0 | 0.0 | 313.6 | 0.0 | 313.6 |
| *Sociology 2200* | 5 | 103 | 20.60 | 405.80 | 81.16 | 13.53 | 15.0 | 0.0 | 100% | 0% | 405.8 | 0.0 | 191.9 | 0.0 | 191.9 |
| ***total*** | ***22*** | ***588*** | ***26.73*** | ***1754.9*** | ***79.77*** | ***58.50*** | ***66*** | ***0*** | **100%** | **0%** | **1754.9** | **0.0** | **830.1** | **0.0** | **830.1** |
| **GRAND TOTAL** | ***231*** | ***5,355*** | ***23.18*** | ***17,712*** | ***76.68*** | ***590*** | ***838*** | ***343*** | **71%** | **29%** | ***12,022*** | ***5,690*** | ***5,686*** | ***16,423*** | ***22,109*** |

Source: Barstow College Office of I titutional ecti eness, analysis by Cambridge West Partnership, LLC

*Table 54: Barstow College Online Baseline, Fall 2015*

| Division/Department | N Sec | Seats | S/Sec | WSCH | CH/Sec | FTES | Lec | Lab | % Lec | % Lab | Lec WSCH | Lab WSCH | ASF Lec | ASF Lab | Total ASF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***CTE Programs*** | | | | | | | | | | | | | | | |
| *Building Const DE 0952* | 1 | 19 | 19.00 | 38.00 | 38.00 | 1.27 | 2.0 | 0.0 | 100% | 0% | 38.0 | 0.0 | 18.0 | 0.0 | 18.0 |
| *Accounting DE* | 3 | 104 | 34.67 | 418.17 | 139.39 | 13.94 | 9.0 | 2.0 | 82% | 18% | 342.1 | 76.0 | 161.8 | 97.3 | 259.2 |
| *Admin of Justice DE* | 8 | 302 | 37.75 | 906.00 | 113.25 | 30.20 | 24.0 | 0.0 | 100% | 0% | 906.0 | 0.0 | 428.5 | 0.0 | 428.5 |
| *Business Admin DE* | 7 | 259 | 37.00 | 777.00 | 111.00 | 25.90 | 21.0 | 0.0 | 100% | 0% | 777.0 | 0.0 | 367.5 | 0.0 | 367.5 |
| *CBIS DE* | 4 | 110 | 27.50 | 457.80 | 114.45 | 15.26 | 12.0 | 0.0 | 100% | 0% | 457.8 | 0.0 | 216.5 | 0.0 | 216.5 |
| *Child Care DE* | 8 | 209 | 26.13 | 645.00 | 80.63 | 21.50 | 24.0 | 0.0 | 100% | 0% | 645.0 | 0.0 | 305.1 | 0.0 | 305.1 |
| *Management DE* | 5 | 180 | 36.00 | 540.00 | 108.00 | 18.00 | 15.0 | 0.0 | 100% | 0% | 540.0 | 0.0 | 255.4 | 0.0 | 255.4 |
| ***total*** | ***36*** | ***1183*** | ***32.86*** | ***3781.97*** | ***105.05*** | ***126.07*** | ***107*** | ***2*** | **98%** | **2%** | **3705.9** | **76.0** | **1752.9** | **97.3** | **1850.2** |
| ***Fine Arts & Humanities*** | | | | | | | | | | | | | | | |
| *Art DE* | 2 | 99 | 49.50 | 267.00 | 133.50 | 8.90 | 6.0 | 0.0 | 100% | 0% | 267.0 | 0.0 | 126.3 | 0.0 | 126.3 |
| *English DE* | 15 | 350 | 23.33 | 1943.00 | 129.53 | 64.77 | 45.0 | 0.0 | 100% | 0% | 1943.0 | 0.0 | 919.0 | 0.0 | 919.0 |
| *History DE* | 7 | 222 | 31.71 | 807.00 | 115.29 | 26.90 | 21.0 | 0.0 | 100% | 0% | 807.0 | 0.0 | 381.7 | 0.0 | 381.7 |
| *Humanities DE* | 4 | 181 | 45.25 | 513.00 | 128.25 | 17.10 | 12.0 | 0.0 | 100% | 0% | 513.0 | 0.0 | 242.6 | 0.0 | 242.6 |
| *Music DE* | 2 | 89 | 44.50 | 267.00 | 133.50 | 8.90 | 6.0 | 0.0 | 100% | 0% | 267.0 | 0.0 | 126.3 | 0.0 | 126.3 |
| *Philosophy DE* | 4 | 90 | 22.50 | 220.00 | 55.00 | 7.33 | 16.0 | 0.0 | 100% | 0% | 220.0 | 0.0 | 104.1 | 0.0 | 104.1 |
| *Religious Studies DE* | 3 | 79 | 26.33 | 237.00 | 79.00 | 7.90 | 9.0 | 0.0 | 100% | 0% | 237.0 | 0.0 | 112.1 | 0.0 | 112.1 |
| *Speech DE* | 3 | 133 | 44.33 | 399.00 | 133.00 | 13.30 | 9.0 | 0.0 | 100% | 0% | 399.0 | 0.0 | 188.7 | 0.0 | 188.7 |
| *Theatre Arts DE* | 1 | 34 | 34.00 | 102.00 | 102.00 | 3.40 | 3.0 | 3.0 | 50% | 50% | 51.0 | 51.0 | 24.1 | 131.1 | 155.2 |
| ***total*** | ***41*** | ***1277*** | ***31.15*** | ***4755.00*** | ***115.98*** | ***158.50*** | ***127*** | ***3*** | **98%** | **2%** | **4704.0** | **51.0** | **2225.0** | **131.1** | **2356.1** |
| ***Natural Sciences/Math*** | | | | | | | | | | | | | | | |
| *Astronomy DE* | 3 | 134 | 44.67 | 402.00 | 134.00 | 13.40 | 12.0 | 0.0 | 100% | 0% | 402.0 | 0.0 | 190.1 | 0.0 | 190.1 |
| *Biology DE* | 6 | 205 | 34.17 | 615.00 | 102.50 | 20.50 | 18.0 | 0.0 | 100% | 0% | 615.0 | 0.0 | 290.9 | 0.0 | 290.9 |
| *Mathematics DE* | 12 | 416 | 34.67 | 1744.60 | 145.38 | 58.15 | 36.0 | 0.0 | 100% | 0% | 1744.6 | 0.0 | 825.2 | 0.0 | 825.2 |
| ***total*** | ***21*** | ***755*** | ***35.95*** | ***2761.60*** | ***131.50*** | ***92.05*** | ***66*** | ***0*** | **100%** | **0%** | **2761.6** | **0.0** | **1306.2** | **0.0** | **1306.2** |

Source: Barstow College Office of I titutional ecti eness, analysis by Cambridge West Partnership, LLC

| Division/Department | N Sec | Seats | S/Sec | WSCH | CH/Sec | FTES | Lec | Lab | % Lec | % Lab | Lec WSCH | Lab WSCH | ASF Lec | ASF Lab | Total ASF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Physical Education*** | | | | | | | | **6** | | | | | | | |
| PEACT DE | 2 | 64 | 32.00 | 197.50 | 98.75 | 6.58 | 0.0 | 6.0 | 0% | 100% | 0.0 | 197.5 | 0.0 | 634.0 | 634.0 |
| ***total*** | ***2*** | ***64*** | ***32.00*** | ***197.50*** | ***98.75*** | ***6.58*** | ***0*** | ***6*** | **0%** | **100%** | **0.0** | **197.5** | **0.0** | **634.0** | **634.0** |
| ***Social Science*** | | | | | | | | | | | | | | | |
| *Economics DE* | 3 | 96 | 32.00 | 249.6 | 83.20 | 8.32 | 9.0 | 0.0 | 100% | 0% | 249.6 | 0.0 | 118.1 | 0.0 | 118.1 |
| *Political Science DE* | 4 | 171 | 42.75 | 513.00 | 128.25 | 17.10 | 12.0 | 0.0 | 100% | 0% | 513.0 | 0.0 | 242.6 | 0.0 | 242.6 |
| *Psychology DE* | 20 | 528 | 26.40 | 1567.30 | 78.37 | 52.24 | 60.0 | 0.0 | 100% | 0% | 1567.3 | 0.0 | 741.3 | 0.0 | 741.3 |
| *Sociology DE* | 10 | 236 | 23.60 | 637.00 | 63.70 | 21.23 | 30.0 | 0.0 | 100% | 0% | 637.0 | 0.0 | 301.3 | 0.0 | 301.3 |
| ***total*** | ***37*** | ***1031*** | ***27.86*** | ***2966.90*** | ***80.19*** | ***98.90*** | ***111*** | ***0*** | **100%** | **0%** | **2966.9** | **197.5** | **1403.3** | **634.0** | **2037.3** |
| **GRAND TOTAL** | ***137*** | ***4,310*** | ***31.46*** | ***14,463*** | ***105.57*** | ***482*** | ***411*** | ***11*** | **97%** | **3%** | ***14,138*** | ***522*** | ***6,687*** | ***1,496*** | ***8,184*** |

Source: Barstow College Office of I titutional ecti eness, analysis by Cambridge West Partnership, LLC

*Table 55: Barstow College Fort Irwin Center Baseline, Fall 2015*

| Division/Department | N Sec | Seats | S/Sec | WSCH | CH/Sec | FTES | Lec | Lab | % Lec | % Lab | Lec WSCH | Lab WSCH | ASF Lec | ASF Lab | Total ASF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Basic Skills*** | | | | | | | | | | | | | | | |
| *Communication 0600* | 4 | 83 | 20.75 | 295.90 | 73.98 | 9.86 | 12.0 | 0.0 | 100% | 0% | 295.9 | 0.0 | 140.0 | 0.0 | 140.0 |
| ***CTE Programs*** | | | | | | | | | | | | | | | |
| *Child Development 1300* | 2 | 6 | 3.00 | 18.00 | 9.00 | 0.60 | 6.0 | 0.0 | 100% | 0% | 18.0 | 0.0 | 8.5 | 0.0 | 8.5 |
| *CBIS 0700* | 1 | 11 | 11.00 | 66.90 | 66.90 | 2.23 | 3.0 | 3.0 | 50% | 50% | 33.5 | 33.5 | 15.8 | 57.2 | 73.0 |
| *Management 0500* | 1 | 14 | 14.00 | 40.80 | 40.80 | 1.36 | 3.0 | 0.0 | 100% | 0% | 40.8 | 0.0 | 19.3 | 0.0 | 19.3 |
| ***Fine Arts*** | | | | | | | | | | | | | | | |
| *English 1500* | 7 | 53 | 7.57 | 188.50 | 26.93 | 6.28 | 21.0 | 0.0 | 100% | 0% | 188.5 | 0.0 | 89.2 | 0.0 | 89.2 |
| *History 2200* | 2 | 27 | 13.50 | 78.70 | 39.35 | 2.62 | 6.0 | 0.0 | 100% | 0% | 78.7 | 0.0 | 37.2 | 0.0 | 37.2 |
| *Humanities* | 1 | 34 | 34.00 | 102.00 | 102.00 | 3.40 | 3.0 | 0.0 | 100% | 0% | 102.0 | 0.0 | 48.2 | 0.0 | 48.2 |
| *Speech 1500* | 1 | 25 | 25.00 | 77.10 | 77.10 | 2.57 | 3.0 | 0.0 | 100% | 0% | 77.1 | 0.0 | 36.5 | 0.0 | 36.5 |
| ***Natural Sciences*** | | | | | | | | | | | | | | | |
| *Biology 0400* | 2 | 29 | 14.50 | 85.50 | 42.75 | 2.85 | 6.0 | 0.0 | 100% | 0% | 85.5 | 0.0 | 40.4 | 0.0 | 40.4 |
| *Mathematics 1700* | 5 | 71 | 14.20 | 255.70 | 51.14 | 8.52 | 20.0 | 0.0 | 100% | 0% | 255.7 | 0.0 | 120.9 | 0.0 | 120.9 |
| ***Social Sciences*** | | | | | | | | | | | | | | | |
| *Political Science 2200* | 1 | 7 | 7.00 | 21.60 | 21.60 | 0.72 | 3.0 | 0.0 | 100% | 0% | 21.6 | 0.0 | 10.2 | 0.0 | 10.2 |
| *Psychology 2000* | 3 | 14 | 4.67 | 41.00 | 13.67 | 1.37 | 9.0 | 0.0 | 100% | 0% | 41.0 | 0.0 | 19.4 | 0.0 | 19.4 |
| *Sociology 2200* | 1 | 11 | 11.00 | 33.00 | 33.00 | 1.10 | 3.0 | 0.0 | 100% | 0% | 33.0 | 0.0 | 15.6 | 0.0 | 15.6 |
| ***total*** | ***31*** | ***385*** | ***12.42*** | ***1304.7*** | ***42.09*** | ***43.49*** | ***98*** | ***3*** | **97%** | **3%** | **834.5** | **33.5** | **394.7** | **57.2** | **451.9** |

Source: Barstow College Office of I titutional ecti eness, analysis by Cambridge West Partnership, LLC

*Table 56: Barstow College Totals by Location Baseline, Fall 2015*

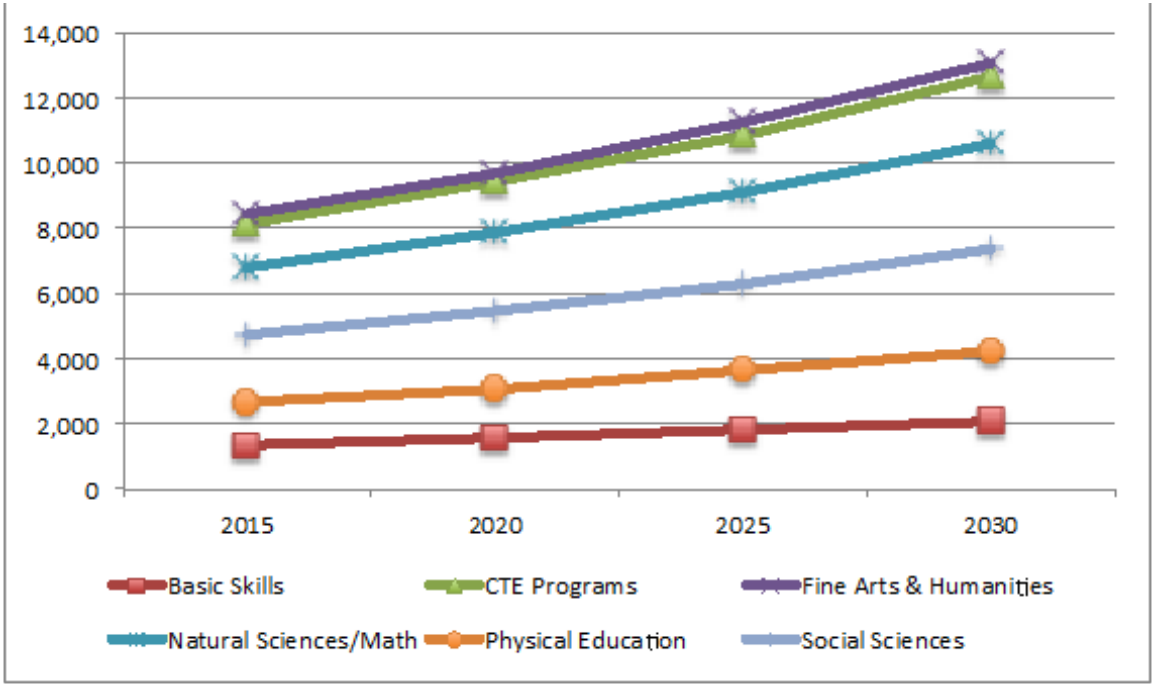
| Location | N Sec | Seats | S/Sec | WSCH | CH/Sec | FTES | Lec | Lab | % Lec | % Lab | Lec WSCH | Lab WSCH | ASF Lec | ASF Lab | Total ASF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Barstow Campus** | | | | | | | | | | | | | | | |
| ***subtotal*** | *231* | *5,355* | *23.18* | *17,712* | *76.68* | *590* | *838* | *343* | 71% | 29% | *12,022* | *5,690* | *5,686* | *16,423* | *22,109* |
| ***Barstow Online*** | | | | | | | | | | | | | | | |
| ***subtotal*** | *137* | *4,310* | *31.46* | *14,463* | *105.57* | *482* | *411* | *11* | 97% | 3% | *14,138* | *522* | *6,687* | *1,496* | *8,184* |
| ***Total*** | ***368*** | ***9,665*** | ***26.26*** | ***32,175*** | ***87.43*** | ***1,072*** | ***1,249*** | ***354*** | **78%** | **22%** | ***26,160*** | ***6,212*** | ***12,373*** | ***17,919*** | ***30,293*** |
| **Fort Irwin Center** | | | | | | | | | | | | | | | |
| ***total*** | ***31*** | ***385*** | ***12.42*** | ***1,305*** | ***42.09*** | ***43*** | ***95*** | ***3*** | **97%** | **3%** | **1,903** | **33.45** | **900** | **57** | **957** |
| ***Grand Total*** | **399** | **10,050** | ***25.19*** | **33,480** | ***83.91*** | ***1,115*** | ***1,344*** | ***357*** | **79%** | **21%** | ***28,063*** | ***6,245*** | ***13,273*** | **17,976** | ***31,250*** |

Source: Barstow College Office of I titutional ecti eness, analysis by Cambridge West Partnership, LLC

## C. WSCH PROJECTIONS AND THE FUTURE PROGRAM OF INSTRUCTION

The following table projects future WSCH and FTES in the benchmark years of 2020, 2025, and 2030. The forecast is in summary form by divisions. A detailed projection by disciplines of the College is found in *Appendix M*. Both this summary and the detailed projections include the online offerings.

*Chart 47: Barstow College, WSCH Projections by Division 2015-2030*




Source: Barstow College Office of I titutional ecti eness, analysis by Cambridge West Partnership,

## D. SPACE PROJECTIONS

State standards for construction and renovation of facilities basically focus on capacity. Capacity, as discussed in the State's 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 facility 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 in 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.

The current comprehensive analysis of projected space needs, by discipline, can be found in *Appendix N* of this combined Educational and Facilities Master Plan. The following table provides a summary of projected space needs. 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.

*Table 57: Barstow College Room and Space Allocations Projections by Division 2015-2030*

| | SPACE INVENTORY | | | | CURRENT | | | | PROJECTED | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2015 | | | | 2015 | | | | 2020 | | | | 2025 | | | | 2030 | | | |
| | Lec | Lab | Other | Total | # of | Lec | Lab | Total | # of | Lec | Lab | Total | # of | Lec | Lab | Total | # of | Lec | Lab | Total |
| **Division** | **ASF** | **ASF** | **ASF** | **ASF** | **SEC** | **ASF** | **ASF** | **ASF** | **SEC** | **ASF** | **ASF** | **ASF** | **SEC** | **ASF** | **ASF** | **ASF** | **SEC** | **ASF** | **ASF** | **ASF** |
| Basic Skills | 1,015 | 616 | 0 | 1,631 | 23 | 571 | 372 | 943 | 26 | 660 | 431 | 1,091 | 31 | 762 | 498 | 1,260 | 37 | 889 | 580 | 1,469 |
| CTE Programs | 4,372 | 13,971 | 0 | 18,343 | 66 | 893 | 7,857 | 8,750 | 40 | 1,035 | 9,079 | 10,114 | 53 | 1,194 | 10,477 | 11,671 | 62 | 1,395 | 12,229 | 13,624 |
| Fine Arts & Humanities | 2,613 | 3,633 | 2,901 | 8,810 | 48 | 1,397 | 1,640 | 3,037 | 43 | 1,616 | 1,893 | 3,509 | 51 | 1,863 | 2,184 | 4,047 | 60 | 2,176 | 2,550 | 4,726 |
| Natural Science/Math | 2,175 | 3,583 | 0 | 5,758 | 37 | 1,422 | 2,376 | 3,798 | 34 | 1,643 | 2,687 | 4,330 | 38 | 1,897 | 3,100 | 4,997 | 44 | 2,213 | 3,618 | 5,831 |
| Physical Education | 723 | 0 | 16,258 | 16,981 | 35 | 572 | 4,175 | 4,747 | 26 | 662 | 4,740 | 5,402 | 29 | 764 | 5,570 | 6,334 | 35 | 892 | 6,501 | 7,393 |
| Social Science | 2,674 | 0 | 0 | 3,535 | 22 | 830 | 0 | 830 | 16 | 960 | 0 | 960 | 18 | 1,108 | 0 | 1,108 | 22 | 1,293 | 0 | 1,293 |
| ***Grand Total*** | ***13,572*** | ***21,803*** | ***19,159*** | ***55,058*** | ***231*** | ***5,685*** | ***16,420*** | ***22,105*** | ***185*** | ***6,576*** | ***18,830*** | ***25,406*** | ***220*** | ***7,588*** | ***21,829*** | ***29,417*** | ***260*** | ***8,858*** | ***25,478*** | ***34,336*** |
| | | | | | | | | | | | | | | | | | | | | |
| Fort Irwin | 0 | 0 | 0 | 0 | 31 | 1,039 | 57 | 1,096 | 17 | 1,219 | 63 | 1,282 | 18 | 1,477 | 75 | 1,552 | 20 | 1,723 | 89 | 1,812 |

Source: Cambridge West Partnership, LLC

# BARSTOW COMMUNITY COLLEGE TODAY

# BARSTOW COMMUNITY COLLEGE TODAY


## OVERVIEW

Barstow Community College (BCC) is located in Barstow, California situated in California's High Desert along Interstate 15, approximately 115 miles northeast of Los Angeles, California and 160 miles southwest of Las Vegas, Nevada. BCC sits at the southern edge of this desert community.

Barstow Community College District (BCCD) was established in 1959, encompassing a vast service area including the San Bernardino Mountain Range to the south, Inyo County to the north; and from Los Angeles County on the west, to the Nevada border on the east. Within this geographical region, BCCD maintains a satellite learning center at the U.S. Army National Training Center in Ft. Irwin, CA. From 1959 until 1965, Barstow College offered night classes at Barstow High School, followed by classes at Barstow First Methodist Church. In 1964, BCC began construction in its current location, opening its doors in 1965.

Today, BCC occupies approximately 200 acres roughly one mile south of I-15 along Barstow Road. In 1969 the District entered a 100 year agreement to lease 25 acres, of the 200 acre campus, directly south of the main campus, along Veterans Parkway to the Barstow Veterans Home of California.

Served by one primary arterial, Barstow Road, BCC has two vehicular entries. The most northern entry off Barstow Rd serves as the campus' main entry. Both private vehicles and public transit use this entry. A second entry, provides direct access to the LRC, Administration Building and Performing Arts.

A solar field is located west of the campus core and south of the athletic fields. Built in 2015, the array has assisted in offsetting the College's electrical demand.

# BCC TODAY

## ACADEMIC CORE

The campus is generally defined by a traditional campus layout - an academic core of one and two story buildings surrounding a centralized Campus Quad. Surface parking rings the core with the largest student lots on the south and north edges of campus.

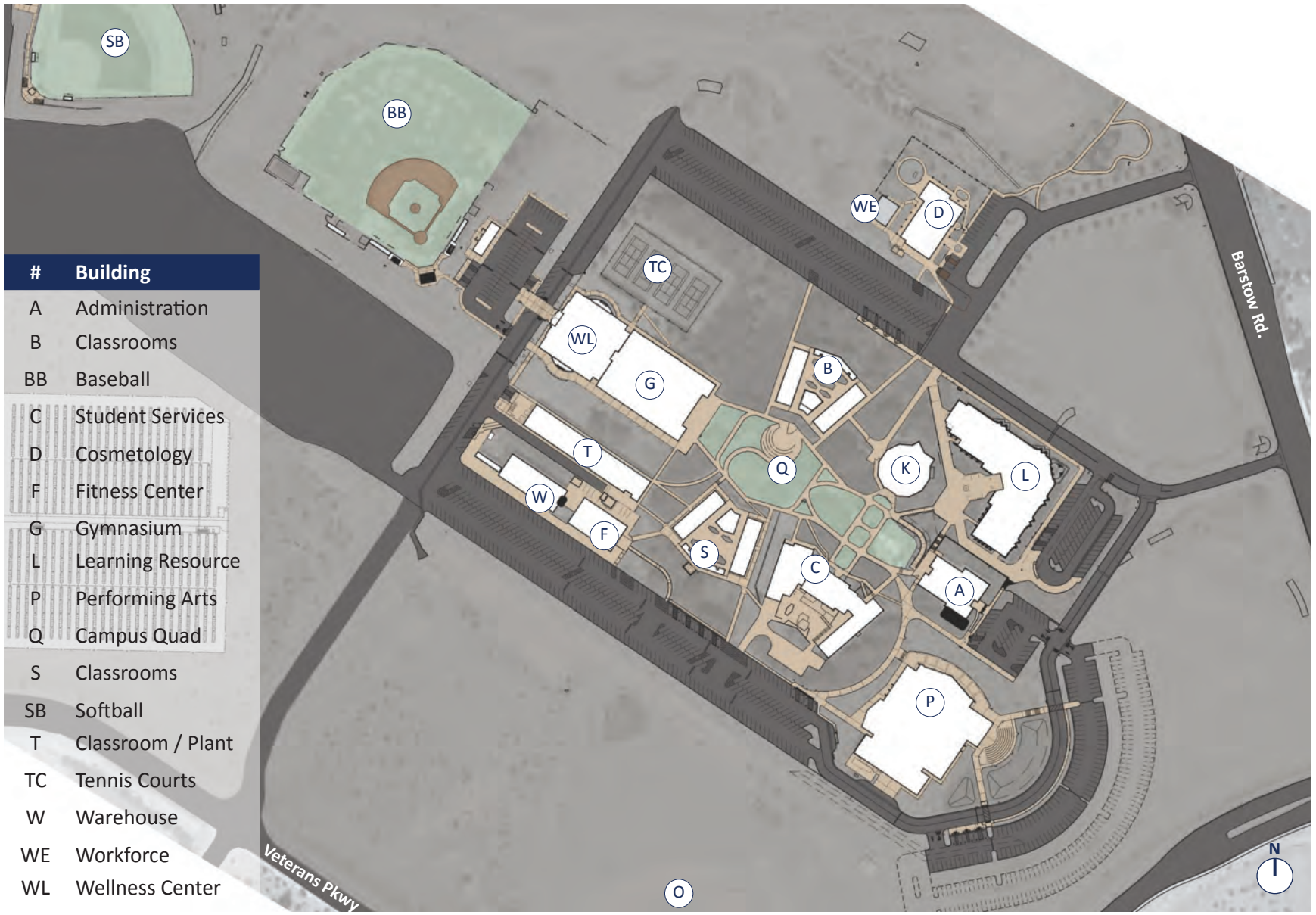
The Academic Core supports the following facilities:

- The Learning Resource Center (L) and Performing Arts Center (P), both highly public facilities, are located at the eastern perimeter of the Academic Core, with direct public access to parking.
- The Student Services Building (C) is located on the south edge of the Academic Core. This location is on the "backside of campus" with no direct access from BCC's vehicular entries, making it difficult for potential students and their families to find their way to the initial points of student contact, support and service.
- Food service is limited to a portion of the west wing of the Student Services Building (C). The food service facilities are "tired", are not visually welcoming and do not capitalize on their potential connection to the quad or the protected courtyard on the south edge of the building, As result this facility does little to support or encourage students to study, socialize or participate in a collegial environment as individuals or in groups.
- The S and B Classroom Buildings, opened in 1965. Today, the facilities contain small classrooms with limited/older technology and do not support evolving instructional needs. Organized around internalized courtyards they lack a sense of collegial connection to the Campus Quad.
- The T Building is a linear, externally loaded / accessed building with little sense, visually or physically, of connection to the Campus Quad. Housing Science Labs, Art Labs and the campus Central Plant the facility is outdated and undersized to support both programs.
- Building K, the original campus Library, has been repurposed multiple times and currently serves as BCC's Student Success Center. Built in 1965, its unique shape and size limits its adaptability. However, its open floor plan, close proximity to the LRC (L) and centralized it's position on campus is appropriate for a Student Success Center.
- Building A, Administration, was built in 1965 to serve the administrative needs of the campus. With growth and changing needs in administration and student services the facility is now undersized.
- Building W, constructed in 1967 serves as the campus Warehouse, Maintenance and Operations Facility. The facility sits directly south of Building T and shares service access with Building T. As with the majority of original buildings, it is undersized for current needs and in poor condition.
- The Academic Core is anchored at its west end by the Gymnasium (G) and new Wellness Center (WL). Directly west of these facilities are BCC's Baseball (BB) and Softball fields (SB). North of the Gymnasium and Wellness Center are Tennis Courts (TC).
- The original Fitness Center (F) is currently used as storage. The completion of the Wellness Center (WL) in 2015 replaced the uses in Building F

## OTHER FACILITIES

Over time additional facilities were developed outside of the Academic Core. These facilities are separated from the core by parking and vehicular roadways creating potential vehicular and pedestrian conflicts, furthering accessibility issues and reducing the concentration of students / energy in the academic core. These include:

- Workforce and Economic Development, WE
- Building D, originally constructed as a Child Development Center, was converted to support Cosmetology and the Campus Bookstore.
- The Observatory




| # | Building |
|---|---|
| A | Administration |
| B | Classrooms |
| BB | Baseball |
| C | Student Services |
| D | Cosmetology |
| F | Fitness Center |
| G | Gymnasium |
| L | Learning Resource |
| P | Performing Arts |
| Q | Campus Quad |
| S | Classrooms |
| SB | Softball |
| T | Classroom / Plant |
| TC | Tennis Courts |
| W | Warehouse |
| WE | Workforce |
| WL | Wellness Center |

# AGE & CONDITION OF BUILDINGS & INFRASTRUCTURE

## EXISTING BUILDING STOCK

The age and condition of campus facilities varies widely. As indicated in the adjacent table, campus facilities range from 2 to 50 years of age. By the end of the 2030 planning period addressed in this master plan, the eldest of these facilities will be approaching 65 years of age.

The original buildings constructed between 1965 and 1977 are within the campus core, or directly south. The majority of these buildings, if they are to remain in service, are in need of extensive renovation and /or replacement of building systems to correct deterioration resulting from deferred maintenance, building systems reaching or exceeding their useful life, accessibility upgrades and the need to meet current instructional and technology needs.

While the age of a building may not be a significant factor in the continued use of a specific building, the efficiency of the building envelope, the need to support growth and the need to support current technology and modes of instruction often contribute to renewal or repurposing costs approaching or exceeding the cost of replacement.

It should also be noted that older, relatively small buildings, coupled with significant deferred maintenance issues creates a day-to-day maintenance burden and cost. Operating costs for these older facilities often exceeds those resulting from replacement and right sizing of facilities.

To assess the current operating condition of each building on campus, discussions were held with the campus' maintenance and operations team. Information from these discussions, along with review of the Chancellor Office's Facilities Condition Index (FCI), informed planning recommendations. The adjacent table notes the FCI given to each facility as a percentage of replacement cost.

*A summary of Age and Condition indicates the following:*

- The early campus buildings (9 Buildings) will be exceeding 65 years of age by 2030, the planning horizon selected for the Facilities Master Plan. Each of these facilities has a FCI of over 50% . With the exception of Student Services (Building C), none of the facilities have had significant renovations.
- The majority of these early campus buildings are currently in need of significant renovation and or replacement of building systems. They are in need of "renewal" if they are to continue in service for any significant period.
- 5 Buildings are less than 15 years of age. These facilities are located along the perimeter of campus and have a FCI less than 10 .

| # | Building | Year | FCI |
|---|---|---|---|
| A | Administration | 1965 | 59% |
| B | Classrooms | 1965 | 57% |
| C | Student Services | 1965 | 60% |
| D | Cosmetology | 1996 | 2% |
| F | Fitness Center | 1977 | 60% |
| G | Gymnasium | 1969 | 52% |
| L | Learning Resource | 2004 | 0% |
| P | Performing Arts | 2014 | 0% |
| S | Classrooms | 1965 | 59% |
| T | Classroom / Plant | 1965 | 59% |
| W | Warehouse | 1967 | 103% |
| WE | Workforce | 2011 | 0% |
| WL | Wellness Center | 2015 | 0% |
| Off-Campus | | | |
| CT | CTE – Off Site | 2000 | 0% |


BB
WE
D
TC
WL
G
B
T
W
Q
K
L
F
S
C
A
P
Barstow Rd.
Veterans Pkwy
N

# AGE & CONDITION OF BUILDINGS & INFRASTRUCTURE

## SITE AND INFRASTRUCTURE CONSIDERATIONS

### *Topography / Accessibility*

The campus generally slopes from the northeast to the southwest with significant grade differences between parking along the north edge, Lot 1, the open space at the center of the Academic Core, and parking on the south edge. These grade differences create significant ADA / accessibility issues and significant design and planning considerations. A recent study completed to assess accessibility identified multiple conditions (both site and building related) across campus which require correction

### *Central Plan Facilities*

The campus Central Plant, which serves most of the original buildings, is running efficiently but at capacity. The recent LRC and Performing Arts Complex are not connected and were designed with separate, stand-alone systems. As existing buildings are taken off line, the capacity of the central plant will need to be evaluated to determine if it can support, or be expanded to support, the new or renovated buildings suggested in the 2030 Facilities Master Plan.

### *Storm Water Management*

All storm water currently flows above grade. There are currently two significant storm water retention basins on campus – one within the Academic Core, north of the Gym and Fitness Center (SW1); and one outside of the academic core, southwest of the south parking lot (SW2). Consistent with the topography, storm waters generally flow from the south edge of campus, around and through the central core, to the norther basins below campus (SW1). While outside of the scope of this Master Plan, as the campus develops further engineering assessment of alternatives relative to the routing and retention of storm water should be completed especially in light of concerns express regarding the developable area dedicated to these facilities, the visual character of the existing retention basins and their potential impact on growth withing the academic core beyond the 2030 planning horizon. It should be noted anecdotally that a record 100 year storm occurred in Barstow in 2016, while some erosion was evident, no significant issues were observed.

| # | Building | Year | FCI |
|---|---|---|---|
| A | Administration | 1965 | 59% |
| B | Classrooms | 1965 | 57% |
| C | Student Services | 1965 | 60% |
| D | Cosmetology | 1996 | 2% |
| F | Fitness Center | 1977 | 60% |
| G | Gymnasium | 1969 | 52% |
| L | Learning Resource | 2004 | 0% |
| P | Performing Arts | 2014 | 0% |
| S | Classrooms | 1965 | 59% |
| T | Classroom / Plant | 1965 | 59% |
| W | Warehouse | 1967 | 103% |
| WE | Workforce | 2011 | 0% |
| WL | Wellness Center | 2015 | 0% |
| Off-Campus | | | |
| CT | CTE – Off Site | 2000 | 0% |


BB
SW1
WE
D
TC
Barstow Rd.
WL
G
B
T
Q
K
L
W
F
S
C
A
SW2
P
Veterans Pkwy
N

# VEHICULAR ACCESS, CIRCULATION & PARKING

## VEHICULAR ACCESS

As previously noted the Campus is served by two entries from Barstow Road (Rt. 247). Neither entry is signalized. The northern most entry serves as the primary access point / entry. Both entries provide access to major surface parking lots. At the southeast edge of the campus, Veterans Parkway divides the District's property and provides access to the leased land (currently leased by Barstow Veterans Home of California) as well as a 'back' campus entry for service.

All existing entries would benefit from enhanced signage and a unified, identifiable landscape and entrance character.

## PEDESTRIAN DROP-OFF, BICYCLES & PUBLIC TRANSPORTATION

The primary entry off Barstow Rd. brings vehicles to a drop off at the north edge of campus, east of the primary entry drive and in close proximity to the LRC. The drop off is currently utilized by private vehicles as well as the Antelope Valley Public Transit, Lines 1 and 2. While the transit stop appears to be heavily used it is not well developed. Pedestrian access into the core of campus from this location, based on the topography, does not support universal access.

Student Services, a location many first time visitors are looking for, is accessed from the south edge of campus. There is no formalized private vehicle or public transit drop–off at this location.

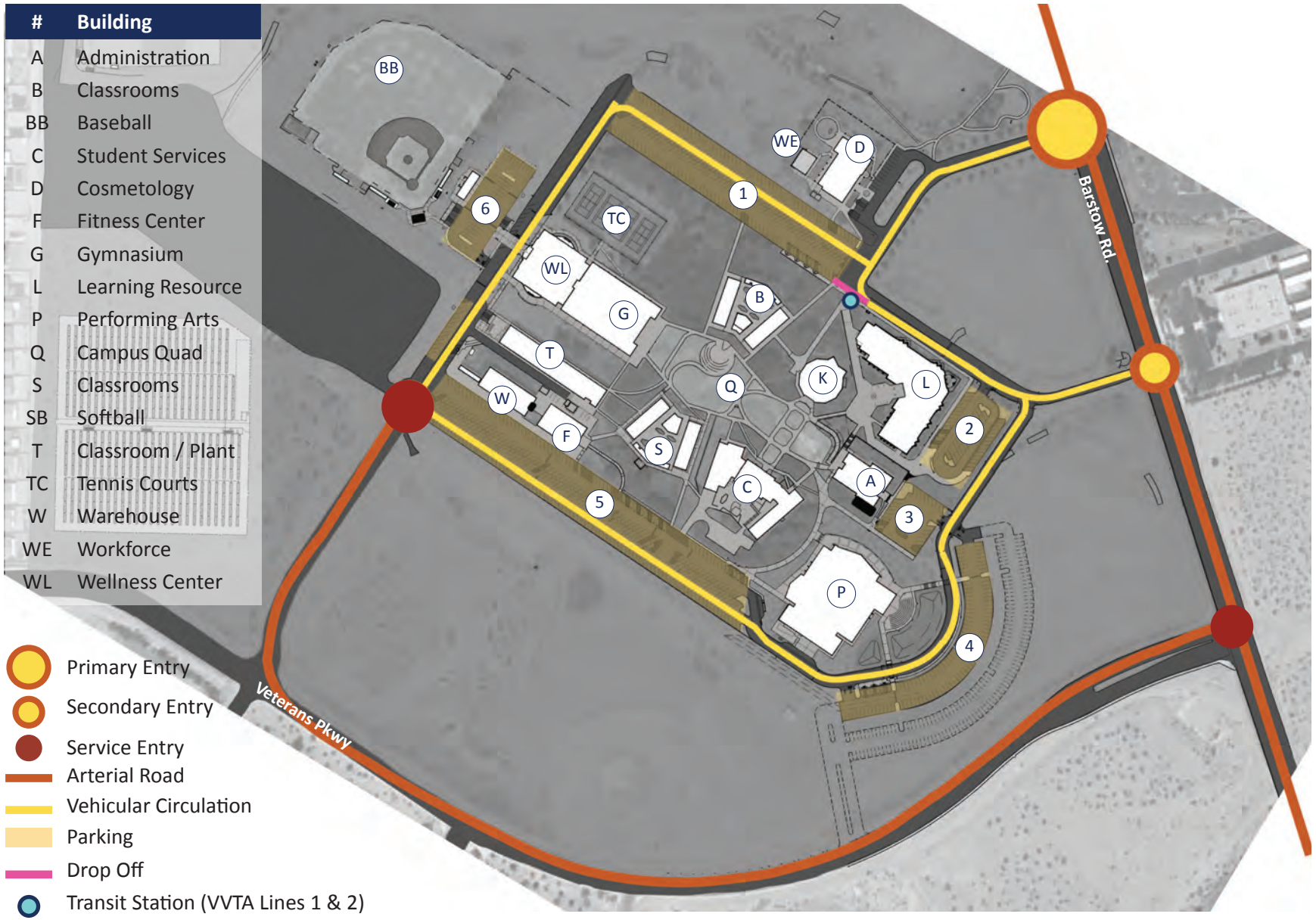
There are no dedicated bicycle paths into or within the campus.

## PARKING AND ON- CAMPUS CIRCULATION

Parking is currently sufficient, well distributed around the academic core and connected via a loop road.

On-site parking is concentrated in 3 zones, is generally well distributed relative to the intensity of student / staff use and in relatively close proximity to the Academic Core. Considering the significant topography across the site, the distribution of parking aids in providing convenient access to facilities. The South lot, Lot 5, provides direct access to most academic space, while the North lot, Lot 1, provides access to the Cosmetology / Bookstore (D) facilities and the north side of the Academic Core. The East lots, 2,3 & 4, provide direct access to the LRC (L), Administration (A) and PAC (P). There is limited parking, Lot 6, on the west side of campus supporting the Wellness Center (WL) and Athletic Fields. The walk from all parking spaces to the center of campus is a very reasonable 1/8th of a mile, however due to topography pedestrian access can be challenging.

One measure of parking adequacy is the ratio of unduplicated student enrollment to the number of on-campus spaces. Today, there are approximately 775 parking spaces on the BCC Campus. The 2015 fall unduplicated enrollment for the BCC is approximately 3,138 students. This equates to a current ratio of approximately 4:1. If / when BCC determines that it is appropriate to expand parking, there is ample land directly adjacent to the existing parking lots for expansion.

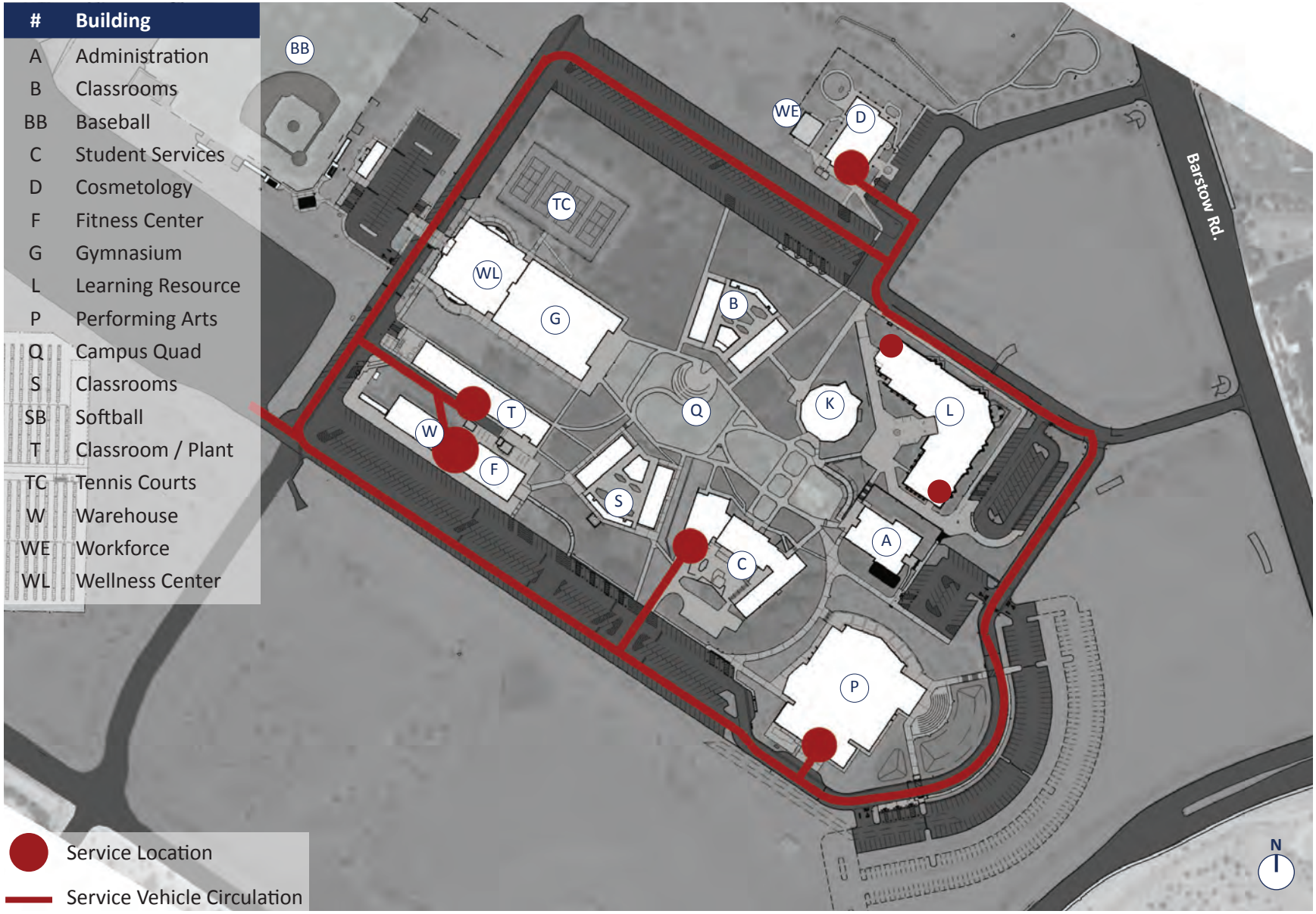

Barstow Rd.
Veterans Pkwy
BB
6
TC
WE
D
1
WL
G
B
T
W
F
S
Q
K
L
2
C
A
5
3
P
4
# Building
A Administration
B Classrooms
BB Baseball
C Student Services
D Cosmetology
F Fitness Center
G Gymnasium
L Learning Resource
P Performing Arts
Q Campus Quad
S Classrooms
SB Softball
T Classroom / Plant
TC Tennis Courts
W Warehouse
WE Workforce
WL Wellness Center
Primary Entry
Secondary Entry
Service Entry
Arterial Road
Vehicular Circulation
Parking
Drop Off
Transit Station (VVTA Lines 1 & 2)

## VEHICULAR ACCESS, CIRCULATION & PARKING

### SERVICE

Service vehicle access to facilities is generally good, located on the outside edges of the Academic Core, and generally away from major pedestrian circulation routes.

While facilities requiring service vehicle access are distributed in multiple locations on campus, the majority of significant service points can be generally accessed from the campus perimeter. These include the Bookstore (B), Library (L), PAC (P), and Food Service (C). Access to the Science Labs (T), Art (T), and Maintenance and Operations (W) is provided through a shared access way between the T Building to the North and Buildings W and F to the South. This access also serves as a pedestrian spine creating some concerns with vehicular and pedestrian conflicts and pedestrian safety




| # | Building |
|---|---|
| A | Administration |
| B | Classrooms |
| BB | Baseball |
| C | Student Services |
| D | Cosmetology |
| F | Fitness Center |
| G | Gymnasium |
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| P | Performing Arts |
| Q | Campus Quad |
| S | Classrooms |
| SB | Softball |
| T | Classroom / Plant |
| TC | Tennis Courts |
| W | Warehouse |
| WE | Workforce |
| WL | Wellness Center |

# PEDESTRIAN ACCESS & OPEN SPACE

## OPEN SPACE

The campus took form in the mid 1960's with the completion of seven buildings (A, B, C, G, K, S, T) set around a central campus green or Quad (Q) in a traditional manner. As the campus grew, additional buildings further defined the "Academic Core" (F, L, P).

Overall the campus possesses a significant amount of open space. The Campus Quad includes: a residential scale pergola and eating area (1), a rose garden (1), an Amphitheater (2) and sloping lawn areas. Unfortunately, few of these spaces have been purposefully planned or improved to adequately support or encourage formal and / or informal student activities, study or socialization. The spaces are not well utilized, nor are they connected to the facilities around them.

Barstow is a city that is subject to temperature extremes and high winds. Some of the original buildings, most notably Classroom Buildings B and S, were planned as courtyard buildings. While providing protection from the winds, the courtyard focus of these buildings and the lack of visual and physical connection of the buildings and their courtyards to the campus green / Quad limits student energy and student engagement in a larger collegial environment. Today, the internalized courtyards are underwhelming.

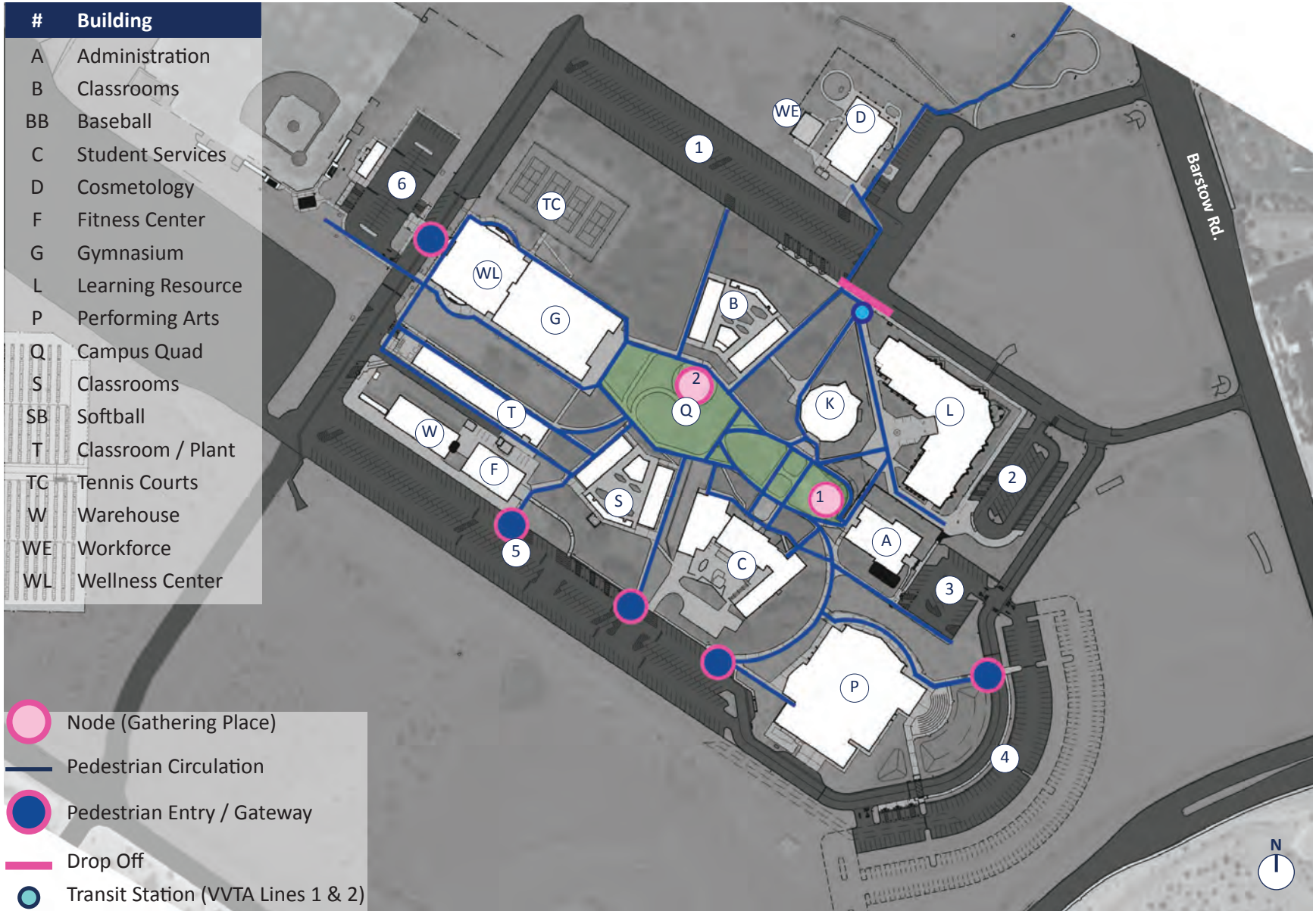
## PEDESTRIAN CIRCULATION AND WAY FINDING

Pedestrian access from Barstow Road to the campus is provided via a curvilinear walk that brings pedestrians to the Bookstore / Cosmetology (Building D) at the edge of campus, and thru / across the north parking lot, Lot 1, to Classroom Building B, the LRC (L) and Student Success Center (K).

Pedestrian "gateways" from parking to the Academic Core are generally poorly defined; lacking in appropriate signage and purposeful development of consistent planting, hardscape and lighting.

As previously discussed elevation changes across the campus create significant challenges with respect to ADA requirements, universal accessibility and even wayfinding. Buildings along the north end of the Academic Core are at an elevation below the south edge by approximately 30 feet.

With the addition of facilities outside of the academic core pedestrian access is bifurcated in some locations by vehicular circulation and parking, most significantly on the north side of campus between Bookstore/Cosmetology (Building D), Workforce and Economic Development (Building E) and the Campus Core.




| # | Building |
|---|---|
| A | Administration |
| B | Classrooms |
| BB | Baseball |
| C | Student Services |
| D | Cosmetology |
| F | Fitness Center |
| G | Gymnasium |
| L | Learning Resource |
| P | Performing Arts |
| Q | Campus Quad |
| S | Classrooms |
| SB | Softball |
| T | Classroom / Plant |
| TC | Tennis Courts |
| W | Warehouse |
| WE | Workforce |
| WL | Wellness Center |

## KEY CONSIDERATIONS FOR THE FUTURE

Based on the findings from the Educational Master Plan, input from the college community and on-campus visits, several key considerations were identified as pertinent to the development of the Facilities Master Plan.

### Supporting the Core Mission of the District

Consideration must be given to insuring that facilities in the future support the core mission of the College/District – i.e. a strong program of transfer/general education, basic skills preparation and workforce preparation. Facilities of the future should ensure that the programs in the sciences, mathematics, language arts, humanities, career technical education, and basic skills are adequately accommodated.

### Meeting Demands for Growth

Based on the current space inventory in 2015, 3,138 students attending BCC. The projection for 2030 is 3,775 unduplicated enrollment, a growth of 20%.

Based on the current space inventory, projected student growth using State space use standards, and the considerations defined above, the needs have been quantified as follows:

- CTE Center on Campus
- Replacement of existing Lab and Classroom Facilities
- Expansion of Student Services
- Expansion of Administration Space
- New Multipurpose Space

### Addressing an Aging Campus

Nine campus buildings are 40 years old. By the end of the 2030 planning period addressed in this Master Plan, these facilities will be 65 years of age. If these facilities remain in service, they will require significant renovation and /or replacement of building systems to correct deterioration resulting from deferred maintenance, building systems reaching or exceeding their useful life, accessibility upgrades and the need to meet current instructional and technology needs.

### Site & Infrastructure Needs

Most of the capital needs and planning considerations in this category are related to site improvements to enhance pedestrian circulation, meet accessibility requirements and provide student amenities / spaces. New systems, such as expansion of the central plant, will need to be evaluated, connected and or extended to maximize operational benefits.

### Vehicular Access, Circulation & Parking

Access to the campus, entry points, vehicular circulation and parking are prime planning considerations. The points of entry and exit should be addressed to enhance campus branding. As the campus grows, parking lots may need to be reconfigured, expanded and / or added to provide additional spaces in balance with growth.

### Pedestrian Circulation & Open Space

The landscape, hardscape, signage and pedestrian amenities should be an asset to the campus and to the community in general. Improvement to these systems should include maintaining and enhancing the landscape character of the campus core to enrich the student experience by creating a sense of place and a sense of energy while supporting accessibility and ease of way-finding.

### Creating a Collegial Environment

BCC should continue to focus on providing dispersed interior (building) and exterior (landscape) spaces for students to gather, socialize and communicate. To the extent reasonable, all future buildings should be located within the campus core to increase the density of student activity and support the ideas of a collegial environment.

### Space Utilization / Distribution of Space

Whenever possible, space allocations should conform to Title 5 standards and allowances for the key space categories monitored by the State. Even without current state funding, it is in the College's best interest to keep itself in a "funding worthy" position for that time in the future when funding becomes available.

### Technology Considerations

Facilities planning is closely linked to, and aligned with, technology. The association between instruction, support services and technology is impacted by distance learning, classroom and support service needs, and anticipated future technological innovations.

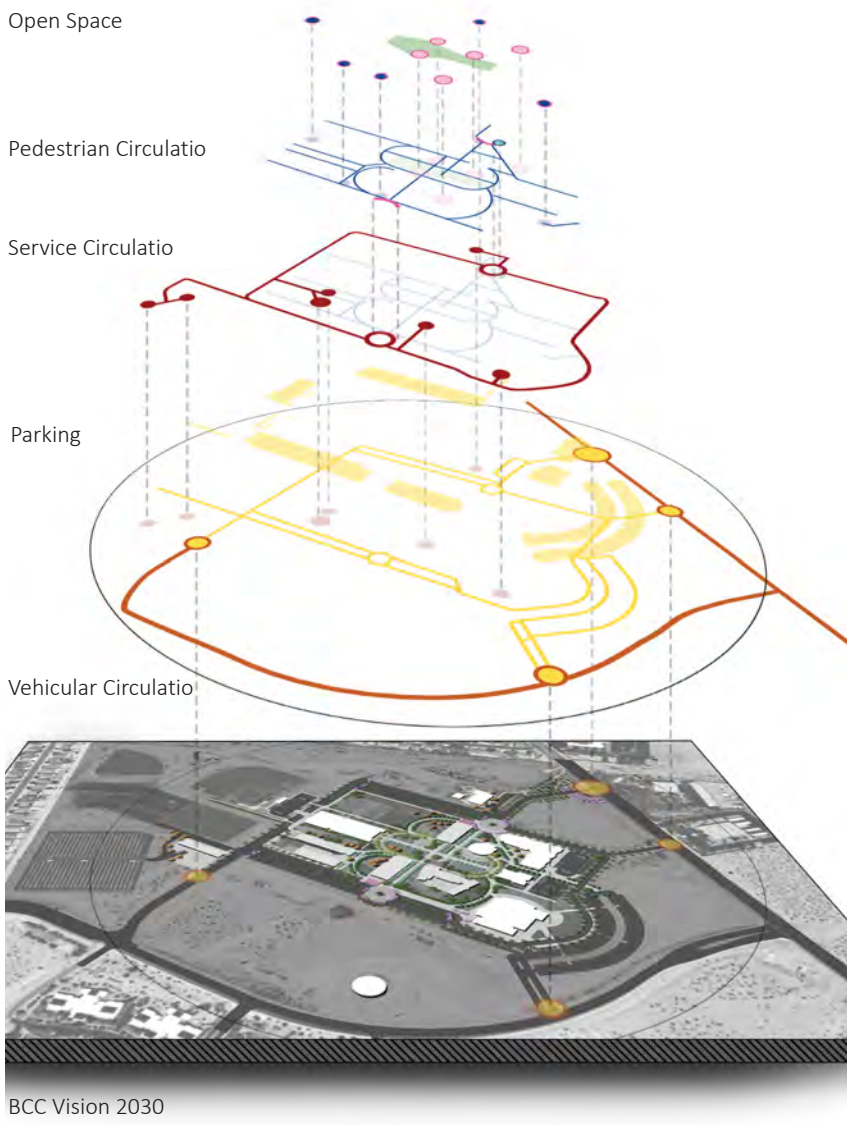
### The Maintenance Imperative

Maintenance is imperative to the useful life of facilities. Key maintenance aspects that should be considered as part of the planning process include:

- The adequacy of the current and projected maintenance organizational structure to support new or renovated facilities
- The need of an overall comprehensive and long-term plan for maintenance
- A long-term commitment of funding for maintenance


# VISION FOR THE FUTURE

# VISION FOR THE FUTURE



BCC Vision 2030

## TRANSLATING THE FINDINGS INTO PHYSICAL FORM

Translating the findings from the educational planning process into a physical vision was initially facilitated via the identification of a program of work. This process involved the assemblage of projected space needs into larger functional building blocks. Findings from the Educational Master Plan, translating WSCH into assignable square feet, our current campus assessment, and interviews all provided the shape and form of the program of work.

## PROPOSED BUILDING FACILITIES PROGRAM AND CAMPUS RENOVATION

### CAPACITY TO GENERATE WSCH

The capacity to generate WSCH was used as the key element for calculating appropriate classroom (lecture and laboratory) space requirements. Added to these numbers was forecasted growth in total headcount enrollments. Projected growth in enrollments and the associated space needs to provide instructional services were augmented through an interview process, and assessment of the current facilities. The status, age and condition of the current facilities and those facilities associated with higher levels of technology, became a prime consideration in the process.

### NON-ACADEMIC SUPPORT SPACE

The space parameters necessary to project support space functions does not operate utilizing the lecture/laboratory calculations. The vast majority of support space is connected to office/office service functions. The projections for support services space is largely based on interviews with constituent groups on-campus.

## KEY PLANNING OBJECTIVES AND PRINCIPLES

The development of the Facilities Master Plan was guided by the results of the educational planning efforts, and assessment of the strengths, weaknesses and opportunities identified by the planning team based on campus tours, interviews with constituent groups, public presentations, discussions with campus leadership, and presentations to appropriate committees. As result of this process several key planning objectives and principles evolved:

- To present a complete program of development that addresses the total needs of the College through 2030
- To meet and support growth projections while simultaneously addressing aging buildings and infrastructure. Considerations include:
  - Create a permanent location on campus for programs currently housed off-campus (CTE)
  - Consolidate related programs
  - Create flexible, interdisciplinary spaces
  - Where effective, renovate existing facilities to support programmatic needs
  - Replace aging facilities that do not support current instructional or support needs
- To enhance the Campus Environment and enrich the student experience including:
  - Delineating clear, inviting campus entry points
  - Providing spaces and places where students can easily connect/collaborate with each other
  - Create an out-of-class environment that is conducive to a comprehensive collegiate experience for students that both supports and enhances the classroom environment
- To create a program of development that is capable of leveraging state funding including:
  - Aligning the projected space inventory with state guidelines
  - Positioning the College to maximize funding (state and local)
- To prioritize and sequence facility projects to minimize disruption on campus, the need for swing space and the number of temporary moves
- To develop a Building/Facilities Program that has institutional and community support
- To involve campus constituencies in the planning process
- To be sensitive to current fiscal constraints and capable of supporting a future bond program
- To embrace sustainability in all future projects
  - Work toward an energy efficient and sustainable campus environment
  - Reduce the campus's ecological footprint in a fiscally- and socially-responsible way


Barstow Community College
Performing Arts

# PROGRAM OF WORK

## NEW BUILDINGS

1 Maintenance and Operations Building
2 CTE Center
3a Classroom / Lab Building
4 Student Services

## RENOVATED / REPURPOSED FACILITIES

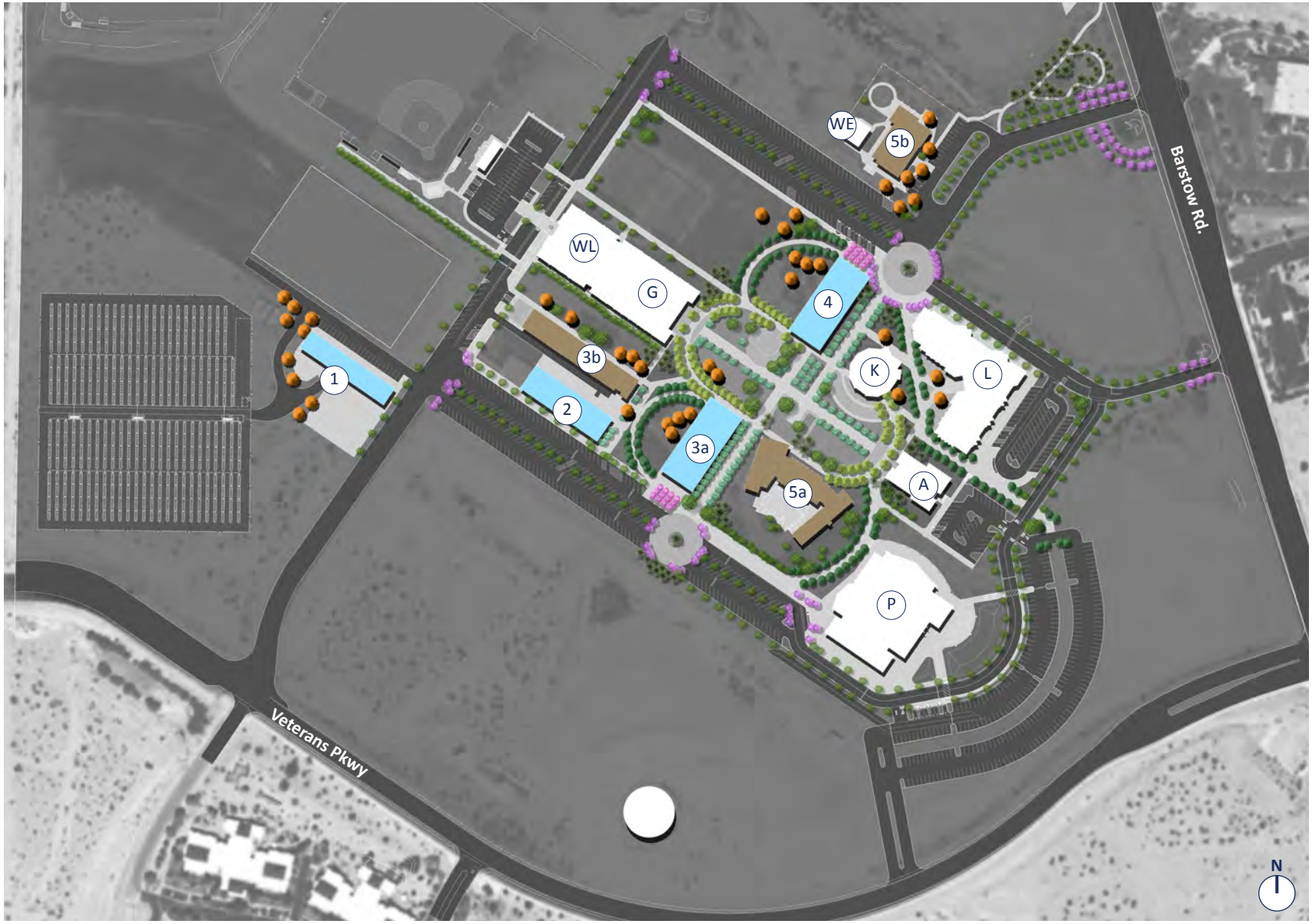
3b Building T: Art Classroom Expansion
5a Hall of Fame / C-Store / Administration Building
5b Cosmetology Renovation & Expansion

## EXISTING BUILDINGS TO REMAIN

A Administration
G Gym
K Student Success Center
L Learning Resource Center
C Cosmetology
P Performing Arts
WL Wellness Center
WE Workforce and Economic Development

## BUILDINGS TO BE DEMOLISHED (NOT SHOWN)

B Classroom Building
S Classroom Building
F Fitness Center
W Warehousing


WE
5b
Barstow Rd.
WL
G
4
3b
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3a
K
L
5a
A
P
Veterans Pkwy
N

# 1. MAINTENANCE & OPERATIONS

A new 1 story Maintenance & Operations Building to be constructed on the southwest edge of the Academic Core, west of its current location and north of the Solar Field is intended to replace the existing outdated and undersized facilities, as well as support growth / enhancement of service to the campus.

| PROGRAM BLOCK | SPACE USE | ASF | GSF |
|---|---|---|---|
| A | Maintenance | 2,000 | 2,632 |
| B | Warehousing | 3,000 | 3,158 |
| C | Office | 3,000 | 4,615 |
| **TOTALS:** | | **8,000** | **10,405** |

As a “lynch-pin” project the proposed site can be developed while the existing facility remains in operation. Upon completion the existing facility Maintenance and Operations Facility and Warehouse Building would be demolished to allow construction of additional instructional facilities, specifically Project 2, a new CTE Facility.


1 Maintenance and Operations
2 CTE Center
3b Building T: Art Classroom Expansion
G Gym
WL Wellness Center
SF Solar Field

# 2. CTE CENTER

It is a goal of Barstow College to provide state-of-the art, on-campus CTE Facilities replacing the existing leased, off-campus facility. Located south of T building on the site of the former Maintenance, Operations and Warehousing Faculties, the proposed 2 story CTE building would be sited to allow service access from the existing service drive to the west. The proposed 2 story solution works with the existing topography to allow direct pedestrian access at the second floor from the parking lot south of the building, while simultaneously supporting grade level access to the first floor directly from the campus core. A stair and elevator tower at the east edge of the facility would assist in resolving campus accessibility issues.

| PROGRAM BLOCK | SPACE USE | ASF | GSF |
|---|---|---|---|
| A | General Service, | 4,200 | |
| B | Automotive/Diesel 0948 | 7,000 | |
| C | Welding 0956 | 3,000 | |
| D | IMMT 0945 | 2,500 | |
| E | Electronics 0934 | 3,000 | |
| F | CBIS 0701 | 3,000 | |
| G | Photography 1000 | 1,200 | |
| H | Photography Studio 1000 | 600 | |
| I | Support Spaces | 1,975 | |
| **TOTALS:** | | **26,475** | **37,821** |

The project requires completion of the new Maintenance and Operations Building and demolition of the existing facilities. This project should be aligned with the campus space inventory to maximize state funding opportunities.


1 Maintenance and Operations
2 CTE Center
3a Classroom / Lab Building
3b Building T: Art Classroom Expansion
4 Student Services
5a Hall of Fame / C-Store / Administration Building
G Gym
WL Wellness Center

# 3a CLASSROOM / LAB BUILDING & 3b ART EXPANSION

### 3a Classroom / Lab Building

The proposed project replaces the existing outdated and undersized science labs in Building T, as well as the outdated classrooms and offices located in Buildings B & S.

Envisioned as a 2 story gateway building on the south edge of the academic core, the project should be site and designed to provide pedestrian access from the south parking lot at the second level, as well as direct grade level access from the campus Quad at the ground floor. Exterior stairs and elevators would link to a new north south pedestrian spine supporting universal accessibility allowing all students, faculty, and campus guests to traverse with ease into the campus core

The Project requires the demolition of Building S prior to construction, as the new facility will be within the footprint of the existing building. The Project should follow completion of the new CTE Center which is expected to provide additional classrooms to BCC; these spaces, in addition to available lecture space in the PAC, LRC should provide adequate temporary housing (of users in Building S) while the new building is constructed. Upon completion, the Building B would be demolished.

This project should be aligned with the campus space inventory to maximize state funding opportunities.

### 3b Art Expansion

Following completion of new science labs in project 3a Classroom / Lab Building, the existing labs vacated within Building T would be repurposed to support expansion and renovation of the existing Art facilities.

Estimated capacity for repurposing: 7,038 ASF

### 3a Classroom / Lab Building

| PROGRAM BLOCK | SPACE USE | ASF | GSF |
|---|---|---|---|
| A | General Classroom | 8,000 | |
| B | Large Lecture | 2,040 | |
| C | Science labs / Lab Service | 7,020 | |
| D | Support Spaces | 3,020 | |
| **TOTALS:** | | **20,080** | **30,892** |

### 3b Art Expansion

| PROGRAM BLOCK | SPACE USE | ASF | GSF |
|---|---|---|---|
| A | Art Labs / Support Space | 8,469 | |
| **TOTALS:** | | **8,469** | **-** |


1 Maintenance and Operations
2 CTE Center
3a Classroom / Lab Building
3b Building T: Art Classroom Expansion
4 Student Services
5a Hall of Fame / C-Store / Administration Building
5b Cosmetology Expansion
A Administration
G Gym
K Student Success Center
L Learning Resource Center
C Cosmetology
P Performing Arts
WL Wellness Center
WE Workforce and Economic Development

# 4. STUDENT SERVICES

The proposed Student Services Building is envisioned as a gateway facility on the north edge of campus, creating a new front door to BCC. The facility will allow for consolidation and expansion of all existing student services in a “one-stop” facility, as well as house the Veteran’s Resource Center, Student Life, Development and Outreach.

The building is intended to provide first time services to new students and visitors at the ground floor with on grade pedestrian access from the proposed public transit and private vehicle drop off / parking lot. It is suggested that services supporting continuing / returning students be located on the second level with direct access from the Campus Quad.

Ideally, this project would be built in association with the new drop off and pedestrian improvements discussed in Vehicular Access, Circulation & Parking. Elevators and exterior stairs linking the proposed facility with a new north / south pedestrian spine extending from the new drop-off and parking into the campus core would support universal access from the north edge of the campus core to the central Quad.

Located within and adjacent to the footprint of the existing Building B, the new Student Services building is sequenced to be constructed following completion of the new Classroom / Lab Building.

This project should be aligned with the campus space inventory to maximize state funding opportunities.

| PROGRAM BLOCK | SPACE USE | ASF | GSF |
|---|---|---|---|
| A | Admissions and Records | 2450 | |
| B | Financial Aid | 990 | |
| C | Counseling | 1830 | |
| D1 | Special Programs & Services, EOPS | 1240 | |
| D2 | Special Programs & Services, DSPS | 979 | |
| D3 | Special Programs & Services, Care, CalWorks, Access, ETC | 1900 | |
| E | Transfer Center | 1354 | |
| F | VP Student Services | 950 | |
| G | Student Life, Development & Outreach | 3670 | |
| H | Veterans Resource Center | 750 | |
| I | Support Spaces | 1400 | |
| **TOTALS:** | | **17,513** | **26,943** |


- 3a Classroom / Lab Building
- 4 Student Services
- 5a Hall of Fame / C-Store / Administration Building
- 5b Cosmetology Expansion
- A Administration
- K Student Success Center
- L Learning Resource Center
- WE Workforce and Economic Development

# 5a. HALL OF FAME / C-STORE / ADMINISTRATION
# 5b. COSMETOLOGY RENOVATION / EXPANSION

### 5a. Hall of Fame / C-Store / Administration

Following completion of the new Student Services building the vacated space in Building S would be renovated to support a "Hall of Fame", Convenience Store, and additional Administrative Offices and support spaces.

The Hall of Fame is intended to celebrate BCC's past and present and is envisioned as providing a large multi-purpose space in the central wing of the building. This space is intended to accommodate board meetings, special events and conferencing / meeting needs.

In the West Wing would be renovated as a Campus or Convenience Store envisioned as a combination Bookstore and Grab-and-Go Food Service facility, a concept widely used on smaller campuses. Presently, the existing Bookstore, located in Building D, and current food service facilities located in Building C are operated by the same company / outside vendor; this project would consolidate services into a single location in close proximity and direct access from the Campus Quad. Renovation of the existing facilities provides an opportunity to enhance the building's connection to the campus core and support collegial involvement.

In the East Wing, the existing offices and meeting rooms would be repurposed to serve growing administrative needs.

### 5b. Cosmetology Renovation / Expansion

Today, the Cosmetology Program shares space with the campus Bookstore. When the bookstore moves out of this facility (upon completion of project 5a), Cosmetology will gain the space vacated; which will be converted to classroom / lab space.

Estimated capacity for repurposing: 1,829 ASF

### 5a. Hall of Fame / C-Store / Administration

| PROGRAM BLOCK | SPACE USE | ASF | GSF |
|---|---|---|---|
| A | Hall of Fame | 4,065 | |
| B | C-Store | 5,486 | |
| C | Administration | 4,112 | |
| **TOTALS:** | | **13,663** | **17,688** |

### 5b. Cosmetology Expansion

| PROGRAM BLOCK | SPACE USE | ASF | GSF |
|---|---|---|---|
| A | Cosmetology Classroom / Lab | 7,192 | |
| **TOTALS:** | | **7,192** | **9,564** |


- 2 CTE Center
- 3a Classroom / Lab Building
- 3b Building T: Art Classroom Expansion
- 4 Student Services
- 5a Hall of Fame / C-Store / Administration Building
- 5b Cosmetology Expansion
- A Administration
- G Gym
- K Student Success Center
- L Learning Resource Center
- P Performing Arts
- WL Wellness Center
- WE Workforce and Economic Development


BARSTOW COMMUNITY COLLEGE
PERFORMING ARTS


ADMINISTRATION
NO SMOKING BEYOND THIS POINT

In addition to addressing facility needs, the Facilities Master Plan establishes a planning framework for the long-term growth and enhancement of the Barstow Community College campus.

In developing the Facilities Master Plan, the campus was viewed as an entity with strengths and weakness, with particular goals to be pursued, and with specific outcomes to be achieved. The needs of the "total campus" were considered, not simply buildings. Critical campus systems needed to support current facilities and future improvements were taken into account. The campus systems included such elements as vehicular access, circulation and parking; open space and pedestrian circulation and; campus wide amenities/ improvements. Along with facilities (projects), these systems coalesce to make the campus a living and working community. Collectively, they support the overall goal of serving students by providing the physical resources that support learning and the overall academic experience. Based on the significant program of work envisioned through 2030, the Facilities Master Plan described in the following pages builds upon the strengths of the existing campus systems while simultaneously suggesting significant refinement of these systems.

Respected Landscape Architect, Kevin Lynch, developed a series of words like paths, edges, nodes, districts and landmarks to describe the organization of a city, how these elements enable its inhabitants to understand the city as a "place," and how these elements facilitate their navigation of that "place" in a way that allows them to enjoy its various components and benefits. These words have become the concepts which planners use to organize small and large scale places, such as a campus, in a way that allows the users and inhabitants of that place to find their way around and enjoy the experience.

For Barstow Community College we have used this nomenclature and similar concepts to shape and define the campus as a series of systems intended to support new and continuing students, the public, and the campus administration and staff. We believe these planning concepts will aid in creating a unique place for students. A place which supports access, learning, teaching, and socialization in a visually pleasant and socially stimulating environment which is welcoming and easily understood.

# VEHICULAR ACCESS & CIRCULATION & PARKING

## ENHANCING VEHICULAR GATEWAYS

The master plan recommends enhancement of the existing vehicular access points to create "vehicular gateways". Enhancements would include a formalized hierarchy of appropriate signage to define primary and secondary entries and a unified, identifiable landscape and entrance character to further "brand" the College. Recommended entry improvements include:

1. The northern most entry from Barstow Road, currently leading to the Bookstore and campus core, should be formalized as the primary campus entry / address with enhanced signage and formalization of the landscape character. It is suggested the landscape improvements include additional trees and formalized planting of the ground plane extending from the Barstow Road entry to a new public transit and private vehicle "drop-off" at the northern edge of the campus core. This "ceremonial" character would visually clarify the "primary" entry, provide clear and direct access for first time visitors and most importantly students, to a new Student Services Building on the north edge of the campus. This entry would visually connect the Campus to Barstow Road.
2. The southern Barstow Road entry leading to the Library, Administration and Theatre Buildings should be enhanced in a similar fashion. However, as a secondary entry, it is suggested the landscape improvements be scaled accordingly.

Both entries should support public transit, bike paths, and pedestrian access from the Barstow Road. Refer to "Connecting the Campus and Surrounding Community" below for additional suggestions.

## PARKING

As previously noted the current on-campus parking is well distributed and sufficient to meet the needs of the campus through the 2030 planning horizon.

There are currently 775 total parking spaces serving a 2015 unduplicated headcount of 3,138 students. The master plan reflects a 2030 unduplicated headcount of 3,775 students. Without additional parking this results in a future ratio of 4.8 students /stall which is approaching an impacted ratio, but should be sufficient without expansion of parking.

The actual number of spaces required to support enrollment will depend on a number of factors including enrollment distribution (day and time of peak student enrollment) and the use / capacity of public transit.

To further minimize parking demand in the future, access to public transportation, carpooling and other alternatives should be rigorously supported and proactively pursued. This might include, with support of the local transit agency, the creation of a second internal public transit stop at the north edge of the Campus Core.

## TRANSIT AND PEDESTRIAN DROP-OFFS

As suggested in the "Pedestrian Access, Circulation and Open Space" discussion which follows, it is suggested that clear, consistent "pedestrian gateways" be created to support pedestrian movement from the adjacent parking into the Campus Core. The Primary Pedestrian Gateways at the north and south edges of the campus should be planned in conjunction with private vehicular drop-off/ pick up zones and the Public Transit stop at the north edge of campus. Consideration could be given to an additional Public Transit Stop at the south edge of the Campus Core as well.


1 Maintenance and Operations
2 CTE Center
3a Classroom / Lab Building
3b Bldg. T: Art Expansion
4 Student Services
5a Hall of Fame / C-Store / Administration Building
5b Cosmetology Expansion
A Administration
G Gym
K Student Success Center
L Learning Resource Center
C Cosmetology
P Performing Arts
WL Wellness Center
WE Workforce and Economic Development
Primary Entry
Secondary Entry
Service Entry
Arterial Road
Vehicular Circulation
Parking
Primary Transit & Pedestrian Drop Off / Gateway
Veterans Pkwy
Barstow Rd.
N

# VEHICULAR ACCESS & CIRCULATION & PARKING

## SERVICE TRAFFIC

Facilities requiring outside or off-campus service (large vehicle) access include the new M&O / Warehousing Facility (1), CTE Center (2) and Classroom / Lab Buildings (3a/3b); the existing Performing Arts Building (P); and the repurposed Student Services Building which will serve as a C-Store and Campus Event Space (5a). These Buildings are easily serviced from the south edge of campus with service vehicle access from Veterans Parkway. The balance of existing and proposed facilities can be generally serviced from the existing perimeter loop road with limited need for campus service vehicles interior to the campus core, thereby minimizing potential pedestrian and vehicle conflicts.

- 1 Maintenance and Operations
- 2 CTE Center
- 3a Classroom / Lab Building
- 3b Building T: Art Classroom Expansion
- 4 Student Services
- 5a Hall of Fame / C-Store / Administration Building
- 5b Cosmetology Expansion
- A Administration
- G Gym
- K Student Success Center
- L Learning Resource Center
- C Cosmetology
- P Performing Arts
- WL Wellness Center
- WE Workforce and Economic Development


WE
5b
Barstow Rd.
WL
G
4
3b
K
L
1
2
3a
A
5a
P
Veterans Pkwy
Service Location
Service Vehicle Circulation
N

# PEDESTRIAN ACCESS, CIRCULATION & OPEN SPACE

## CREATING A FRAMEWORK OF PEDESTRIAN CIRCULATION

The master plan suggests development of a hierarchy of pedestrian spines and walkways linking buildings and open space in a direct, clear, visually and physically consistent manner that supports ease of way finding and most importantly, accessibility. Suggested improvements include:

- Enhancing existing and creating new "Pedestrian Gateways" to the campus where pedestrian spines terminate at parking and drop-off zones. These gateways should reflect a consistent landscape / hardscape character and signage program to assist in way finding and to signify pedestrian entry to the campus.
- Extending, improving and visually defining a series of east-west and north-south "Pedestrian Spines" which provide visual access and support physical movement through the campus, from edge to edge, in an accessible manner.
- To assist in pedestrian way finding and visual understanding of the campus, differentiate all new, extended and existing pedestrian spines and walkways by their width, hardscape and landscape treatment.
- Minimizing the need for Campus Service Vehicle traffic sharing the primary pedestrian circulation

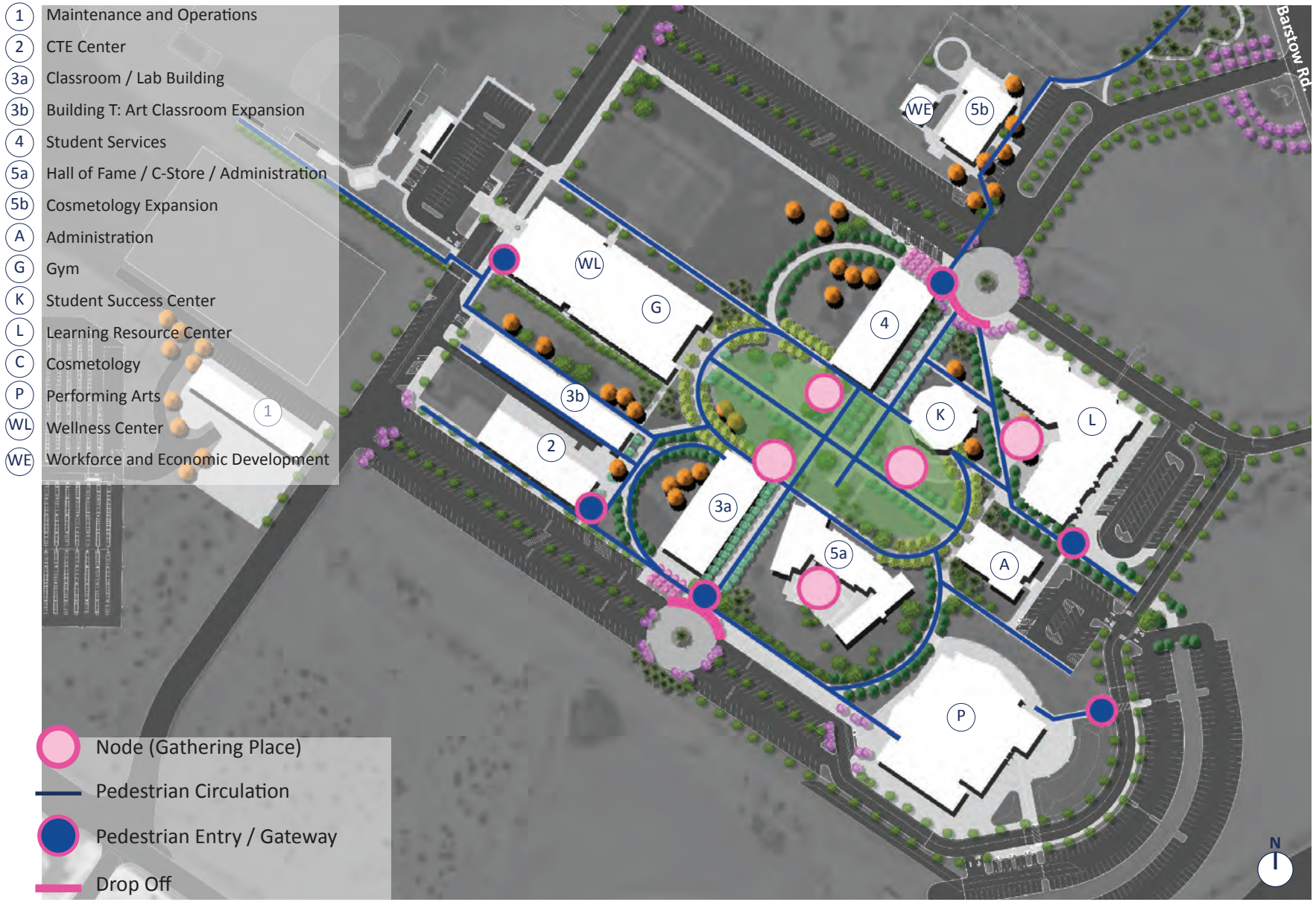
## IMPROVE ACCESSIBILITY

As previously noted, the topography of the Campus creates significant accessibility challenges. These challenges are evidenced by the recent accessibility study completed by Higginson Architects, Inc. which identifies more than 300 building and site conditions requiring correction. While the Master Plan is not intended as a detailed design or engineered resolution of these conditions, it is intended to suggest a framework for pedestrian movement which will assist in resolving these issues. That is to say, all planned new and or renovated facilities and related site improvements should, to the extent possible, support the concept of universal accessibility. This includes the minimization of ramps (walkways exceeding 4.9 %) and thoughtful location of accessible parking, pedestrian drop-offs and pedestrian circulation spines.

Where appropriate the use of exterior elevators along these spines should be considered to mitigate accessibility issues created by the site's topography to allow disabled students to easily and freely move across the site in a north / south direction. Opportunities suggested by the master plan include an exterior elevator in conjunction with the new Student Services Building (4) at the north edge of the Campus core and in conjunction with the new Lab / Classroom Building (3a) and CTE Center (2) on the south edge of campus.

The adjacent Circulation diagram depicts the following concept:

- Generally, the campus core slopes from south (higher elevation) to north (lower elevation). The master plan concept suggests 2 primary east/ west spines providing connection from building to building along those elevations and a single, primary north / south spine which facilitates, with the use of stairs and elevators, the connection of the 2 east / west spines with the parking and drop-off areas (campus core edges) to the north and south. It is suggested the details of this concept be further developed in a Precinct Plan and Master Landscape Plan. See Recommendations


1 Maintenance and Operations
2 CTE Center
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4 Student Services
5a Hall of Fame / C-Store / Administration
5b Cosmetology Expansion
A Administration
G Gym
K Student Success Center
L Learning Resource Center
C Cosmetology
P Performing Arts
WL Wellness Center
WE Workforce and Economic Development
Barstow Rd.
Node (Gathering Place)
Pedestrian Circulation
Pedestrian Entry / Gateway
Drop Off
N

# PEDESTRIAN ACCESS, CIRCULATION & OPEN SPACE

## CONNECTING THE CAMPUS AND SURROUNDING COMMUNITY

The campus is a community asset. To enhance connection the master plan suggests purposeful extension of the new north / south pedestrian spine from the north edge of the Campus Core north to Barstow Road. This would be completed in conjunction with the landscape improvements at the Primary Access as referenced in the "Enhancing Vehicular Gateways".

## ENHANCING OPEN SPACE & THE COLLEGIAL CHARACTER OF THE CAMPUS

In addition to the pedestrian improvements outlined above, the master plan vision includes:

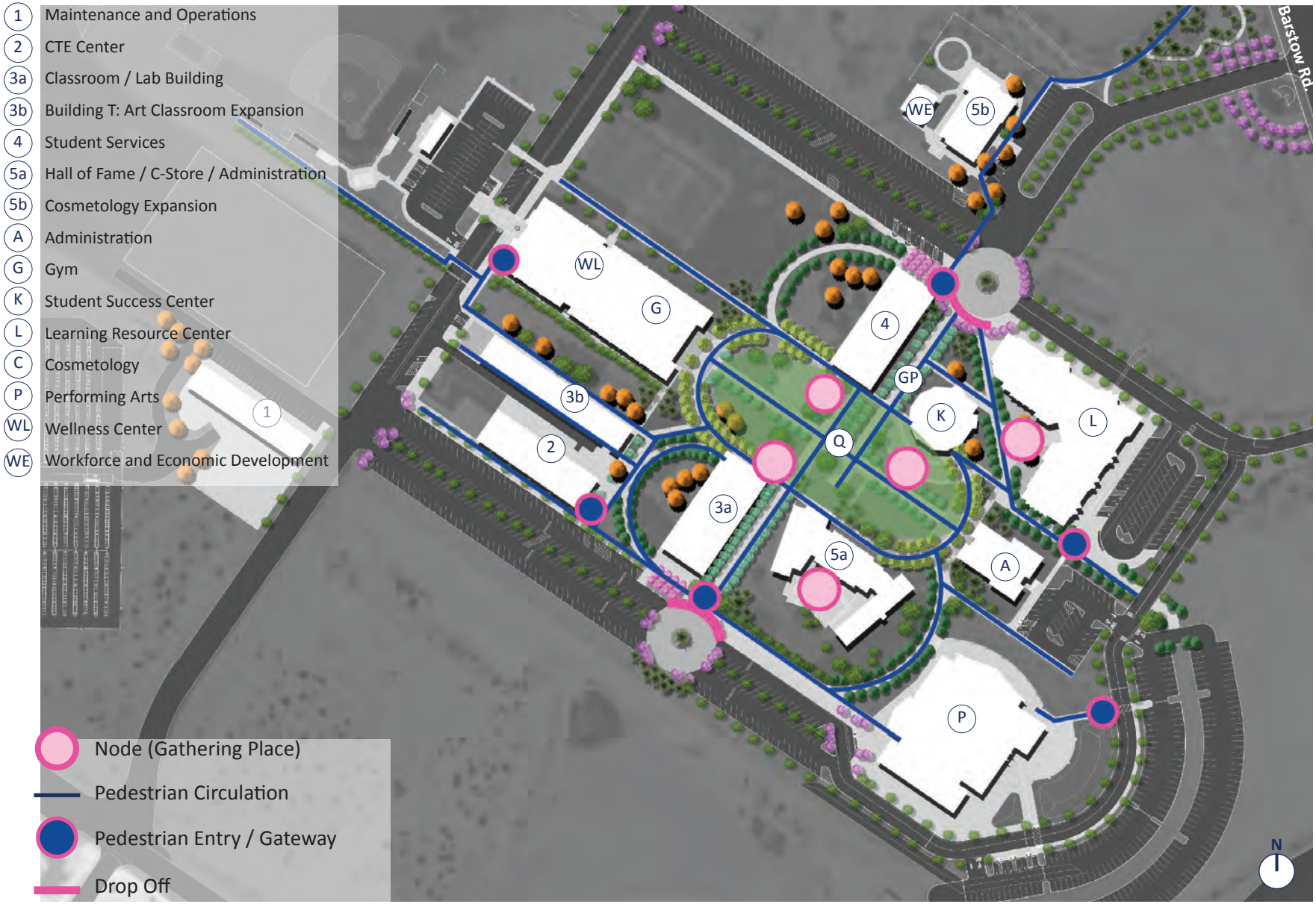
- Weaving a newer more energetic collegial design character / framework into the campus core to facilitate and encourage the creation of spaces which provide opportunities for student, faculty, administrators and staff to meet, mingle and socialize
- Creating pedestrian nodes or plazas at the naturally occurring and significant intersections along promenades, walkways and paths. These spaces should allow for the placement of campus maps to assist in way finding and together with seating, opportunities for meeting friends and informal interaction
- Development of secondary walkways and paths to connect individual buildings, pedestrian nodes and other points of interest on the campus
- Establishing a limited and consistent palette of hardscape, landscape, lighting, signage and open space furnishings to beautify space and increase shade / student comfort.

The original planning concept of the College featured buildings surrounding a central open space or "Green". The master plan, consistent with this concept, envisions development and improvement of this central space or Quad into a series of connected spaces supporting a hierarchy of large, active, formal and informal gathering spaces as well as smaller, intimate, and purpose-built spaces. Major open space features include the following:

**Campus Green (Q)** – This is intended to serve as the "town square;" an active space at the heart of the campus for meeting, dining, study and socialization. It should serve as an exterior extension of activities and spaces housed in the Student Services and C-Store / Campus Events Center.

It should become a more vital and energetic space where informal gathering along with performance, lectures, and student events can be integrated into College life. A place where students want to see and be seen. It is intended as the energy center of the campus.

**Student Services Gateway and Plaza (GP)** – This new plaza will serve as a visual and physical Pedestrian Gateway from the north parking lot, south into the core of campus. It will be directly accessed from the new student drop-off and parking at the north edge of the campus core and will provide a gathering space for prospective students and their families visiting the Student Services Center. The south end of this terraced plaza is envisioned as spill-out space from ASB offices and activity spaces into the Campus Green.


1 Maintenance and Operations
2 CTE Center
3a Classroom / Lab Building
3b Building T: Art Classroom Expansion
4 Student Services
5a Hall of Fame / C-Store / Administration
5b Cosmetology Expansion
A Administration
G Gym
K Student Success Center
L Learning Resource Center
C Cosmetology
P Performing Arts
WL Wellness Center
WE Workforce and Economic Development
Barstow Rd.
Node (Gathering Place)
Pedestrian Circulation
Pedestrian Entry / Gateway
Drop Off
N

## PEDESTRIAN ACCESS, CIRCULATION & OPEN SPACE

a **C-Store and Events Center Gateway and Plaza** – Flanked by the new Lab / Classroom Building to the west and the repurposed C-Store and Events Center Building to the east, this terraced plaza is envisioned as a gateway from the southern parking into the core of campus. The northern edge of the elevated plaza, overlooking the Campus Green would be designed to support exterior dining, study and socialization.

b **Discipline Specific Courtyards and Plazas** – Envisioned as purpose-built open spaces these plazas and courtyards are intended to be developed a major pedestrian intersections as well as adjacent to existing and proposed buildings in a manner that supports instruction and service to students as well as provide opportunities for quiet study and informal socialization. They are envisioned as themed to reflect and support the disciplines they serve (i.e. – Preforming Arts, Fine Arts, Science, Technology, Athletics, Administration, etc.)

It is recognized that winds and temperature extremes significantly impact the desirability and use of exterior spaces. Therefore creating shaded, wind protected spaces will be critical in the further development of these concepts.

c **Athletics Zone-** The master plan supports future development of the area west of the Campus Core to provide a multi-purpose field supporting an evolving soccer program, and available for community use. Access improvements as well as a new restroom / concession facility are intended to serve all field sports.

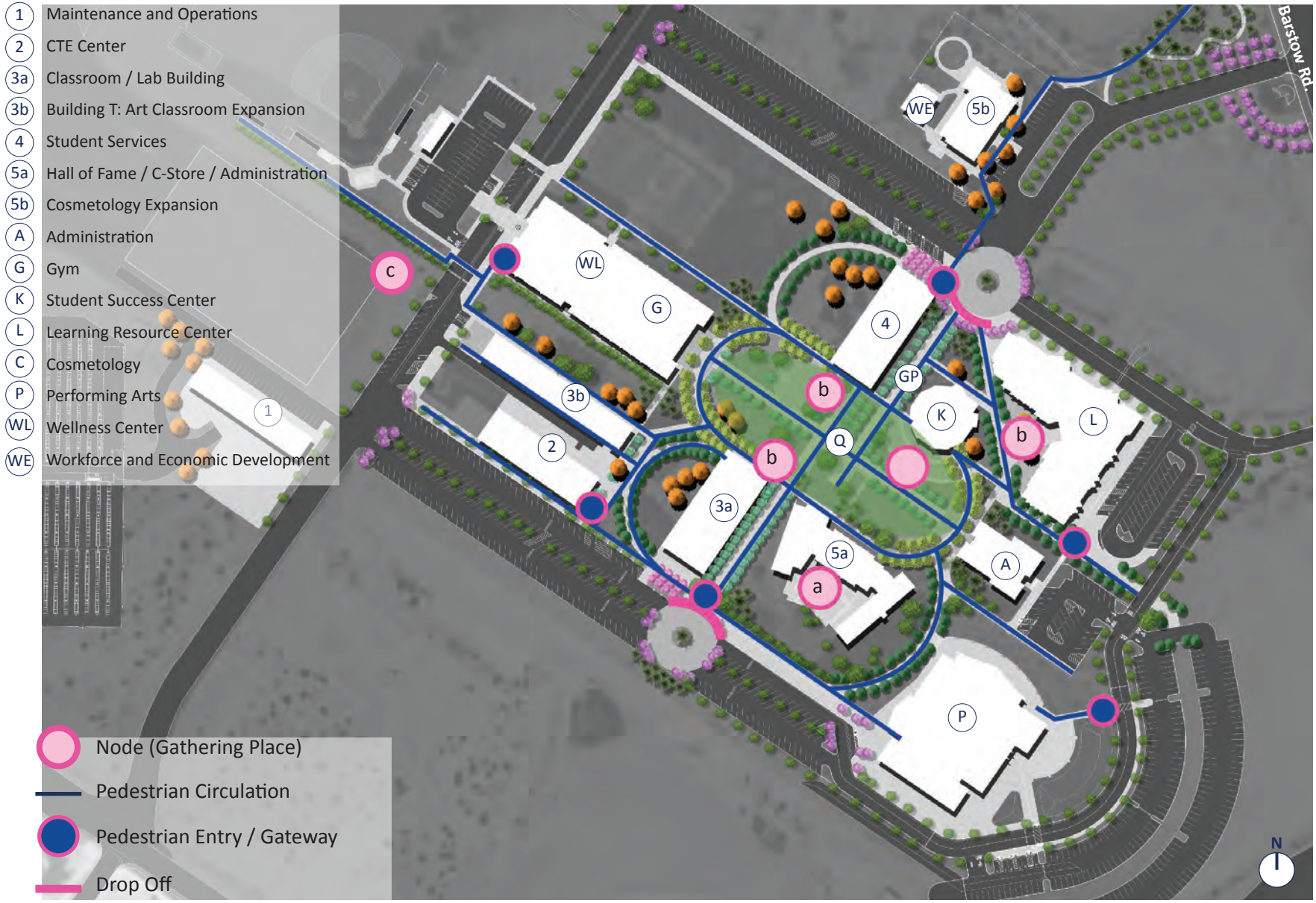
The ultimate program of uses and the geometry and / or proper orientation of individual uses (i.e., baseball, softball, etc.) will in the long run drive the planning solution for this area. Dependent on the uses some relocation of existing field improvements and/ or reshaping the geometry of existing surface parking to maximize the use of the available land area, resolve accessibility and address storm water concerns may be required.

### LANDSCAPE RECOMMENDATIONS

The campus is currently exempt from recent water use restrictions mandated by the State Architect (DSA). However, the planning teams recommends the following:

**Planting -** From our discussions with campus staff and on-site observations there is an opportunity to simplify the campus plant palette and in doing so, benefit significantly from a reduction in water use, maintenance demands and enhance the campus wayfinding. A great deal of the turf is not utilized for campus lounging and open free play. The planning team recommends a study be completed in conjunction with a landscape master plan to develop consistent guidelines for reduction of turf areas, to refine the campus plant palette and further the campus landscape character. The plant palette should reflect drought tolerant and wind resistant selections and recommend plant materials requiring limited trimming and maintenance. The planning palette should be selected to assist in defining and differentiating the primary spines and walkways and pedestrian and vehicular entries and gateways to enhance way finding and to shield open space from the harsh climate.

**Irrigation -** Further to our discussions with campus staff and review of campus planting we recommend an irrigation master plan be developed concurrent with the campus landscape plan. Key to the development of this plan is establishing a baseline of campus water use. A meter should be installed and water use monitored to understand use factors over a full year cycle. Based upon weather statistics and the proposed landscape master plan consultants can determine possible cost savings and how those savings might apply to meeting new planting and irrigation restrictions.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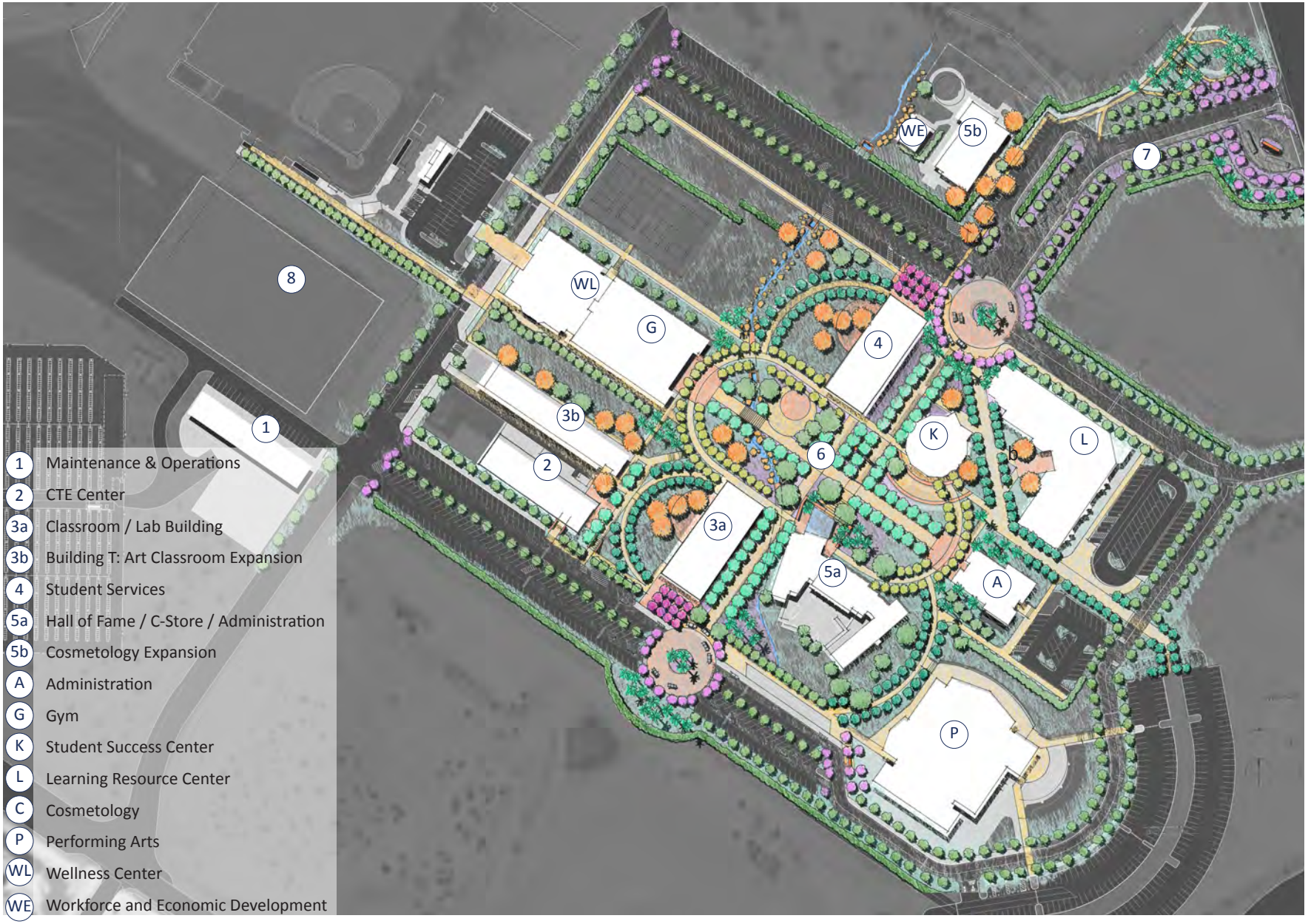
Barstow Rd.
Node (Gathering Place)
Pedestrian Circulation
Pedestrian Entry / Gateway
Drop Off
N

## PROGRAM OF WORK COST

| PROJECT | SCOPE | SQUARE FOOTAGE | | TOTAL PROJECT COST |
|---|---|---|---|---|
| | | ASF | GSF | |
| **Buildings** | | | | |
| 1. Maintenance and Operations | New Construction | 8,000 | 10,405 | $4,912,297 |
| 2. CTE Center | New Construction | 26,475 | 37,821 | $24,834,651 ** |
| 3a. Classroom / Lab | New Construction | 20,080 | 30,892 | $20,040,716 ** |
| 3b. Building T: Art Classroom Expansion | Repurpose | 8,469 | 12,886 | $3,805,233 ** |
| 4. Student Services | New Construction | 17,513 | 26,943 | $15,538,706 ** |
| 5a. Hall of Fame / C-Store / Administration | Renovation / Repurpose | 13,663 | 17,688 | $8,031,199 |
| 5b. Cosmetology Renovation / Expansion | Renovation / Repurpose | 7,192 | 9,564 | $2,314,001 ** |
| *Sub-total* | | *98,009* | *146,200* | *$79,476,803* |
| **Site Work** | | | | |
| 6. Quad | Renovation | - | - | $2,112,796 |
| 7. Entry Drive | Renovation | - | - | $614,281 |
| 8. Multi-Purpose Field | New Construction | - | - | $3,537,459 |
| 9. Infrastructure & Amenities | Renovation | - | - | $4,216,212 |
| *Sub-total* | | | | *$10,480,748* |
| **TOTAL** | | | | **$89,957,551 *** |

** The total project cost is provided in 2016 / 2017 cost dollars. This includes state supportable cost, soft cost, program management cost*
*** Project is considered eligible for State Support. Extent of State Support to be determined*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P Performing Arts
WL Wellness Center
WE Workforce and Economic Development

## CAMPUS DEVELOPMENT SCHEDULE / PHASING PLAN

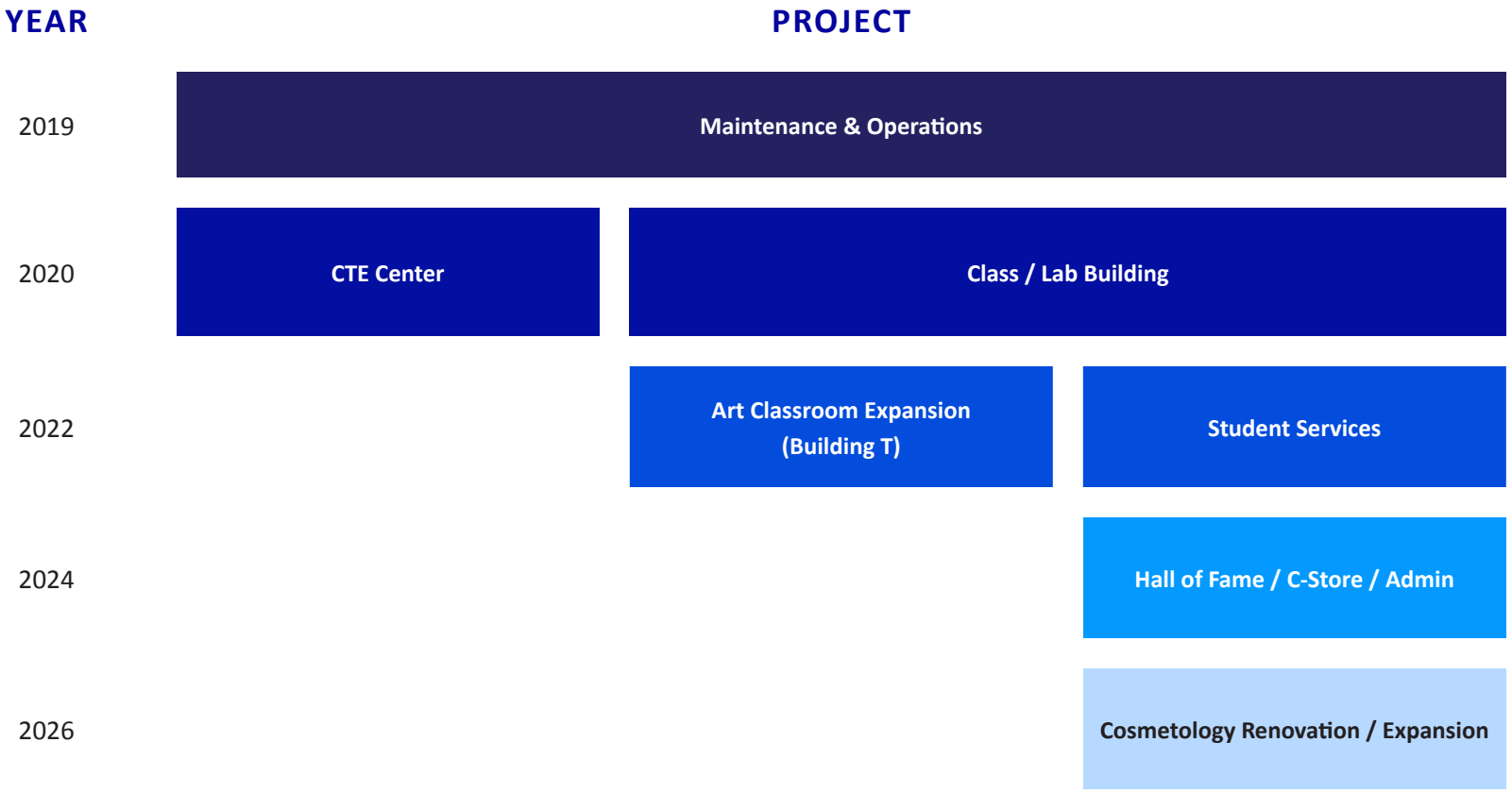
The program of work reflects the creation of a campus development schedule / phasing plan. In this perspective, projects were aligned into a development sequence. The following criteria were used to determine a project's position in the development queue.

The degree to which a project:

- Rectified a safety and / or health concern that required immediate attention
- Was identified as a "linchpin" project – i.e. a project that facilitated / made possible the completion of other projects in a timely and financially feasible manner
- Addressed an academic program that was currently experiencing space shortage or inadequate instructional space
- Addressed immediate space needs for key student support services
- Remedied academic space needs that are five to ten years downrange (i.e. accommodating disciplines / programs that can manage with existing space but will need space in the near future)
- Met the space requirements of student support services that are five to ten years in the future

Other considerations included:

- Minimizing the disruption to students and not overburdening the campus with construction at any one point in time
- The ability of a project to attract state funds (if any such funds should become available in the future)




This program of work assumes future consideration of GO Bonds by the District and a State GO Bond
This program of work will shift 2 additional years dependent on when the District pursues a GO Bond.

# REVENUE RESOURCING

To address capital construction needs, the district will need to pursue both state and local sources of funding. Finding outside (the District) financial support to augment local funding is based in two primary sources: 1) The state's Capital Outlay Budget Program (COBP); and 2) Joint Venture and Entrepreneurial Activities.

State of California Capital Outlay Budget Program (COBP)
The COBP represents the best possibility for long-term, large scale financing support for the District's capital construction program. Like most state or federal programs, it comes with caveats and requirements. Projects must pass the review of the State Chancellor's Office for compliancy with capacity-load ratios. Projects must also compete with other colleges throughout the state for funding – all projects are evaluated on a point system. Finally, projects funded through this program must have matching local funds. Matching funds can be anywhere between 0% and 50%, depending on the strength of the project.

Overall, the revenue resourcing program of the COBP is projected to attract approximately $XX million to the District. The "cost to construct" for the District would be under fifty-cents on the dollar.

## JOINT VENTURE & ENTREPRENEURIAL ACTIVITY

The 2030 Facilities Master Plan may provide opportunities for creating new sources of revenue through joint venture and entrepreneurial activity. Because these opportunities will need to be developed and cultivated, the full extent of benefit is not known at this time.

## OTHER FINANCING MECHANISMS TO SUPPORT THE PLAN FOR REVENUE RESOURCING

In addition to the state's Capital Outlay Budget Program and joint venture/entrepreneurial opportunities, the District will have other tools available for increasing the revenue side of the equation. The financing vehicles listed below are frequently used by community college institutions. Several of these mechanisms are currently being used by the District.

- *Local Bond Measure:* The District may use this financing option as a means to address its capital construction needs. A local general obligation bond is, by far, the most successful and reachable of the financing mechanisms available to the District for addressing large-scale capital construction needs. Local bond measures are imperative for leveraging state monies and private funds
- *Leasing of District Owned Land or Buildings:* At the present, the District currently has limited leasing revenue resourcing activity at the present time. Leasing provides an excellent means of maintaining property and/or building control while creating a long-term revenue source. Revenues generated from this activity can be used to fund capital construction projects for the District
- *Student Fees:* Via a campus-wide vote, students can authorize an auxiliary fee for the construction of facilities such as student centers or parking facilities. Generally, a bond is issued for a specific period of time with the source of repayment the fee imposed by the students. When the debt service on the facility has been retired, the fee obligation for students terminates

## DOLLARS WITH BOND MONEY

- *Certificates of Participation (COP):* COPs are often used as "bridge financing," with a long-range financing strategy or objective in place to repay the debt. A COP is a loan the District secures to finance a particular obligation or project. Typically, this obligation is a capital outlay project (buildings and/or equipment, land acquisition, etc.). The District must demonstrate to the lender that it has the financial capability to repay the COP in a timely manner. There are financial limits and necessary approvals the District must achieve to use this program.
- *Scheduled Maintenance Funds:* As available from the state, scheduled maintenance funding has been included as an annual block grant program. It also includes funding for instructional and library equipment. There is a local match required for the use of these funds. It is not typically a large amount of funding but it is an option to solve minor building renovation or maintenance issues.
- *Special Assessment District Funding:* In cooperation with the City and/or County, an assessment district could be created to provide new or upgraded infrastructure. The source of repayment is typically the property tax revenue or special assessment levied against the property owners within a prescribed area (district). Special Assessment Districts are often an integral part of a redevelopment project, wherein the project will generate additional property tax revenue that can be used to re-pay the bonds that are issued for the capital improvement.
- *Federal and State Grants:* Federal and State grants are generally obtained through a competitive application process. Most Federal and State Grants to community colleges are in the form of funds for equipment, furniture, program development costs, and/or operational staffing. With current federal stimulus programs, there may be opportunities for the financing of capital construction projects, particularly those that result in job creation. Awards, in this regard, would most likely be given to projects that are "shovel ready."
- *Fee-Based Instructional Programs:* The District has the option to develop a fee-based curriculum and compete with other public and private institutions for students who would not typically attend the traditional, state-funded, public instructional program of a community college. Any excess revenue generated from such activities could be used to fund future capital construction projects.
- *Partnership with other Educational Institutions:* An educational institution that is in need of a facility but does not have funding to construct is a likely candidate for a joint venture project. In this partnership, the District might construct the facility with the provision that debt service on the construction loan would be the responsibility of the partnering educational institution. Both entities would have access to and use the facility for educational purposes.
- *Private Donations:* Private donations provide a means for interested members of the public to contribute to a specific project. Facilities such as libraries, planetariums, or specific academic and academic support buildings (e.g. Biological Sciences, Career Technical Education, etc.) are common examples.


# CHAPTER 03

# APPENDIX MATERIALS

# Appendix Materials

## Appendix A- Inventory of College Plans Related to the Instructional or Student Services Functions

| Planning Document | Current Date | Authorship Committee | Reviewed and/or Approved By Committee/Person | Resourced By | Implementation Responsibility |
|---|---|---|---|---|---|
| ***Institutional Plans*** | | | | | |
| Educational Master Plan | 4/20/11 | Cambridge West Partnership | Business & Finance | | faculty and administration |
| Facilities Master Plan | 2/6/13 | Hill Partnership Inc. | Business & Finance | bonds | VP Administrative Services |
| Strategic Plan | 2/17/16 | Institutional Effectiveness (IEC), all colleagues | IEC, SLOAC, Program Review, President's Shared Gov. Council (PSGC)* | general fund | all areas |
| | | | | | |
| ***Functional Plans*** | | | | | |
| Technology Strategic Plan | 2011 | Technology | Technology, PSGC | general fund | VP Administrative Services |
| Professional Development Plan | 5/18/16 | Staff Development & Recognition (SDRC) | SDRC, PSGC | categorical grant | Associate VP, Human Resources |
| Staffing Plan | 5/20/15 | Associate VP, Human Resources | EEO & Diversity, PSGC | general fund | Associate VP, Human Resources |
| Equal Opportunity & Diversity Plan | 10/20/15 | EEO & Diversity | EEO & Diversity, PSGC | general fund | Associate VP, Human Resources |
| Student Equity Plan | 12/7/15 | Student Success & Equity (SSEC) | SSEC, IEC, Senate, PSGC | categorical grant | VPs Academic Affairs & Student Services |
| Student Success & Support Program Plan | 10/30/15 | SSEC | SSEC, IEC, Senate, PSGC | categorical grant | VPs Academic Affairs & Student Services |
| Distance Education Plan | | | Distance Education | general fund | VP Academic Affairs |
| Basic Skills Initiative Plan | 10/28/15 | Basic Skills Committee (BSC) | Basic Skills Initiative Coordinator, Senate, PSGC | categorical grant | VPs Academic Affairs & Student Services |
| Student Learning Outcomes Assessment Plan | 2011 | Service & Learning Outcomes Assessment (SLOAC) | SLOAC, IEC | general fund | VP Academic Affairs |
| CTE Perkins Plan | annual | CTE faculty | Workforce & Economic Development/Career & Technical Education (WED/CTE) Dean | categorical grant | VP Academic Affairs |

*all constituency groups are involved in reviewing plans through their representative at the PSGC

| Planning Document | Current Date | Authorship Committee | Reviewed and/or Approved By Committee/Person | Resourced By | Implementation Responsibility |
|---|---|---|---|---|---|
| Major Grants- big money (Federal Title III or V, State) | | | | | |
| TAACCCT | | CTE faculty & WED/CTE Dean | (WED/CTE) Dean, PSGC | categorical grant | VP Academic Affairs |
| Carl D. Perkins | | CTE faculty & WED/CTE Dean | (WED/CTE) Dean, PSGC | categorical grant | VP Academic Affairs |
| CCPT (RAMP-Up) | | CTE faculty & WED/CTE Dean | (WED/CTE) Dean, PSGC | categorical grant | VP Academic Affairs |
| Prop 39 Clean Energy Workforce | | CTE faculty & WED/CTE Dean | (WED/CTE) Dean, PSGC | categorical grant | VP Academic Affairs |
| CTE Transition | | CTE faculty & WED/CTE Dean | (WED/CTE) Dean, PSGC | categorical grant | VP Academic Affairs |
| Foster & Kinship Care Education | | CTE faculty & WED/CTE Dean | (WED/CTE) Dean, PSGC | categorical grant | VP Academic Affairs |
| | | | | | |
| | | | | | |
| ***Unit Plans*** | | | | | |
| Department/Unit Comprehensive Program Reviews & Updates | 3-Yr Cycle & annual | departments and units | IEC, Program Review | general fund | Vice Presidents |

Source: Barstow College Administration; analysis by Cambridge West Partnership, LLC

## Appendix B- Neighboring Colleges

| Institution | Address | City | Drive Time* | Miles* |
|---|---|---|---|---|
| Barstow College | 2700 Barstow Road | Barstow | 0 | 0 |
| | | | | |
| Victor Valley College | 18422 Bear Valley Road | Victorville | 46 min. | 39 |
| | | | | |
| | | | | |
| Copper Mountain College | 6162 Rotary Way | Joshua Tree | 1 hr. 31 min. | 88 |
| | | | | |
| Antelope Valley College | | | | |
| Lancaster | 3041 West Ave. K | Lancaster | 1 hr. 40 min | 98 |
| Palmdale Center | 1529 East Palmdale Blvd. | Palmdale | 1 hr. 33 min. | 83 |
| | | | | |
| Cerro Coso College | 3000 College Heights Blvd. | Ridgecrest | 1 hr. 30 min. | 85 |
| East Kern Center | | | | |
| Edwards AFB | 140 Methusa Road | Edwards AFB | 1 hr. 7 min. | 61 |
| Tehachapi Ed Center | 126 S. Snyder Ave. | Tehachapi | 1 hr. 30 min. | 90 |
| | | | | |
| Crafton Hills College | 11711 San Canyon Road | Yucaipa | 1 hr. 27 min. | 88 |
| San Bernardino Valley College | 701 South Mount Vernon Ave. | San Bernardino | 1 hr. 18 min. | 72 |
| | | | | |
| *Google Maps | | | | |

## Appendix C- Barstow Major Employers

| | | Estimated Employees | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Major Employers** | **Industry** | **2000** | **2001** | **2002** | **2008** | **2009** | **2010** | **2011** | **2015** |
| Fort Irwin National Training Center | National Defense | 2,729 | 3,000 | 3,000 | 5,723 | 5,565 | 5,665 | 5,665 | |
| military | | | | | | | | | 4,823 |
| civilian | | | | | | | | | 900 |
| Marine Corps Logistics Base | National Defense | 1,300 | 1,300 | 1,300 | 1,389 | 2,123 | 1,845 | 1,600 | |
| military | | | | | | | | | 1,671 |
| civilian | | | | | | | | | 1,567 |
| BNSF Railroad | Transportation | 820 | 820 | 820 | 1,000 | 950 | 1,000 | 1,000 | 1,000 |
| Northrup Grumman | National Defense | | 720 | 720 | 800 | 1,210 | 1,152 | 1,192 | 800 |
| Barstow Unified School District | Education | 719 | 700 | 700 | 700 | 675 | 617 | 648 | 700 |
| IAP World Services | Facility Maintenance | | | | 481 | 530 | 412 | | 481 |
| Tanger Outlets Stores | Retail | | 400 | 400 | 400 | 483 | 400 | 550 | 400 |
| Raytheon Technical Services | National Defense | 486 | 500 | 500 | 396 | 396 | 498 | 498 | 396 |
| Johnson Controls | Energy Technology | 400 | | | | 400 | | | |
| Yellow Freight Systems | Transportation | 400 | | | | 300 | | | |
| San Bernardino County | County Government | 200 | 200 | 200 | 285 | 300 | 300 | 300 | 285 |
| Wal-Mart | Retail | 250 | 250 | 250 | 275 | 275 | 230 | 200 | 275 |
| Barstow Community Hospital | Health | 240 | 486 | 486 | | 277 | 290 | 290 | 255 |
| Silver Lake School District | Education | | 100 | 100 | | | 287 | 293 | 244 |

Source: Barstow Chamber of Commerce & Town Square Publications; City of Barstow, Comprehensive Annual Financial Reports; analysis by Cambridge West Partnership, LLC

| | | Estimated Employees | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Major Employers** | **Industry** | **2000** | **2001** | **2002** | **2008** | **2009** | **2010** | **2011** | **2015** |
| ITT Industries Systems- Goldstone | Deep Space Tracking | 648 | 700 | 700 | | | 165 | 165 | 180 |
| Barstow Outlet Stores | Retail | | | | | | | | 175 |
| Home Depot | Retail | | | | | | | | 150 |
| Travel Centers of America | Truck Stop | | | | | | | | 150 |
| Veterans Home of California | Retirement Home | | | | | | | | 125 |
| City of Barstow | Municipal Government | | | | | | 129 | 183 | 122 |
| Barstow Community College | Education | | 240 | 240 | | | 200 | 320 | 104 |
| Flying J | Truck Stop | | | | | | | | 100 |
| First Students | Transportation | | | | | | | | 100 |
| Southern California Edison | Utility | | | | | | | | 100 |
| Stater Brothers | Grocery | | | | | | | | 85 |
| Vons | Grocery | | | | | | | | 80 |
| Food for Less | Grocery | | | | | | | | 75 |
| California Highway Patrol | Public Safety | | | | | | | | 65 |

Source: Barstow Chamber of Commerce & Town Square Publications; City of Barstow, Comprehensive Annual Financial Reports; analysis by Cambridge West Partnership, LLC

## Appendix D- Changes in Occupational Employment 2001 vs. 2015

| Occupational Family | 2001 | 2015 | Change | % Change |
|---|---|---|---|---|
| Management Occupations | 275 | 368 | 93 | 34% |
| Business and Financial Operations Occupations | 275 | 412 | 137 | 50% |
| Computer and Mathematical Occupations | 58 | 76 | 18 | 31% |
| Architecture and Engineering Occupations | 79 | 120 | 41 | 52% |
| Life, Physical, and Social Science Occupations | 75 | 120 | 45 | 60% |
| Community and Social Service Occupations | 114 | 141 | 27 | 24% |
| Legal Occupations | 30 | 46 | 16 | 53% |
| Education, Training, and Library Occupations | 719 | 794 | 75 | 10% |
| Arts, Design, Entertainment, Sports, and Media Occupations | 74 | 63 | -11 | -15% |
| Healthcare Practitioners and Technical Occupations | 361 | 521 | 160 | 44% |
| Healthcare Support Occupations | 127 | 193 | 66 | 52% |
| Protective Service Occupations | 114 | 174 | 60 | 53% |
| Food Preparation and Serving Related Occupations | 1,271 | 1,786 | 515 | 41% |
| Building and Grounds Cleaning and Maintenance Occupations | 281 | 316 | 35 | 12% |
| Personal Care and Service Occupations | 138 | 154 | 16 | 12% |
| Sales and Related Occupations | 1,237 | 1,572 | 335 | 27% |
| Office and Administrative Support Occupations | 908 | 1,146 | 238 | 26% |
| Farming, Fishing, and Forestry Occupations | 5 | 8 | 3 | 60% |
| Construction and Extraction Occupations | 92 | 112 | 20 | 22% |
| Installation, Maintenance, and Repair Occupations | 284 | 326 | 42 | 15% |
| Production Occupations | 152 | 162 | 10 | 7% |
| Transportation and Material Moving Occupations | 597 | 723 | 126 | 21% |
| Military Occupations | 333 | 386 | 53 | 16% |

Source: Economic Modeling Specialists International. *Barstow Occupational Report*; analysis by Cambridge West Partnership, LLC

## Appendix E- Working With Labor Market Data: Discussion Points for Labor Market Analysis

Net Job Market

- Given the number of enrollments that are projected for the program and that are necessary to support the program, are there enough openings locally to permit placement of the expected number of graduates?
- Has the job market been declining slowly? Holding steady? Growing slowly? Growing rapidly? Recently emerging?

Earning Potential

- What is the average initial salary?
- What is the average percentage of salary increase in two years? Five years?

Program Credibility /Career Potential

- If advanced degrees are typically needed for career advancement, will the courses required for this program transfer toward completion of the requirements for those degrees?
- Will this preparation permit students to remain current in their field?
- Does the program teach basic principles and theory, as well as application? Is it current and of sufficient rigor? Does it allow for later shifts in career?
- Does this preparation meet the needs of those already employed for upward mobility, entrepreneurship, or a career upgrade?
- Does the program prepare students to work in an ethnically diverse workforce and in an ethnically diverse, global market?

Emerging Occupations

- When job market data are not available or are not appropriate for a new CTE program in an area of emerging social need or technology, it becomes important to provide a careful analysis and explication of the specific demands of this new occupation.
- A carefully designed employer survey (see instructions for Employer Survey/Other Evidence of Need in form instructions) can elicit documentation demonstrating that employers:
    - share the college's assumption regarding future direction(s) of the field and the skills that this emerging industry will require of employees
    - recognize the value of the proposed degree or certificate in the hiring or promoting of staff

Competitive Fields

Colleges are often called upon to provide training that students greatly desire, even where the job prospects are limited and the field is highly competitive. In such occupations—often in the arts and entertainment—it is talent rather than education that drives hiring. While no community college certificate can substitute for talent, a program that is exceptionally well designed to identify and develop talent can still be justified when few programs of similar quality exist in the college service area.

Career Technical Education Skills

Many kinds of certificates are of occupational benefit to students already employed. In such circumstances, the program objectives and design, including the sequencing of courses, must fit the needs of students likely to be already employed. The course sequence must build on students' prior experience, and courses must be scheduled to accommodate working students. A program must not establish provisions that exclude students who are not already employed in a particular industry, unless the college makes available to such students a practicable entry-level pathway that would qualify them, upon completion, for the advanced training.

Small Businesses or Cottage Industries

Entrepreneurial opportunities and the market for cottage industries yield few statistics. Yet entrepreneurial opportunities are of value to an increasingly large proportion of the workforce, especially in rural areas. A proposal for approval of a program designed to meet the needs of students interested in pursuing entrepreneurial activities must include a careful analysis of needs and of the market within which they must compete.

Source: California Community College Chancellor's Office. Program and Course Approval Handbook 4th edition March 2012.

## Appendix F- Projected Job Openings by Educational Preparation

The first table identifies occupations commonly requiring a Bachelor's Degree. Thirty-two occupations in Riverside or San Bernardino Counties meet these criteria. A **bolded** TOP code indicates a Barstow College has an Associate Degree established for the occupation.

Occupations Commonly Requiring a Bachelor's Degree, 255 or More Projected Annual Openings 2012-2022

| 2012-2022 Occupational Employment Projections | | | | | | | | Inland Empire California Community Colleges Regional Data | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Riverside-San Bernardino-Ontario Metropolitan Statistical Area (Riverside & San Bernardino Counties) | | | | | | | | Number of Programs | | | Average Awards 2010-11 to 2014-15 | | |
| SOC | Occupational Title | Av An Total Jobs | 2014 Q1 Median Hourly | 2014 Q1 Median Annual | Entry Level Education | Work Exp | On-the-Job Training | Regional TOP Codes | Certificate | Degree | Total | Certificate | Degree | Total |
| 111021 | General and Operations Managers | | | | | | | 050650 | 6 | 3 | 9 | 14 | 3 | 17 |
| 111021 | General and Operations Managers | 767 | $43.75 | $90,991 | Bachelor's | <5 years | None | **050600** | 12 | 10 | 22 | 87 | 98 | 185 |
| 111021 | General and Operations Managers | | | | | | | **050100** | 3 | 8 | 11 | 25 | 143 | 168 |
| 111021 | General and Operations Managers | | | | | | | 050800 | 1 | | 1 | 11 | | 11 |
| 111021 | General and Operations Managers | | | | | | | **050500** | 3 | 14 | 17 | 15 | 498 | 512 |
| 111021 | General and Operations Managers | | | | | | | 050640 | 3 | 1 | 4 | 7 | 2 | 9 |
| 252021 | Elementary School Teachers, Except Special Education | 582 | [6] | $75,170 | Bachelor's | None | I/R | | | | | | | 0 |
| 132011 | Accountants and Auditors | 379 | $29.94 | $62,286 | Bachelor's | None | None | **050200** | 17 | 8 | 25 | 125 | 92 | 217 |
| 132011 | Accountants and Auditors | | | | | | | 050210 | 3 | | 3 | 8 | | 8 |
| 131111 | Management Analysts | | | | | | | **050500** | 3 | 14 | 17 | 15 | 498 | 512 |
| 131111 | Management Analysts | | | | | | | **050100** | 3 | 8 | 11 | 25 | 143 | 168 |
| 131111 | Management Analysts | 255 | $36.54 | $76,009 | Bachelor's | <5 years | None | **050600** | 12 | 10 | 22 | 87 | 98 | 185 |
| [6] In occupations where workers do not work full-time all year-round, it is not possible to calculate an hourly wage. | | | | | | | | | | | | | | |
| I/R- Internship/Residency; MT OJT- > 1 mo < 12 mos. | | | | | | | | | | | | | | |

Source: California Employment Development Department, Labor Market Information. California Community College Chancellor's Office; analysis by Cambridge West Partnership, LLC

## Occupations Commonly Requiring a Bachelor's Degree, 148 to 204 Projected Annual Openings 2012-2022

| 2012-2022 Occupational Employment Projections | | | | | | | | | Inland Empire California Community Colleges Regional Data | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Riverside-San Bernardino-Ontario Metropolitan Statistical Area (Riverside & San Bernardino Counties) | | | | | | | | | Number of Programs | | | Average Awards 2010-11 to 2014-15 | | | |
| SOC | Occupational Title | Av An Total Jobs | 2014 Q1 Median Hourly | 2014 Q1 Median Annual | Entry Level Education | Work Exp | On-the-Job Training | Regional TOP Codes | Certificate | Degree | Total | Certificate | Degree | Total | |
| 252031 | Secondary School Teachers, Except Special and Career/Technical Education | | | | | | | 190100 | | 1 | 1 | | 9 | 9 | |
| 252031 | Secondary School Teachers, Except Special and Career/Technical Education | | | | | | | 190200 | | 7 | 7 | | 38 | 38 | |
| 252031 | Secondary School Teachers, Except Special and Career/Technical Education | | | | | | | 100400 | 3 | 8 | 11 | 12 | 24 | 36 | |
| 252031 | Secondary School Teachers, Except Special and Career/Technical Education | | | | | | | 170100 | | 15 | 15 | | 125 | 125 | |
| 252031 | Secondary School Teachers, Except Special and Career/Technical Education | 204 | [6] | $70,830 | Bachelor's | None | I/R | 220100 | | 6 | 6 | | 536 | 536 | |
| 252031 | Secondary School Teachers, Except Special and Career/Technical Education | | | | | | | 220500 | | 10 | 10 | | 76 | 76 | |
| 252031 | Secondary School Teachers, Except Special and Career/Technical Education | | | | | | | 100200 | | 10 | 10 | | 51 | 51 | |
| 252031 | Secondary School Teachers, Except Special and Career/Technical Education | | | | | | | 190500 | | 4 | 4 | | 15 | 15 | |
| 252031 | Secondary School Teachers, Except Special and Career/Technical Education | | | | | | | 150100 | | 13 | 13 | | 64 | 64 | |
| 252031 | Secondary School Teachers, Except Special and Career/Technical Education | | | | | | | 040100 | | 4 | 4 | | 20 | 20 | |
| 252031 | Secondary School Teachers, Except Special and Career/Technical Education | | | | | | | 110200 | | 2 | 2 | | 2 | 2 | |
| 252031 | Secondary School Teachers, Except Special and Career/Technical Education | | | | | | | 110500 | | 6 | 6 | | 15 | 15 | |
| 119021 | Construction Managers | 198 | $49.88 | $103,767 | Bachelor's | None | MT OJT | 095700 | 3 | 1 | 4 | 5 | 2 | 7 | |
| 131051 | Cost Estimators | 192 | $29.95 | $62,296 | Bachelor's | None | None | 050600 | 12 | 10 | 22 | 87 | 98 | 185 | |
| 131051 | Cost Estimators | | | | | | | 050500 | 3 | 14 | 17 | 15 | 498 | 512 | |
| 131051 | Cost Estimators | | | | | | | 050100 | 3 | 8 | 11 | 25 | 143 | 168 | |
| 131051 | Cost Estimators | | | | | | | 095200 | 2 | 2 | 4 | 11 | 4 | 15 | |
| 252022 | Middle School Teachers, Except Special and Career/Technical Education | 175 | [6] | $76,445 | Bachelor's | None | I/R | | | | | | | 0 | |
| 131161 | Market Research Analysts and Marketing Specialists | 148 | $26.77 | $55,687 | Bachelor's | None | None | | | | | | | 0 | |
| [6] In occupations where workers do not work full-time all year-round, it is not possible to calculate an hourly wage. | | | | | | | | | | | | | | | |
| I/R- Internship/Residency; MT OJT- > 1 mo < 12 mos. | | | | | | | | | | | | | | | |

Source: California Employment Development Department, Labor Market Information. California Community College Chancellor's Office; analysis by Cambridge West Partnership, LLC

Occupations Commonly Requiring a Bachelor's Degree, 77 to 143 Projected Annual Openings 2012-2022

| 2012-2022 Occupational Employment Projections | | | | | | | | | Inland Empire California Community Colleges Regional Data | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Riverside-San Bernardino-Ontario Metropolitan Statistical Area (Riverside & San Bernardino Counties) | | | | | | | | | Number of Programs | | | Average Awards 2010-11 to 2014-15 | | |
| SOC | Occupational Title | Av An Total Jobs | 2014 Q1 Median Hourly | 2014 Q1 Median Annual | Entry Level Education | Work Exp | On-the-Job Training | Regional TOP Codes | Certificate | Degree | Total | Certificate | Degree | Total |
| 112022 | Sales Managers | | | | | | | **050100** | 3 | 8 | 11 | 25 | 143 | 168 |
| 112022 | Sales Managers | | | | | | | **050600** | 12 | 10 | 22 | 87 | 98 | 185 |
| 112022 | Sales Managers | 143 | $47.31 | $98,407 | Bachelor's | <5 years | None | **050500** | 3 | 14 | 17 | 15 | 498 | 512 |
| 112022 | Sales Managers | | | | | | | 050640 | 3 | 1 | 4 | 7 | 2 | 9 |
| 113031 | Financial Managers | 142 | $50.92 | $105,903 | Bachelor's | ≥5 years | None | | | | | | | 0 |
| 172051 | Civil Engineers | 113 | $45.40 | $94,423 | Bachelor's | None | None | | | | | | | 0 |
| 119111 | Medical and Health Services Managers | 103 | $51.43 | $106,971 | Bachelor's | None | None | | | | | | | 0 |
| 131071 | Human Resources Specialists | 100 | $26.95 | $56,070 | Bachelor's | None | None | | | | | | | 0 |
| 414011 | Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products | 99 | $32.77 | $68,161 | Bachelor's | None | MT OJT | 050800 | 1 | | 1 | 11 | | 11 |
| 271024 | Graphic Designers | | | | | | | 100900 | | 1 | 1 | | 4 | 4 |
| 271024 | Graphic Designers | | | | | | | 061400 | 1 | 1 | 2 | 5 | 7 | 12 |
| 271024 | Graphic Designers | | | | | | | 101300 | 1 | 1 | 2 | 1 | 2 | 3 |
| 271024 | Graphic Designers | | | | | | | 061460 | 5 | 2 | 7 | 14 | 9 | 23 |
| 271024 | Graphic Designers | 92 | $18.45 | $38,384 | Bachelor's | None | None | 103000 | 2 | 1 | 3 | 36 | 8 | 43 |
| 252012 | Kindergarten Teachers, Except Special Education | 91 | [6] | $68,969 | Bachelor's | None | I/R | | | | | | | 0 |
| 399032 | Recreation Workers | 85 | $10.30 | $21,413 | Bachelor's | None | None | | | | | | | 0 |
| 113011 | Administrative Services Managers | | | | | | | 050630 | 3 | 2 | 5 | 7 | 4 | 10 |
| 113011 | Administrative Services Managers | 77 | $36.41 | $75,747 | Bachelor's | <5 years | None | **050500** | 3 | 14 | 17 | 15 | 498 | 512 |
| 113011 | Administrative Services Managers | | | | | | | **050600** | 12 | 10 | 22 | 87 | 98 | 185 |
| 113011 | Administrative Services Managers | | | | | | | 050640 | 3 | 1 | 4 | 7 | 2 | 9 |
| 113011 | Administrative Services Managers | | | | | | | **050100** | 3 | 8 | 11 | 25 | 143 | 168 |
| [6] In occupations where workers do not work full-time all year-round, it is not possible to calculate an hourly wage. | | | | | | | | | | | | | | |
| I/R- Internship/Residency; MT OJT- > 1 mo < 12 mos. | | | | | | | | | | | | | | |

Source: California Employment Development Department, Labor Market Information. California Community College Chancellor's Office; analysis by Cambridge West Partnership, LLC

## Occupations Commonly Requiring a Bachelor's Degree, 50 to 77 Projected Annual Openings 2012-2022

| 2012-2022 Occupational Employment Projections | | | | | | | | | Inland Empire California Community Colleges Regional Data | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Riverside-San Bernardino-Ontario Metropolitan Statistical Area (Riverside & San Bernardino Counties) | | | | | | | | | Number of Programs | | | Average Awards 2010-11 to 2014-15 | | |
| SOC | Occupational Title | Av An Total Jobs | 2014 Q1 Median Hourly | 2014 Q1 Median Annual | Entry Level Education | Work Exp | On-the-Job Training | Regional TOP Codes | Certificate | Degree | Total | Certificate | Degree | Total |
| 253099 | Teachers and Instructors, All Other | 77 | [6] | $64,284 | Bachelor's | None | I/R | | | | | | | 0 |
| 111011 | Chief Executives | 75 | N/A | N/A | Bachelor's | ≥5 years | None | | | | | | | 0 |
| 151121 | Computer Systems Analysts | | | | | | | 070730 | 1 | | 1 | 1 | | 1 |
| 151121 | Computer Systems Analysts | 64 | $37.55 | $78,104 | Bachelor's | None | None | **070200** | 9 | 11 | 20 | 56 | 86 | 142 |
| 151121 | Computer Systems Analysts | | | | | | | 070810 | 5 | | 5 | 120 | | 120 |
| 151121 | Computer Systems Analysts | | | | | | | 070100 | 3 | | 3 | 39 | | 39 |
| 413031 | Securities, Commodities, and Financial Services Sales Agents | 62 | $21.65 | $45,031 | Bachelor's | None | MT OJT | | | | | | | 0 |
| 131041 | Compliance Officers | 60 | $33.36 | $69,379 | Bachelor's | None | MT OJT | | | | | | | 0 |
| 272022 | Coaches and Scouts | 60 | [6] | $35,764 | Bachelor's | None | None | 083500 | | 5 | 5 | | 102 | 102 |
| 272022 | Coaches and Scouts | | | | | | | 083560 | 3 | 1 | 4 | 6 | 1 | 7 |
| 132072 | Loan Officers | 57 | $39.24 | $81,631 | Bachelor's | None | MT OJT | | | | | | | 0 |
| 151142 | Network and Computer Systems Administrators | 57 | $36.64 | $76,213 | Bachelor's | None | None | 070800 | 1 | | 1 | 7 | | 7 |
| 131151 | Training and Development Specialists | 53 | $26.27 | $54,639 | Bachelor's | <5 years | None | | | | | | | 0 |
| 172141 | Mechanical Engineers | 51 | $38.81 | $80,735 | Bachelor's | None | None | | | | | | | 0 |
| 192041 | Environmental Scientists and Specialists, Including Health | | | | | | | 030200 | | 1 | 1 | | 1 | 1 |
| 192041 | Environmental Scientists and Specialists, Including Health | 50 | $36.10 | $75,090 | Bachelor's | None | None | 030100 | | 3 | 3 | | 4 | 4 |
| 252052 | Special Education Teachers, Kindergarten and Elementary School | 50 | [6] | $74,533 | Bachelor's | None | I/R | | | | | | | 0 |
| [6] In occupations where workers do not work full-time all year-round, it is not possible to calculate an hourly wage. | | | | | | | | | | | | | | |
| I/R- Internship/Residency; MT OJT- > 1 mo < 12 mos. | | | | | | | | | | | | | | |

Source: California Employment Development Department, Labor Market Information. California Community College Chancellor's Office; analysis by Cambridge West Partnership, LLC

The table below identifies four occupations in the Riverside or San Bernardino Counties with 50 or more projected annual openings through 2022 that commonly require an Associate Degree. The **bold** TOP code indicates that Barstow College has a program established that relates to the occupation.

Occupations Commonly Requiring an Associate Degree, 50 or More Projected Annual Openings 2012-2022

| 2012-2022 Occupational Employment Projections | | | | | | | | | Inland Empire California Community Colleges Regional Data | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Riverside-San Bernardino-Ontario Metropolitan Statistical Area (Riverside & San Bernardino Counties) | | | | | | | | | Number of Programs | | | Average Awards 2010-11 to 2014-15 | | |
| SOC | Occupational Title | Av An Total Jobs | 2014 Q1 Median Hourly | 2014 Q1 Median Annual | Entry Level Education | Work Exp | On-the-Job Training | Regional TOP Codes | Certificate | Degree | Total | Certificate | Degree | Total |
| 291141 | Registered Nurses | 830 | $42.39 | $88,181 | Associate | None | None | 123010 | 1 | 7 | 8 | 73 | 532 | 604 |
| | | | | | | | | | | | | | | |
| 252011 | Preschool Teachers, Except Special Education | 153 | $14.45 | $30,058 | Associate | None | None | **130500** | 19 | 23 | 42 | 447 | 174 | 621 |
| 252011 | Preschool Teachers, Except Special Education | | | | | | | 130540 | 1 | | 1 | 2 | | 2 |
| | | | | | | | | | | | | | | |
| 232011 | Paralegals and Legal Assistants | 56 | $24.58 | $51,142 | Associate | None | None | 140200 | 3 | 3 | 6 | 39 | 21 | 60 |
| | | | | | | | | | | | | | | |
| 292021 | Dental Hygienists | 75 | $44.02 | $91,550 | Associate | None | None | 124020 | | 1 | 1 | | 11 | 11 |

Source: California Employment Development Department, Labor Market Information. California Community College Chancellor's Office; analysis by Cambridge West Partnership, LLC

The table below identifies sixteen occupations in Riverside or San Bernardino Counties with 50 or more projected annual openings through 2022 that commonly require a Postsecondary Certificate. The **bold** TOP code indicates that Barstow College has a program established that relates to the occupation.

Occupations Commonly Requiring a Certificate, 50 or More Projected Annual Openings 2012-2022

| 2012-2022 Occupational Employment Projections | | | | | | | | | Inland Empire California Community Colleges Regional Data | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Riverside-San Bernardino-Ontario Metropolitan Statistical Area (Riverside & San Bernardino Counties) | | | | | | | | | Number of Programs | | | Average Awards 2010-11 to 2014-15 | | |
| SOC | Occupational Title | Av An Total Jobs | 2014 Q1 Median Hourly | 2014 Q1 Median Annual | Entry Level Education | Work Exp | On-the-Job Training | Regional TOP Codes | Certificate | Degree | Total | Certificate | Degree | Total |
| 533032 | Heavy and Tractor-Trailer Truck Drivers | 995 | $20.39 | $42,398 | Certificate | None | ST OJT | | | | | | | 0 |
| 311014 | Nursing Assistants | 328 | $12.66 | $26,330 | Certificate | None | None | **123030** | 4 | 1 | 5 | 134 | 3 | 137 |
| 292061 | Licensed Practical and Licensed Vocational Nurses | 299 | $22.17 | $46,104 | Certificate | None | None | 123020 | 6 | 4 | 10 | 150 | 62 | 212 |
| 319092 | Medical Assistants | 290 | $13.01 | $27,045 | Certificate | None | None | 120810 | 1 | | 1 | 2 | | 2 |
| 319092 | Medical Assistants | | | | | | | **120800** | 7 | 7 | 14 | 37 | 29 | 65 |
| 395012 | Hairdressers, Hairstylists, and Cosmetologists | 251 | $9.47 | $19,690 | Certificate | None | None | **300700** | 6 | 4 | 10 | 112 | 19 | 131 |
| 499021 | Heating, Air Conditioning, and Refrigeration Mechanics and Installers | 184 | $24.73 | $51,439 | Certificate | None | LT OJT | 094600 | 3 | 3 | 6 | 62 | 10 | 72 |
| 319091 | Dental Assistants | 171 | $16.18 | $33,666 | Certificate | None | None | 124010 | 4 | 3 | 7 | 59 | 9 | 68 |
| 332011 | Firefighters | 98 | $26.69 | $55,522 | Certificate | None | LT OJT | **213300** | 13 | 13 | 26 | 95 | 92 | 187 |
| 332011 | Firefighters | | | | | | | **213350** | 4 | 1 | 5 | 82 | 9 | 91 |
| 395092 | Manicurists and Pedicurists | 86 | $9.04 | $18,793 | Certificate | None | None | **300700** | 6 | 4 | 10 | 112 | 19 | 131 |
| 511011 | First-Line Supervisors of Production and Operating Workers | 84 | $23.03 | $47,915 | Certificate | <5 years | None | | | | | | | 0 |
| 292041 | Emergency Medical Technicians and Paramedics | 83 | $11.46 | $23,846 | Certificate | None | None | 125100 | 4 | 4 | 8 | 41 | 22 | 63 |
| 292041 | Emergency Medical Technicians and Paramedics | | | | | | | 125000 | 4 | | 4 | 371 | | 371 |
| 292071 | Medical Records and Health Information Technicians | 76 | $19.00 | $39,507 | Certificate | None | None | | | | | | | 0 |
| 254031 | Library Technicians | 62 | $17.77 | $36,938 | Certificate | None | None | 160200 | 1 | 1 | 2 | 6 | 4 | 10 |
| 319097 | Phlebotomists | 57 | $16.84 | $35,026 | Certificate | None | None | 120510 | 2 | | 2 | 5 | | 5 |
| 319011 | Massage Therapists | 51 | $17.97 | $37,364 | Certificate | None | None | | | | | | | 0 |
| 492022 | Telecommunications Equipment Installers and Repairers, Except Line Installers | 51 | $30.76 | $63,989 | Certificate | None | MT OJT | 093430 | 3 | 1 | 4 | 3 | 1 | 4 |
| ST OJT- 1 month or less OJT; MT OJT- mor than 1 month and up to 12 months OJT and informal training; APP- Apprenticeship | | | | | | | | | | | | | | |
| LT OJT- more than 12 months OJT and formal classroom instruction; I/R- Internship/Residency | | | | | | | | | | | | | | |

Source: California Employment Development Department, Labor Market Information. California Community College Chancellor's Office; analysis by Cambridge West Partnership, LLC

The table below identifies two occupations in Riverside or San Bernardino Counties with 50 or more projected annual openings through 2022 that commonly require some college. The **bold** TOP code indicates that Barstow College has a program established that relates to the occupation.

Occupations Commonly Requiring Some College, 50 or More Projected Annual Openings 2012-2022

| 2012-2022 Occupational Employment Projections | | | | | | | | | | Inland Empire California Community Colleges Regional Data | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Riverside-San Bernardino-Ontario Metropolitan Statistical Area (Riverside & San Bernardino Counties) | | | | | | | | | | Number of Programs | | | | Average Awards 2010-11 to 2014-15 | | |
| SOC | Occupational Title | Av An Total Jobs | 2014 Q1 Median Hourly | 2014 Q1 Median Annual | Entry Level Education | Work Exp | On-the-Job Training | Regional TOP Codes | | Certificate | Degree | Total | | Certificate | Degree | Total |
| 259041 | Teacher Assistants | 442 | [6] | $29,421 | Some College | None | None | 080200 | | 4 | 3 | 7 | | 11 | 12 | 23 |
| | | | | | | | | | | | | | | | | |
| 151151 | Computer User Support Specialists | 103 | $24.63 | $51,213 | Some College | None | MT OJT | **070200** | | 6 | 9 | 15 | | 56 | 86 | 142 |
| 151151 | Computer User Support Specialists | | | | | | | 070820 | | 1 | | 1 | | 1 | | 1 |
| MT OJT- > 1 mo < 12 mos. | | | | | | | | | | | | | | | | |

Source: California Employment Development Department, Labor Market Information. California Community College Chancellor's Office; analysis by Cambridge West Partnership, LLC

The table below identifies eighty-nine occupations in Riverside or San Bernardino Counties with 50 or more projected annual openings through 2022 that commonly require a high school diploma. For some occupations below a college certificate or some college experience may give the job applicant a competitive advantage. In other occupations local hiring practices actually expect more than a high school diploma for entry-level education. The **bold** TOP code indicates that Barstow College has a program established that relates to the occupation.

Occupations Commonly Requiring a High School Diploma, 50 or More Projected Annual Openings 2012-2022

| 2012-2022 Occupational Employment Projections | | | | | | | | | Inland Empire California Community Colleges Regional Data | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Riverside-San Bernardino-Ontario Metropolitan Statistical Area (Riverside & San Bernardino Counties) | | | | | | | | | Number of Programs | | | | Average Awards 2010-11 to 2014-15 | | |
| SOC | Occupational Title | Av An Total Jobs | 2014 Q1 Median Hourly | 2014 Q1 Median Annual | Entry Level Education | Work Exp | On-the-Job Training | Regional TOP Codes | Certificate | Degree | Total | | Certificate | Degree | Total |
| 439061 | Office Clerks, General | 925 | $13.37 | $27,805 | HS Diploma | None | ST OJT | | | | | | | | 0 |
| 411011 | First-Line Supervisors of Retail Sales Workers | 595 | $18.94 | $39,397 | HS Diploma | <5 years | None | 050650 | 6 | 3 | 9 | | 14 | 3 | 17 |
| 431011 | First-Line Supervisors of Office and Administrative Support Workers | | | | | | | 051440 | 2 | 2 | 4 | | 9 | 8 | 17 |
| 431011 | First-Line Supervisors of Office and Administrative Support Workers | 570 | $23.49 | $48,857 | HS Diploma | <5 years | None | 050630 | 3 | 2 | 5 | | 7 | 4 | 10 |
| 472031 | Carpenters | | | | | | | **095210** | 1 | | 1 | | 1 | | 1 |
| 472031 | Carpenters | 560 | $25.24 | $52,489 | HS Diploma | None | APP | 095200 | 2 | 2 | 4 | | 11 | 4 | 15 |
| 493023 | Automotive Service Technicians and Mechanics | 357 | $17.21 | $35,806 | HS Diploma | None | LT OJT | **094800** | 29 | 18 | 47 | | 167 | 45 | 212 |
| 493023 | Automotive Service Technicians and Mechanics | | | | | | | 094840 | 1 | | 1 | | 2 | | 2 |
| 436014 | Secretaries and Administrative Assistants, Except Legal, Medical, and Executive | 543 | $17.13 | $35,643 | HS Diploma | None | ST OJT | **051400** | 16 | 4 | 20 | | 59 | 46 | 105 |
| 351012 | First-Line Supervisors of Food Preparation and Serving Workers | 504 | $13.16 | $27,378 | HS Diploma | <5 years | None | 130630 | 7 | 2 | 9 | | 64 | 11 | 75 |
| 351012 | First-Line Supervisors of Food Preparation and Serving Workers | | | | | | | 130700 | | 1 | 1 | | | 5 | 5 |
| 351012 | First-Line Supervisors of Food Preparation and Serving Workers | | | | | | | 130710 | 5 | 3 | 8 | | 19 | 11 | 30 |
| 351012 | First-Line Supervisors of Food Preparation and Serving Workers | | | | | | | 130620 | 2 | | 2 | | 13 | | 13 |
| ST OJT- 1 month or less OJT; MT OJT- more than 1 month and up to 12 months OJT and informal training; APP- Apprenticeship | | | | | | | | | | | | | | | |
| LT OJT- more than 12 months OJT and formal classroom instruction; I/R- Internship/Residency | | | | | | | | | | | | | | | |

Source: California Employment Development Department, Labor Market Information. California Community College Chancellor's Office; analysis by Cambridge West Partnership, LLC

## Occupations Commonly Requiring a High School Diploma, 50 or More Projected Annual Openings 2012-2022

| 2012-2022 Occupational Employment Projections | | | | | | | | | Inland Empire California Community Colleges Regional Data | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Riverside-San Bernardino-Ontario Metropolitan Statistical Area (Riverside & San Bernardino Counties) | | | | | | | | | Number of Programs | | | Average Awards 2010-11 to 2014-15 | | |
| SOC | Occupational Title | Av An Total Jobs | 2014 Q1 Median Hourly | 2014 Q1 Median Annual | Entry Level Education | Work Exp | On-the-Job Training | Regional TOP Codes | Certificate | Degree | Total | Certificate | Degree | Total |
| 414012 | Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products | | | | | | | 050800 | 1 | | 1 | 11 | | 11 |
| 414012 | Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products | 469 | $25.65 | $53,346 | HS Diploma | None | MT OJT | 050900 | 4 | 3 | 7 | 10 | 9 | 19 |
| 339032 | Security Guards | 412 | $10.62 | $22,098 | HS Diploma | None | ST OJT | | | | | | | 0 |
| 399011 | Childcare Workers | | | | | | | 130590 | 4 | | 4 | 8 | | 8 |
| 399011 | Childcare Workers | | | | | | | 130550 | 1 | | 1 | 1 | | 1 |
| 399011 | Childcare Workers | | | | | | | 130540 | 1 | | 1 | 2 | | 2 |
| 399011 | Childcare Workers | 366 | $10.52 | $21,886 | HS Diploma | None | ST OJT | **130500** | 19 | 23 | 42 | 447 | 174 | 621 |
| 433031 | Bookkeeping, Accounting, and Auditing Clerks | 364 | $18.06 | $37,566 | HS Diploma | None | MT OJT | **050200** | 10 | 7 | 17 | 125 | 92 | 217 |
| 499071 | Maintenance and Repair Workers, General | 357 | $18.24 | $37,933 | HS Diploma | None | LT OJT | | | | | | | 0 |
| 435071 | Shipping, Receiving, and Traffic Clerks | 354 | $14.06 | $29,243 | HS Diploma | None | ST OJT | | | | | | | 0 |
| 434171 | Receptionists and Information Clerks | 339 | $12.80 | $26,621 | HS Diploma | None | ST OJT | | | | | | | 0 |
| 413099 | Sales Representatives, Services, All Other | 311 | $21.79 | $45,313 | HS Diploma | None | ST OJT | | | | | | | 0 |
| 533033 | Light Truck or Delivery Services Drivers | 296 | $15.74 | $32,733 | HS Diploma | None | ST OJT | | | | | | | 0 |
| 471011 | First-Line Supervisors of Construction Trades and Extraction Workers | 253 | $33.06 | $68,771 | HS Diploma | ≥5 years | None | 095700 | 3 | 1 | 4 | 5 | 2 | 7 |
| 471011 | First-Line Supervisors of Construction Trades and Extraction Workers | | | | | | | **095210** | 1 | | 1 | 1 | | 1 |
| 471011 | First-Line Supervisors of Construction Trades and Extraction Workers | | | | | | | **095200** | 3 | 2 | 5 | 11 | 4 | 15 |
| 471011 | First-Line Supervisors of Construction Trades and Extraction Workers | | | | | | | | | | | | | 0 |
| 471011 | First-Line Supervisors of Construction Trades and Extraction Workers | | | | | | | 210210 | 1 | | 1 | 2 | | 2 |
| ST OJT- 1 month or less OJT; MT OJT- more than 1 month and up to 12 months OJT and informal training; APP- Apprenticeship | | | | | | | | | | | | | | |
| LT OJT- more than 12 months OJT and formal classroom instruction; I/R- Internship/Residency | | | | | | | | | | | | | | |

Source: California Employment Development Department, Labor Market Information. California Community College Chancellor's Office; analysis by Cambridge West Partnership, LLC

Occupations Commonly Requiring a High School Diploma, 50 or More Projected Annual Openings 2012-2022

| 2012-2022 Occupational Employment Projections | | | | | | | | | Inland Empire California Community Colleges Regional Data | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Riverside-San Bernardino-Ontario Metropolitan Statistical Area (Riverside & San Bernardino Counties) | | | | | | | | | Number of Programs | | | Average Awards 2010-11 to 2014-15 | | |
| SOC | Occupational Title | Av An Total Jobs | 2014 Q1 Median Hourly | 2014 Q1 Median Annual | Entry Level Education | Work Exp | On-the-Job Training | Regional TOP Codes | Certificate | Degree | Total | Certificate | Degree | Total |
| 472111 | Electricians | 241 | $27.61 | $57,407 | HS Diploma | None | APP | **095220** | 3 | 3 | 6 | | | 0 |
| 436013 | Medical Secretaries | 224 | $15.30 | $31,825 | HS Diploma | None | MT OJT | 051420 | 3 | 1 | 4 | 6 | 2 | 8 |
| 436013 | Medical Secretaries | | | | | | | **120820** | | 1 | 1 | | 2 | 2 |
| 512092 | Team Assemblers | 220 | $11.58 | $24,090 | HS Diploma | None | MT OJT | | | | | | | 0 |
| 131199 | Business Operations Specialists, All Other | 195 | $31.50 | $65,500 | HS Diploma | None | None | 050640 | 3 | 1 | 4 | 7 | 2 | 9 |
| 333051 | Police and Sheriff's Patrol Officers | 190 | $40.82 | $84,895 | HS Diploma | None | MT OJT | **210500** | 9 | 19 | 28 | 120 | 341 | 461 |
| 333051 | Police and Sheriff's Patrol Officers | | | | | | | **210550** | 5 | 2 | 7 | 47 | 9 | 56 |
| 439199 | Office and Administrative Support Workers, All Other | 189 | $12.64 | $26,276 | HS Diploma | None | ST OJT | | | | | | | 0 |
| 433071 | Tellers | 173 | $13.58 | $28,241 | HS Diploma | None | ST OJT | 050400 | 2 | 1 | 3 | 2 | 1 | 3 |
| 472073 | Operating Engineers and Other Construction Equipment Operators | 159 | $32.19 | $66,960 | HS Diploma | None | MT OJT | | | | | | | 0 |
| 434151 | Order Clerks | 155 | $14.73 | $30,640 | HS Diploma | None | ST OJT | | | | | | | 0 |
| 119051 | Food Service Managers | 152 | $22.64 | $47,093 | HS Diploma | <5 years | None | 130720 | 1 | 1 | 2 | 7 | 5 | 12 |
| 119051 | Food Service Managers | | | | | | | 130620 | 2 | | 2 | 13 | | 13 |
| 119051 | Food Service Managers | | | | | | | 130700 | | 1 | 1 | | 5 | 5 |
| 119051 | Food Service Managers | | | | | | | 130710 | 5 | 3 | 8 | 19 | 11 | 30 |
| 433021 | Billing and Posting Clerks | 151 | $16.13 | $33,547 | HS Diploma | None | ST OJT | | | | | | | 0 |
| 491011 | First-Line Supervisors of Mechanics, Installers, and Repairers | 151 | $33.78 | $70,269 | HS Diploma | <5 years | None | 093440 | 4 | 2 | 6 | 56 | 11 | 66 |
| 333012 | Correctional Officers and Jailers | 150 | $35.17 | $73,156 | HS Diploma | None | MT OJT | 210510 | 3 | 1 | 4 | 39 | 12 | 51 |
| 333012 | Correctional Officers and Jailers | | | | | | | | | | | | | 0 |
| ST OJT- 1 month or less OJT; MT OJT- more than 1 month and up to 12 months OJT and informal training; APP- Apprenticeship | | | | | | | | | | | | | | |
| LT OJT- more than 12 months OJT and formal classroom instruction; I/R- Internship/Residency | | | | | | | | | | | | | | |

Source: California Employment Development Department, Labor Market Information. California Community College Chancellor's Office; analysis by Cambridge West Partnership, LLC

## Occupations Commonly Requiring a High School Diploma, 50 or More Projected Annual Openings 2012-2022

| 2012-2022 Occupational Employment Projections | | | | | | | | | Inland Empire California Community Colleges Regional Data | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Riverside-San Bernardino-Ontario Metropolitan Statistical Area (Riverside & San Bernardino Counties) | | | | | | | | | Number of Programs | | | | Average Awards 2010-11 to 2014-15 | | |
| SOC | Occupational Title | Av An Total Jobs | 2014 Q1 Median Hourly | 2014 Q1 Median Annual | Entry Level Education | Work Exp | On-the-Job Training | Regional TOP Codes | Certificate | Degree | Total | | Certificate | Degree | Total |
| 119199 | Managers, All Other | | | | | | | **220700** | | 113 | 13 | | | 34 | 34 |
| 119199 | Managers, All Other | | | | | | | **050500** | 3 | 15 | 18 | | 15 | 498 | 512 |
| 119199 | Managers, All Other | | | | | | | **220100** | | 6 | 6 | | | 536 | 536 |
| 119199 | Managers, All Other | | | | | | | **220800** | | 13 | 13 | | | 135 | 135 |
| 119199 | Managers, All Other | | | | | | | 220200 | | 11 | 11 | | | 36 | 36 |
| 119199 | Managers, All Other | 143 | $51.95 | $108,049 | HS Diploma | <5 years | None | **050600** | 11 | 11 | 22 | | 87 | 98 | 185 |
| 119199 | Managers, All Other | | | | | | | **200100** | | 14 | 14 | | | 176 | 176 |
| 119199 | Managers, All Other | | | | | | | 220600 | | 7 | 7 | | | 12 | 12 |
| 119199 | Managers, All Other | | | | | | | 220400 | | 4 | 4 | | | 21 | 21 |
| 119199 | Managers, All Other | | | | | | | **050100** | 3 | 7 | 10 | | 25 | 143 | 168 |
| 119199 | Managers, All Other | | | | | | | **220500** | | 11 | 11 | | | 76 | 76 |
| 119199 | Managers, All Other | | | | | | | 050640 | 3 | 1 | 4 | | 7 | 2 | 9 |
| 493031 | Bus and Truck Mechanics and Diesel Engine Specialists | 142 | $21.12 | $43,918 | HS Diploma | None | LT OJT | **094700** | 2 | 2 | 4 | | 8 | | 8 |
| 472152 | Plumbers, Pipefitters, and Steamfitters | 141 | $22.30 | $46,397 | HS Diploma | None | APP | | | | | | | | 0 |
| 433011 | Bill and Account Collectors | 138 | $15.97 | $33,223 | HS Diploma | None | MT OJT | 050400 | 2 | 1 | 3 | | 2 | 1 | 3 |
| 531021 | First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand | 135 | $23.88 | $49,674 | HS Diploma | <5 years | None | | | | | | | | 0 |
| 533022 | Bus Drivers, School or Special Client | 127 | $17.11 | $35,599 | HS Diploma | None | ST OJT | | | | | | | | 0 |
| 211093 | Social and Human Service Assistants | | | | | | | 130100 | | 1 | 1 | | | 1 | 1 |
| 211093 | Social and Human Service Assistants | | | | | | | 130560 | 1 | | 1 | | 2 | | 2 |
| 211093 | Social and Human Service Assistants | 126 | $15.12 | $31,444 | HS Diploma | None | ST OJT | 210440 | 7 | 2 | 9 | | 130 | 11 | 141 |
| 211093 | Social and Human Service Assistants | | | | | | | 210400 | 6 | 3 | 9 | | 42 | 40 | 82 |
| 434081 | Hotel, Motel, and Resort Desk Clerks | 126 | $10.80 | $22,479 | HS Diploma | None | ST OJT | | | | | | | | 0 |
| 514041 | Machinists | | | | | | LT OJT | 095630 | 4 | 2 | 6 | | 13 | 4 | 17 |
| 514041 | Machinists | 125 | $15.22 | $31,642 | HS Diploma | None | LT OJT | 095600 | 3 | 2 | 5 | | 6 | 3 | 8 |
| 339099 | Protective Service Workers, All Other | 124 | $14.77 | $30,723 | HS Diploma | None | ST OJT | | | | | | | | 0 |
| ST OJT- 1 month or less OJT; MT OJT- more than 1 month and up to 12 months OJT and informal training; APP- Apprenticeship | | | | | | | | | | | | | | | |
| LT OJT- more than 12 months OJT and formal classroom instruction; I/R- Internship/Residency | | | | | | | | | | | | | | | |

Source: California Employment Development Department, Labor Market Information. California Community College Chancellor's Office; analysis by Cambridge West Partnership, LLC

## Occupations Commonly Requiring a High School Diploma, 50 or More Projected Annual Openings 2012-2022

| 2012-2022 Occupational Employment Projections | | | | | | | | | Inland Empire California Community Colleges Regional Data | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Riverside-San Bernardino-Ontario Metropolitan Statistical Area (Riverside & San Bernardino Counties) | | | | | | | | | Number of Programs | | | Average Awards 2010-11 to 2014-15 | | | |
| SOC | Occupational Title | Av An Total Jobs | 2014 Q1 Median Hourly | 2014 Q1 Median Annual | Entry Level Education | Work Exp | On-the-Job Training | Regional TOP Codes | Certificate | Degree | Total | Certificate | Degree | Total | |
| 519061 | Inspectors, Testers, Sorters, Samplers, and Weighers | 120 | $16.25 | $33,797 | HS Diploma | None | MT OJT | 095680 | | 1 | 1 | | 1 | 1 | |
| 519061 | Inspectors, Testers, Sorters, Samplers, and Weighers | | | | | | | 095600 | 3 | 2 | 5 | 6 | 3 | 8 | |
| 435032 | Dispatchers, Except Police, Fire, and Ambulance | 119 | $18.67 | $38,832 | HS Diploma | None | MT OJT | | | | | | | 0 | |
| 499041 | Industrial Machinery Mechanics | 111 | $25.00 | $51,999 | HS Diploma | None | LT OJT | | | | | | | 0 | |
| 531031 | First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators | 110 | $24.79 | $51,554 | HS Diploma | <5 years | None | **051000** | 6 | 6 | 12 | 41 | 13 | 54 | |
| 292052 | Pharmacy Technicians | 105 | $16.27 | $33,842 | HS Diploma | None | MT OJT | 122100 | 3 | 2 | 5 | 47 | 22 | 69 | |
| 435061 | Production, Planning, and Expediting Clerks | 105 | $18.66 | $38,812 | HS Diploma | None | MT OJT | **051000** | 6 | 6 | 12 | 41 | 13 | 54 | |
| 493093 | Tire Repairers and Changers | 103 | $12.70 | $26,412 | HS Diploma | None | ST OJT | | | | | | | 0 | |
| 519111 | Packaging and Filling Machine Operators and Tenders | 102 | $11.48 | $23,866 | HS Diploma | None | MT OJT | | | | | | | 0 | |
| 499052 | Telecommunications Line Installers and Repairers | 101 | $26.75 | $55,633 | HS Diploma | None | LT OJT | | | | | | | 0 | |
| 514121 | Welders, Cutters, Solderers, and Brazers | 101 | $17.30 | $35,982 | HS Diploma | None | MT OJT | **095650** | 5 | 5 | 10 | 61 | 11 | 72 | |
| 393011 | Gaming Dealers | 100 | $9.60 | $19,972 | HS Diploma | None | ST OJT | | | | | | | 0 | |
| 435052 | Postal Service Mail Carriers | 99 | $27.50 | $57,210 | HS Diploma | None | ST OJT | | | | | | | 0 | |
| 436011 | Executive Secretaries and Executive Administrative Assistants | 98 | $24.90 | $51,793 | HS Diploma | <5 years | None | **051400** | 16 | 4 | 20 | 59 | 46 | 105 | |
| 119141 | Property, Real Estate, and Community Association Managers | | | | | | | 051110 | 1 | 2 | 3 | 1 | 5 | 6 | |
| 119141 | Property, Real Estate, and Community Association Managers | 92 | $31.49 | $65,490 | HS Diploma | <5 years | None | 051100 | 8 | 6 | 14 | 42 | 16 | 58 | |
| 434061 | Eligibility Interviewers, Government Programs | 90 | $20.13 | $41,880 | HS Diploma | None | MT OJT | | | | | | | 0 | |
| 533031 | Driver/Sales Workers | 88 | $11.54 | $24,014 | HS Diploma | None | ST OJT | | | | | | | 0 | |
| 433051 | Payroll and Timekeeping Clerks | 86 | $19.27 | $40,078 | HS Diploma | None | MT OJT | **050200** | 10 | 7 | 17 | 125 | 92 | 217 | |
| ST OJT- 1 month or less OJT; MT OJT- more than 1 month and up to 12 months OJT and informal training; APP- Apprenticeship | | | | | | | | | | | | | | | |
| LT OJT- more than 12 months OJT and formal classroom instruction; I/R- Internship/Residency | | | | | | | | | | | | | | | |

Source: California Employment Development Department, Labor Market Information. California Community College Chancellor's Office; analysis by Cambridge West Partnership, LLC

## Occupations Commonly Requiring a High School Diploma, 50 or More Projected Annual Openings 2012-2022

| 2012-2022 Occupational Employment Projections | | | | | | | | | Inland Empire California Community Colleges Regional Data | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Riverside-San Bernardino-Ontario Metropolitan Statistical Area (Riverside & San Bernardino Counties) | | | | | | | | | Number of Programs | | | | Average Awards 2010-11 to 2014-15 | | |
| SOC | Occupational Title | Av An Total Jobs | 2014 Q1 Median Hourly | 2014 Q1 Median Annual | Entry Level Education | Work Exp | On-the-Job Training | Regional TOP Codes | Certificate | Degree | Total | | Certificate | Degree | Total |
| 499099 | Installation, Maintenance, and Repair Workers, All Other | 86 | $16.86 | $35,073 | HS Diploma | None | MT OJT | | | | | | | | 0 |
| 131031 | Claims Adjusters, Examiners, and Investigators | 84 | $30.55 | $63,536 | HS Diploma | None | LT OJT | | | | | | | | 0 |
| 371012 | First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers | 82 | $18.92 | $39,359 | HS Diploma | <5 years | None | 010940 | 3 | 2 | 5 | | 16 | 6 | 22 |
| 371012 | First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers | | | | | | | 010900 | 2 | 2 | 4 | | 28 | 11 | 38 |
| 371012 | First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers | | | | | | | 010930 | 1 | | 1 | | 3 | | 3 |
| 371012 | First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers | | | | | | | | | | | | | | 0 |
| 413021 | Insurance Sales Agents | 82 | $18.77 | $39,034 | HS Diploma | None | MT OJT | | | | | | | | 0 |
| 519199 | Production Workers, All Other | 81 | $11.49 | $23,876 | HS Diploma | None | MT OJT | | | | | | | | 0 |
| 472021 | Brickmasons and Blockmasons | 79 | $41.63 | $86,601 | HS Diploma | None | APP | | | | | | | | 0 |
| 339092 | Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers | 79 | $10.98 | $22,843 | HS Diploma | None | ST OJT | | | | | | | | 0 |
| 419022 | Real Estate Sales Agents | 77 | $24.95 | $51,904 | HS Diploma | None | LT OJT | 051100 | 8 | 6 | 14 | | 42 | 16 | 58 |
| 351012 | First-Line Supervisors of Food Preparation and Serving Workers | | | | | | | 130600 | 1 | 1 | 2 | | 2 | 5 | 7 |
| 371011 | First-Line Supervisors of Housekeeping and Janitorial Workers | 73 | $16.53 | $34,381 | HS Diploma | <5 years | None | | | | | | | | 0 |
| 253021 | Self-Enrichment Education Teachers | 69 | $13.05 | $27,134 | HS Diploma | <5 years | None | | | | | | | | 0 |
| 419011 | Demonstrators and Product Promoters | 66 | $11.21 | $23,312 | HS Diploma | None | ST OJT | | | | | | | | 0 |
| 411012 | First-Line Supervisors of Non-Retail Sales Workers | 66 | $26.27 | $54,646 | HS Diploma | <5 years | None | | | | | | | | 0 |
| 434121 | Library Assistants, Clerical | 65 | $12.92 | $26,884 | HS Diploma | None | ST OJT | | | | | | | | 0 |
| ST OJT- 1 month or less OJT; MT OJT- more than 1 month and up to 12 months OJT and informal training; APP- Apprenticeship | | | | | | | | | | | | | | | |
| LT OJT- more than 12 months OJT and formal classroom instruction; I/R- Internship/Residency | | | | | | | | | | | | | | | |

Source: California Employment Development Department, Labor Market Information. California Community College Chancellor's Office; analysis by Cambridge West Partnership, LLC

## Occupations Commonly Requiring a High School Diploma, 50 or More Projected Annual Openings 2012-2022

| 2012-2022 Occupational Employment Projections | | | | | | | | | Inland Empire California Community Colleges Regional Data | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Riverside-San Bernardino-Ontario Metropolitan Statistical Area (Riverside & San Bernardino Counties) | | | | | | | | | Number of Programs | | | Average Awards 2010-11 to 2014-15 | | |
| SOC | Occupational Title | Av An Total Jobs | 2014 Q1 Median Hourly | 2014 Q1 Median Annual | Entry Level Education | Work Exp | On-the-Job Training | Regional TOP Codes | Certificate | Degree | Total | Certificate | Degree | Total |
| 351011 | Chefs and Head Cooks | | | | | | | **130600** | 2 | 1 | 3 | 2 | 5 | 7 |
| 351011 | Chefs and Head Cooks | | | | | | | 130710 | 5 | 3 | 8 | 19 | 11 | 30 |
| 351011 | Chefs and Head Cooks | 62 | $12.82 | $26,662 | HS Diploma | ≥5 years | None | 130630 | 7 | 2 | 9 | 64 | 11 | 75 |
| 391021 | First-Line Supervisors of Personal Service Workers | 62 | $17.95 | $37,323 | HS Diploma | <5 years | None | | | | | | | 0 |
| 493042 | Mobile Heavy Equipment Mechanics, Except Engines | 64 | $27.31 | $56,803 | HS Diploma | None | LT OJT | | | | | | | 0 |
| 533099 | Motor Vehicle Operators, All Other | 64 | $10.61 | $22,063 | HS Diploma | None | ST OJT | | | | | | | 0 |
| 472211 | Sheet Metal Workers | 61 | $22.70 | $47,217 | HS Diploma | None | APP | | | | | | | 0 |
| 372021 | Pest Control Workers | 59 | $13.72 | $28,537 | HS Diploma | None | MT OJT | | | | | | | 0 |
| 113071 | Transportation, Storage, and Distribution Managers | 58 | $39.11 | $81,359 | HS Diploma | ≥5 years | None | **051000** | 6 | 6 | 12 | 41 | 13 | 54 |
| 439041 | Insurance Claims and Policy Processing Clerks | 58 | $17.71 | $36,837 | HS Diploma | None | MT OJT | | | | | | | 0 |
| 499051 | Electrical Power-Line Installers and Repairers | 58 | $49.52 | $102,991 | HS Diploma | None | LT OJT | 093440 | 4 | 2 | 6 | 56 | 11 | 66 |
| 131023 | Purchasing Agents, Except Wholesale, Retail, and Farm Products | 57 | $25.50 | $53,037 | HS Diploma | None | LT OJT | 050900 | 4 | 3 | 7 | 10 | 9 | 19 |
| 119013 | Farmers, Ranchers, and Other Agricultural Managers | | | | | | | 011200 | | 1 | 1 | | 1 | 1 |
| 119013 | Farmers, Ranchers, and Other Agricultural Managers | 56 | $51.45 | $107,001 | HS Diploma | ≥5 years | None | 010900 | 2 | 2 | 4 | 28 | 11 | 38 |
| 119013 | Farmers, Ranchers, and Other Agricultural Managers | | | | | | | 010930 | 1 | | 1 | 3 | | 3 |
| ST OJT- 1 month or less OJT; MT OJT- more than 1 month and up to 12 months OJT and informal training; APP- Apprenticeship | | | | | | | | | | | | | | |
| LT OJT- more than 12 months OJT and formal classroom instruction; I/R- Internship/Residency | | | | | | | | | | | | | | |

Source: California Employment Development Department, Labor Market Information. California Community College Chancellor's Office; analysis by Cambridge West Partnership, LLC

## Occupations Commonly Requiring a High School Diploma, 50 or More Projected Annual Openings 2012-2022

| 2012-2022 Occupational Employment Projections | | | | | | | | | Inland Empire California Community Colleges Regional Data | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Riverside-San Bernardino-Ontario Metropolitan Statistical Area (Riverside & San Bernardino Counties) | | | | | | | | | Number of Programs | | | Average Awards 2010-11 to 2014-15 | | | |
| SOC | Occupational Title | Av An Total Jobs | 2014 Q1 Median Hourly | 2014 Q1 Median Annual | Entry Level Education | Work Exp | On-the-Job Training | Regional TOP Codes | Certificate | Degree | Total | Certificate | Degree | Total | |
| 435111 | Weighers, Measurers, Checkers, and Samplers, Recordkeeping | 55 | $12.69 | $26,398 | HS Diploma | None | ST OJT | | | | | | | 0 | |
| 419021 | Real Estate Brokers | | | | | | | 051110 | 1 | 2 | 3 | 1 | 5 | 6 | |
| 419021 | Real Estate Brokers | 53 | N/A | N/A | HS Diploma | <5 years | None | 051100 | 8 | 6 | 14 | 42 | 16 | 58 | |
| 131022 | Wholesale and Retail Buyers, Except Farm Products | 53 | $24.03 | $49,994 | HS Diploma | None | LT OJT | 050900 | 4 | 3 | 7 | 10 | 9 | 19 | |
| 131022 | Wholesale and Retail Buyers, Except Farm Products | | | | | | | 050800 | 1 | | 1 | 11 | | 11 | |
| 493021 | Automotive Body and Related Repairers | 53 | $15.88 | $33,028 | HS Diploma | None | MT OJT | 094900 | 4 | 3 | 7 | 41 | 5 | 46 | |
| 499098 | Helpers--Installation, Maintenance, and Repair Workers | 53 | $13.42 | $27,928 | HS Diploma | None | MT OJT | | | | | | | 0 | |
| 292099 | Health Technologists and Technicians, All Other | 51 | $19.13 | $39,781 | HS Diploma | None | None | | | | | | | 0 | |
| 271026 | Merchandise Displayers and Window Trimmers | 50 | $14.06 | $29,249 | HS Diploma | None | MT OJT | 130320 | 1 | 1 | 2 | 2 | 4 | 6 | |
| ST OJT- 1 month or less OJT; MT OJT- more than 1 month and up to 12 months OJT and informal training; APP- Apprenticeship | | | | | | | | | | | | | | | |
| LT OJT- more than 12 months OJT and formal classroom instruction; I/R- Internship/Residency | | | | | | | | | | | | | | | |

Source: California Employment Development Department, Labor Market Information. California Community College Chancellor's Office; analysis by Cambridge West Partnership, LLC

## Appendix G- WSCH Projections and the Future Program of Instruction by Discipline 2015-2030

The following table projects future WSCH and FTES in the benchmark years of 2020, 2025, and 2030. The forecast is in detail form by discipline then summarized by division.

| | Actual | | | | | | Projected | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Profile - Fall Semester 2015 | | | | | | 2020 | | | | | 2025 | | | | | 2030 | | | | |
| Department | # of Sec | WSCH | WSCH Sec | FTES | Lec Hrs | Lab Hrs | # of Sec | Lec WSCH | Lab WSCH | Total WSCH | FTES | # of Sec | Lec WSCH | Lab WSCH | Total WSCH | FTES | # of Sec | Lec WSCH | Lab WSCH | Total WSCH | FTES |
| **Basic Skills** | | | | | | | | | | | | | | | | | | | | | |
| Academic Support | 4 | 388.0 | 97.0 | 12.9 | 12 | 4 | 4 | 336.4 | 112.1 | 448.5 | 15.0 | 5 | 388.0 | 129.0 | 517.0 | 17.2 | 6 | 453.1 | 151.0 | 604.1 | 20.1 |
| Education | 2 | 1.9 | 1.0 | 0.1 | 26 | 0 | 10 | 2.2 | 0.0 | 2.2 | 0.1 | 12 | 3.0 | 0.0 | 3.0 | 0.1 | 14 | 2.9 | 0.0 | 2.9 | 0.1 |
| ESL | 9 | 302.0 | 33.6 | 10.1 | 27 | 4 | 4 | 303.7 | 45.4 | 349.1 | 11.6 | 5 | 351.0 | 52.0 | 403.0 | 13.4 | 5 | 409.0 | 61.1 | 470.1 | 15.7 |
| Orientation | 7 | 607.2 | 86.7 | 20.2 | 21 | 0 | 7 | 701.9 | 0.0 | 701.9 | 23.4 | 8 | 810.0 | 0.0 | 810.0 | 27.0 | 10 | 945.4 | 0.0 | 945.4 | 31.5 |
| Reading | 1 | 60.0 | 60.0 | 2.0 | 3 | 1 | 1 | 52.0 | 17.3 | 69.3 | 2.3 | 1 | 60.0 | 20.0 | 80.0 | 2.7 | 1 | 70.1 | 23.4 | 93.5 | 3.1 |
| ***Total*** | **23** | **1,359.1** | **59.1** | **45.3** | **89** | **9** | **26** | **1,396.2** | **174.8** | **1,571.0** | **52.4** | **31** | **1,612.0** | **201.0** | **1,813.0** | **60.4** | **36** | **1,880.5** | **235.5** | **2,116.0** | **70.5** |

Source: Barstow College Office of Institutional Effectiveness, analysis by Cambridge West Partnership, LLC

| | Actual | | | | | | Projected | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Profile - Fall Semester 2015 | | | | | | 2020 | | | | | 2025 | | | | | 2030 | | | |
| Department | # of Sec | WSCH | WSCH Sec | FTES | Lec Hrs | Lab Hrs | # of Sec | Lec WSCH | Lab WSCH | Total WSCH | FTES | # of Sec | Lec WSCH | Lab WSCH | Total WSCH | FTES | # of Sec | Lec WSCH | Lab WSCH | Total WSCH | FTES |
| **CTE Programs** | | | | | | | | | | | | | | | | | | | | |
| Accounting 0952 | 1 | 51.0 | 51.0 | 1.7 | 3 | 1 | 1 | 44.2 | 14.7 | 58.9 | 2.0 | 1 | 51.0 | 17.1 | 68.1 | 2.3 | 1 | 59.6 | 19.9 | 79.5 | 2.7 |
| Admin of Justice 2100 | 3 | 144.0 | 48.0 | 4.8 | 9 | 0 | 2 | 166.5 | 0.0 | 166.5 | 5.6 | 2 | 192.0 | 0.0 | 192.0 | 6.4 | 3 | 224.2 | 0.0 | 224.2 | 7.5 |
| Allied Health 1200 | 10 | 270.4 | 2704.0 | 9.0 | 276 | 13 | 8 | 300.1 | 12.5 | 312.6 | 10.4 | 10 | 346.0 | 14.5 | 360.5 | 12.0 | 11 | 404.1 | 16.8 | 420.9 | 14.0 |
| Automotive 0948 | 9 | 594.0 | 66.0 | 19.8 | 18 | 18 | 8 | 343.3 | 343.3 | 686.6 | 22.9 | 9 | 396.0 | 396.0 | 792.0 | 26.4 | 11 | 462.4 | 462.4 | 924.8 | 30.8 |
| Business Administration 0500 | 1 | 84.0 | 84.0 | 2.8 | 3 | 0 | 1 | 97.1 | 0.0 | 97.1 | 3.2 | 1 | 112.0 | 0.0 | 112.0 | 3.7 | 1 | 130.8 | 0.0 | 130.8 | 4.4 |
| CBIS 0700 | 6 | 305.3 | 50.9 | 10.2 | 19 | 21 | 2 | 169.4 | 187.0 | 356.4 | 11.9 | 2 | 196.0 | 216.0 | 412.0 | 13.7 | 3 | 228.2 | 251.9 | 480.1 | 16.0 |
| Child Care 1300 | 3 | 96.0 | 32.0 | 3.2 | 3 | 0 | 1 | 111.0 | 0.0 | 111.0 | 3.7 | 2 | 128.0 | 0.0 | 128.0 | 4.3 | 2 | 149.5 | 0.0 | 149.5 | 5.0 |
| Cosmetology 3000 | 5 | 1,551.6 | 310.3 | 51.7 | 10 | 60 | 5 | 251.1 | 1,542.5 | 1,793.6 | 59.8 | 6 | 290.0 | 1,780.0 | 2,070.0 | 69.0 | 7 | 338.2 | 2,077.6 | 2,415.8 | 80.5 |
| Electrical Technology | 1 | 12.0 | 12.0 | 0.4 | 2 | 0 | 1 | 13.9 | 0.0 | 13.9 | 0.5 | 1 | 16.0 | 0.0 | 16.0 | 0.5 | 1 | 18.7 | 0.0 | 18.7 | 0.6 |
| Industrial Main Mech 0945 | 13 | 233.6 | 18.0 | 7.8 | 20 | 22 | 5 | 129.6 | 140.4 | 270.0 | 9.0 | 7 | 150.0 | 162.0 | 312.0 | 10.4 | 8 | 174.6 | 189.1 | 363.7 | 12.1 |
| Management 0500 | 2 | 68.1 | 34.1 | 2.3 | 6 | 0 | 1 | 78.7 | 0.0 | 78.7 | 2.6 | 1 | 91.0 | 0.0 | 91.0 | 3.0 | 1 | 106.0 | 0.0 | 106.0 | 3.5 |
| Photography | 1 | 195.0 | 195.0 | 6.5 | 3 | 4 | 1 | 96.9 | 128.5 | 225.4 | 7.5 | 1 | 112.0 | 148.0 | 260.0 | 8.7 | 1 | 130.6 | 173.1 | 303.7 | 10.1 |
| Welding | 6 | 720.0 | 120.0 | 24.0 | 12 | 18 | 5 | 332.9 | 499.4 | 832.3 | 27.7 | 8 | 384.0 | 576.0 | 960.0 | 32.0 | 9 | 448.4 | 672.6 | 1,121.0 | 37.4 |
| Workforce | 5 | 46.0 | 9.2 | 1.5 | 5 | 0 | 1 | 53.2 | 0.0 | 53.2 | 1.8 | 2 | 61.0 | 0.0 | 61.0 | 2.0 | 3 | 71.6 | 0.0 | 71.6 | 2.4 |
| ***subtotal*** | **66** | **4,371.0** | **66.2** | **145.7** | **389** | **156** | **42** | **2,187.9** | **2,868.3** | **5,056.2** | **168.5** | **53** | **2,525.0** | **3,309.6** | **5,834.6** | **194.5** | **62** | **2,946.9** | **3,863.4** | **6,810.3** | **227.0** |
| **CTE Online** | | | | | | | | | | | | | | | | | | | | |
| Building Construct DE | 1 | 38.0 | 38.0 | 1.3 | 2 | 0 | 1 | 43.9 | 0.0 | 43.9 | 1.5 | 1 | 51.0 | 0.0 | 51.0 | 1.7 | 1 | 59.2 | 0.0 | 59.2 | 2.0 |
| Accounting DE | 3 | 418.2 | 139.4 | 13.9 | 9 | 2 | 3 | 396.4 | 87.0 | 483.4 | 16.1 | 3 | 457.0 | 100.0 | 557.0 | 18.6 | 4 | 533.9 | 117.2 | 651.1 | 21.7 |
| Admin of Justice DE | 8 | 906.0 | 113.3 | 30.2 | 24 | 0 | 9 | 1,047.3 | 0.0 | 1,047.3 | 34.9 | 10 | 1,209.0 | 0.0 | 1,209.0 | 40.3 | 12 | 1,410.7 | 0.0 | 1,410.7 | 47.0 |
| Business Admin DE | 7 | 777.0 | 111.0 | 25.9 | 21 | 0 | 7 | 898.2 | 0.0 | 898.2 | 29.9 | 8 | 1,037.0 | 0.0 | 1,037.0 | 34.6 | 10 | 1,209.8 | 0.0 | 1,209.8 | 40.3 |
| CBIS DE | 4 | 457.8 | 114.5 | 15.3 | 6 | 9 | 3 | 529.2 | 0.0 | 529.2 | 17.6 | 4 | 612.0 | 0.0 | 612.0 | 20.4 | 4 | 713.0 | 0.0 | 713.0 | 23.8 |
| Child Care DE | 8 | 645.0 | 80.6 | 21.5 | 24 | 0 | 6 | 745.6 | 0.0 | 745.6 | 24.9 | 7 | 860.0 | 0.0 | 860.0 | 28.7 | 8 | 1,004.3 | 0.0 | 1,004.3 | 33.5 |
| Management DE | 5 | 540.0 | 108.0 | 18.0 | 15 | 0 | 5 | 624.2 | 0.0 | 624.2 | 20.8 | 5 | 720.0 | 0.0 | 720.0 | 24.0 | 7 | 840.8 | 0.0 | 840.8 | 28.0 |
| ***subtotal*** | **36** | **3782.0** | **105.1** | **126.1** | **101** | **11** | **34** | **4284.8** | **87** | **4371.8** | **145.7** | **38** | **4946** | **100** | **5046** | **168.2** | **46** | **5771.7** | **117.2** | **5888.9** | **196.3** |
| ***CTE Total*** | **102** | **8153.0** | **79.9** | **271.8** | **490** | **167** | **76** | **6472.7** | **2955.3** | **9428.0** | **314.3** | **91** | **7471.0** | **3409.6** | **10880.6** | **362.7** | **108** | **8718.6** | **3980.6** | **12699.2** | **423.3** |

Source: Barstow College Office of Institutional Effectiveness, analysis by Cambridge West Partnership, LLC

| | Actual | | | | | | Projected | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Profile - Fall Semester 2015 | | | | | | 2020 | | | | | 2025 | | | | | 2030 | | | | |
| Department | # of Sec | WSCH | WSCH Sec | FTES | Lec Hrs | Lab Hrs | # of Sec | Lec WSCH | Lab WSCH | Total WSCH | FTES | # of Sec | Lec WSCH | Lab WSCH | Total WSCH | FTES | # of Sec | Lec WSCH | Lab WSCH | Total WSCH | FTES |
| **Fine Arts & Humanities** | | | | | | | | | | | | | | | | | | | | |
| Art 1000 | 4 | 672 | 168.0 | 22.4 | 11 | 13 | 3 | 357 | 420.0 | 777.0 | 25.9 | 4 | 412 | 484 | 896.0 | 29.9 | 5 | 481.3 | 565 | 1,046.3 | 34.9 |
| English 1500 | 17 | 986.4 | 56.9 | 32.9 | 51 | 12 | 20 | 905.0 | 212.0 | 1,117.0 | 37.2 | 23 | 1,044.0 | 245.0 | 1,289.0 | 43.0 | 27 | 1,218.8 | 285.9 | 1,504.7 | 50.2 |
| History 2200 | 8 | 645.0 | 80.6 | 21.5 | 24 | 0 | 7 | 746.0 | 0.0 | 746.0 | 24.9 | 9 | 860.0 | 0.0 | 860.0 | 28.7 | 10 | 1,004.3 | 0.0 | 1,004.3 | 33.5 |
| Humanities 1500 | 1 | 102.0 | 102.0 | 3.4 | 3 | 0 | 1 | 118.0 | 0.0 | 118.0 | 3.9 | 1 | 136.0 | 0.0 | 136.0 | 4.5 | 1 | 159.8 | 0.0 | 159.8 | 5.3 |
| Music 1000 | 3 | 127.0 | 42.3 | 4.2 | 6 | 9 | 2 | 59.0 | 88.0 | 147.0 | 4.9 | 3 | 68.0 | 102.0 | 170.0 | 5.7 | 3 | 79.1 | 118.6 | 197.7 | 6.6 |
| Philosophy 2200 | 3 | 209.7 | 69.9 | 7.0 | 9 | 0 | 1 | 242.0 | 0.0 | 242.0 | 8.1 | 2 | 280.0 | 0.0 | 280.0 | 9.3 | 2 | 326.5 | 0.0 | 326.5 | 10.9 |
| Religious Study 2200 | 2 | 72.0 | 36.0 | 2.4 | 6 | 0 | 1 | 83.0 | 0.0 | 83.0 | 2.8 | 1 | 96.0 | 0.0 | 96.0 | 3.2 | 1 | 112.1 | 0.0 | 112.1 | 3.7 |
| Spanish 1100 | 1 | 168.0 | 168.0 | 5.6 | 4 | 0 | 1 | 194.0 | 0.0 | 194.0 | 6.5 | 1 | 224.0 | 0.0 | 224.0 | 7.5 | 1 | 261.6 | 0.0 | 261.6 | 8.7 |
| Speech 1500 | 7 | 570.0 | 81.4 | 19.0 | 21 | 0 | 5 | 659.0 | 0.0 | 659.0 | 22.0 | 6 | 760.0 | 0.0 | 760.0 | 25.3 | 7 | 887.5 | 0.0 | 887.5 | 29.6 |
| Theatre Arts 1000 | 2 | 135.8 | 67.9 | 4.5 | 6 | 12 | 1 | 52.0 | 105.0 | 157.0 | 5.2 | 1 | 60.0 | 121.0 | 181.0 | 6.0 | 2 | 69.8 | 141.7 | 211.5 | 7.1 |
| ***subtotal*** | **48** | **3,687.9** | **76.8** | **122.9** | **141** | **46** | **42** | **3,415.0** | **825.0** | **4,240.0** | **141.3** | **51** | **3,940.0** | **952.0** | **4,892.0** | **163.1** | **59** | **4,600.8** | **1,111.2** | **5,712.0** | **190.4** |
| **Fine Arts & Humanities Online** | | | | | | | | | | | | | | | | | | | | |
| Art DE | 2 | 267.0 | 133.5 | 8.9 | 6 | 0 | 3 | 308.7 | 0.0 | 308.7 | 10.3 | 3 | 356.0 | 0.0 | 356.0 | 11.9 | 4 | 415.7 | 0.0 | 415.7 | 13.9 |
| English DE | 15 | 1,943.0 | 129.5 | 64.8 | 45 | 0 | 13 | 2,246.1 | 0.0 | 2,246.1 | 74.9 | 12 | 2,592.0 | 0.0 | 2,592.0 | 86.4 | 13 | 3,025.3 | 0.0 | 3,025.3 | 100.8 |
| History DE | 7 | 807.0 | 115.3 | 26.9 | 21 | 0 | 6 | 932.9 | 0.0 | 932.9 | 31.1 | 7 | 1,077.0 | 0.0 | 1,077.0 | 35.9 | 8 | 1,256.5 | 0.0 | 1,256.5 | 41.9 |
| Humanities DE | 4 | 513.0 | 128.3 | 17.1 | 12 | 0 | 5 | 593.0 | 0.0 | 593.0 | 19.8 | 6 | 684.0 | 0.0 | 684.0 | 22.8 | 7 | 798.7 | 0.0 | 798.7 | 26.6 |
| Music DE | 2 | 267.0 | 133.5 | 8.9 | 6 | 0 | 2 | 308.7 | 0.0 | 308.7 | 10.3 | 3 | 356.0 | 0.0 | 356.0 | 11.9 | 3 | 415.7 | 0.0 | 415.7 | 13.9 |
| Philosophy DE | 4 | 220.0 | 55.0 | 7.3 | 16 | 0 | 2 | 254.3 | 0.0 | 254.3 | 8.5 | 3 | 294.0 | 0.0 | 294.0 | 9.8 | 3 | 342.5 | 0.0 | 342.5 | 11.4 |
| Religious Study DE | 3 | 237.0 | 79.0 | 7.9 | 9 | 0 | 2 | 274.0 | 0.0 | 274.0 | 9.1 | 2 | 316.0 | 0.0 | 316.0 | 10.5 | 3 | 369.0 | 0.0 | 369.0 | 12.3 |
| Speech DE | 3 | 399.0 | 133.0 | 13.3 | 9 | 0 | 4 | 461.3 | 0.0 | 461.3 | 15.4 | 4 | 532.0 | 0.0 | 532.0 | 17.7 | 5 | 621.2 | 0.0 | 621.2 | 20.7 |
| Theatre Arts DE | 1 | 102.0 | 102.0 | 3.4 | 3 | 3 | 1 | 59.0 | 59.0 | 118.0 | 3.9 | 1 | 68.0 | 68.5 | 136.5 | 4.6 | 1 | 79.4 | 79.4 | 158.8 | 5.3 |
| ***subtotal*** | **41** | **4,755.0** | **116.0** | **159** | **127** | **3** | **38** | **5,438.0** | **59.0** | **5,497** | **183** | **41** | **6,275** | **69** | **6,344** | **211** | **47** | **7,324** | **79** | **7,403** | **247** |
| ***Fine Arts Total*** | **89** | **8,442.9** | **94.9** | **281** | **268** | **49** | **80** | **8,853** | **884.0** | **9,737.0** | **324.6** | **92** | **10,215.0** | **1,020.5** | **11,235.5** | **374.5** | **106** | **11,924.8** | **1,190.6** | **13,115.4** | **437.2** |

Source: Barstow College Office of Institutional Effectiveness, analysis by Cambridge West Partnership, LLC

| | Actual | | | | | | Projected | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Profile - Fall Semester 2015 | | | | | | 2020 | | | | | 2025 | | | | | 2030 | | | | |
| Department | # of Sec | WSCH | WSCH Sec | FTES | Lec Hrs | Lab Hrs | # of Sec | Lec WSCH | Lab WSCH | Total WSCH | FTES | # of Sec | Lec WSCH | Lab WSCH | Total WSCH | FTES | # of Sec | Lec WSCH | Lab WSCH | Total WSCH | FTES |
| **Natural Science/Math** | | | | | | | | | | | | | | | | | | | | | |
| Astronomy 1900 | 2 | 135.0 | 67.5 | 4.5 | 4 | 3 | 2 | 89.0 | 67.1 | 156.1 | 5.2 | 2 | 103.0 | 77.0 | 180.0 | 6.0 | 2 | 119.8 | 90.4 | 210.2 | 7.0 |
| Biology 0400 | 11 | 1,363.0 | 123.9 | 45.4 | 39 | 27 | 10 | 929.7 | 646.1 | 1,575.8 | 52.5 | 12 | 1,073.0 | 746.0 | 1,819.0 | 60.6 | 14 | 1,252.1 | 870.1 | 2,122.2 | 70.7 |
| Chemistry 1900 | 4 | 444.0 | 111.0 | 14.8 | 12 | 12 | 3 | 256.6 | 256.6 | 513.2 | 17.1 | 3 | 296.0 | 296.0 | 592.0 | 19.7 | 4 | 345.7 | 345.7 | 691.4 | 23.0 |
| CBIS 0700 | 4 | 408.0 | 102.0 | 13.6 | 12 | 12 | 5 | 235.8 | 235.8 | 471.6 | 15.7 | 5 | 272.0 | 272.0 | 544.0 | 18.1 | 6 | 317.6 | 317.6 | 635.2 | 21.2 |
| Mathematics 1799 | 15 | 1,608.3 | 107.2 | 53.6 | 45 | 0 | 13 | 1,859.1 | 0.0 | 1,859.1 | 62.0 | 15 | 2,146.0 | 0.0 | 2,146.0 | 71.5 | 17 | 2,504.1 | 0.0 | 2,504.1 | 83.5 |
| Physical Sciences 1900 | 1 | 90.0 | 90.0 | 3.0 | 3 | 0 | 1 | 104.0 | 0.0 | 104.0 | 3.5 | 1 | 120.0 | 0.0 | 120.0 | 4.0 | 1 | 140.1 | 0.0 | 140.1 | 4.7 |
| ***subtotal*** | **37** | **4,048.3** | **109.4** | **134.9** | **115** | **54** | **34** | **3,474.2** | **1,205.6** | **4,679.8** | **156.0** | **38** | **4,010.0** | **1,391.0** | **5,401.0** | **180.0** | **44** | **4,679.4** | **1,623.8** | **6,303.2** | **210.1** |
| **Natural Science/Math Online** | | | | | | | | | | | | | | | | | | | | | |
| Astronomy DE | 3 | 402.0 | 134.0 | 13.4 | 12 | 0 | 4 | 464.7 | 0.0 | 464.7 | 15.5 | 4 | 536.0 | 0.0 | 536.0 | 17.9 | 5 | 625.9 | 0.0 | 625.9 | 20.9 |
| Biology DE | 6 | 615.0 | 102.5 | 20.5 | 18 | 0 | 6 | 711.0 | 0.0 | 711.0 | 23.7 | 7 | 820.0 | 0.0 | 820.0 | 27.3 | 8 | 957.5 | 0.0 | 957.5 | 31.9 |
| Mathematics DE | 12 | 1,744.6 | 145.4 | 58.2 | 36 | 0 | 12 | 2,016.7 | 0.0 | 2,016.7 | 67.2 | 14 | 2,327.0 | 0.0 | 2,327.0 | 77.6 | 16 | 2,716.4 | 0.0 | 2,716.4 | 90.5 |
| ***subtotal*** | **21** | **2761.6** | **131.5** | **92.1** | **66** | **0** | **22** | **3192.4** | **0.0** | **3192.4** | **106.4** | **25** | **3683.0** | **0.0** | **3683.0** | **122.8** | **29** | **4299.8** | **0.0** | **4299.8** | **143.327** |
| ***Natural Science/Math Total*** | **58** | **6809.9** | **117.4** | **227.0** | **181** | **54** | **56** | **6666.6** | **1205.6** | **7872.2** | **262.4** | **63** | **7693.0** | **1391.0** | **9084.0** | **302.8** | **73** | **8,979.2** | **1,623.8** | **10,603** | **353.4** |

| Department | # of Sec | WSCH | WSCH Sec | FTES | Lec Hrs | Lab Hrs | # of Sec | Lec WSCH | Lab WSCH | Total WSCH | FTES | # of Sec | Lec WSCH | Lab WSCH | Total WSCH | FTES | # of Sec | Lec WSCH | Lab WSCH | Total WSCH | FTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Physical Education** | | | | | | | | | | | | | | | | | | | | | |
| Athletics 0835 | 12 | 670.1 | 55.8 | 22.3 | 0 | 36 | 8 | 0.0 | 774.6 | 774.6 | 25.8 | 9 | 0.0 | 894.0 | 894.0 | 29.8 | 11 | 0.0 | 1,043.4 | 1,043.4 | 34.8 |
| Health 1200 | 10 | 1,104.6 | 110.5 | 36.8 | 30 | 0 | 10 | 1,276.9 | 0.0 | 1,276.9 | 42.6 | 12 | 1,474.0 | 0.0 | 1,474.0 | 49.1 | 14 | 1,719.9 | 0.0 | 1,719.9 | 57.3 |
| Physical Edu Act 0835 | 11 | 542.4 | 49.3 | 18.1 | 0 | 33 | 6 | 0.0 | 627.0 | 627.0 | 20.9 | 6 | 0.0 | 755.0 | 755.0 | 25.2 | 8 | 0.0 | 881.0 | 881.0 | 29.4 |
| Physical Edu Lecture 0835 | 1 | 84.0 | 84.0 | 2.8 | 3 | 0 | 1 | 97.1 | 0.0 | 97.1 | 3.2 | 1 | 112.0 | 0.0 | 112.0 | 3.7 | 1 | 130.8 | 0.0 | 130.8 | 4.4 |
| Physical Edu Theory 0835 | 1 | 86.4 | 86.4 | 2.9 | 1 | 3 | 1 | 25.0 | 74.9 | 99.9 | 3.3 | 1 | 29.0 | 86.0 | 115.0 | 3.8 | 1 | 33.6 | 100.9 | 134.5 | 4.5 |
| ***subtotal*** | **35** | **2,487.5** | **71.1** | **82.9** | **34** | **72** | **26** | **1,399.0** | **1,476.5** | **2,875.5** | **95.9** | **29** | **1,615.0** | **1,735.0** | **3,350.0** | **111.7** | **35** | **1,884.3** | **2,025.3** | **3,909.6** | **130.3** |
| **Physical Education Online** | | | | | | | | | | | | | | | | | | | | | |
| **PEACT DE** | **2** | **197.5** | **98.8** | **6.6** | **0** | **6** | 2 | 0.0 | 228.3 | 228.3 | 7.6 | 2 | 0.0 | 265.4 | 265.4 | 8.8 | 2 | 0.0 | 307.5 | 307.5 | 10.3 |
| ***subtotal*** | **2** | **197.5** | **98.8** | **6.6** | **0** | **6** | **2** | **0.0** | **228.3** | **228.3** | **7.6** | **2** | **0.0** | **265.4** | **265.4** | **8.8** | **2** | **0.0** | **307.5** | **307.5** | **10.3** |
| ***Physical Education Total*** | **37** | **2685.0** | **72.6** | **89.5** | **34** | **78** | **28** | **1399.0** | **1704.8** | **3103.8** | **103.5** | **31** | **1615.0** | **2000.4** | **3615.4** | **120.5** | **37** | **1,884.3** | **2,332.8** | **4,217.1** | **140.6** |

Source: Barstow College Office of Institutional Effectiveness, analysis by Cambridge West Partnership, LLC

| | Actual | | | | | | Projected | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Profile - Fall Semester 2015 | | | | | | 2020 | | | | | 2025 | | | | | 2030 | | | | |
| Department | # of Sec | WSCH | WSCH Sec | FTES | Lec Hrs | Lab Hrs | # of Sec | Lec WSCH | Lab WSCH | Total WSCH | FTES | # of Sec | Lec WSCH | Lab WSCH | Total WSCH | FTES | # of Sec | Lec WSCH | Lab WSCH | Total WSCH | FTES |
| **Social Science** | | | | | | | | | | | | | | | | | | | | |
| Ethnic Studies 2200 | 1 | 96.0 | 96.0 | 3.2 | 3 | 0 | 1 | 111.0 | 0.0 | 111.0 | 3.7 | 1 | 129.0 | 0.0 | 129.0 | 4.30 | 1 | 149.5 | 0.0 | 149.5 | 5.0 |
| Economics 2200 | 2 | 172.4 | 86.2 | 5.7 | 6 | 0 | 1 | 199.3 | 0.0 | 199.3 | 6.6 | 2 | 230.0 | 0.0 | 230.0 | 7.67 | 2 | 268.4 | 0.0 | 268.4 | 8.9 |
| Political Science 2200 | 4 | 417.7 | 104.4 | 13.9 | 12 | 0 | 4 | 482.9 | 0.0 | 482.9 | 16.1 | 4 | 557.0 | 0.0 | 557.0 | 18.57 | 5 | 650.4 | 0.0 | 650.4 | 21.7 |
| Psychology 2000 | 10 | 663.0 | 66.3 | 22.1 | 30 | 0 | 7 | 766.4 | 0.0 | 766.4 | 25.5 | 8 | 885.0 | 0.0 | 885.0 | 29.50 | 10 | 1,032.3 | 0.0 | 1,032.3 | 34.4 |
| Sociology 2200 | 5 | 405.8 | 81.2 | 13.5 | 15 | 0 | 3 | 469.1 | 0.0 | 469.1 | 15.6 | 3 | 541.0 | 0.0 | 541.0 | 18.03 | 4 | 631.8 | 0.0 | 631.8 | 21.1 |
| ***subtotal*** | **22** | **1,754.9** | **79.8** | **58.5** | **66** | **0** | **16** | **2,028.7** | **0.0** | **2,028.7** | **67.6** | **18** | **2,342.0** | **0.0** | **2,342.0** | **78.07** | **22** | **2,732.4** | **0.0** | **2,732.4** | **91.1** |
| **Social Science Online** | | | | | | | | | | | | | | | | | | | | |
| Economics DE | 3 | 288.0 | 96.0 | 9.6 | 9 | 0 | 3 | 289.0 | 0.0 | 289.0 | 9.6 | 3 | 333.0 | 0.0 | 333.0 | 11.10 | 4 | 389.0 | 0.0 | 389.0 | 13.0 |
| Political Science DE | 4 | 513.0 | 128.3 | 17.1 | 12 | 0 | 5 | 593.0 | 0.0 | 593.0 | 19.8 | 6 | 684.0 | 0.0 | 684.0 | 22.80 | 6 | 799.0 | 0.0 | 799.0 | 26.6 |
| Psychology DE | 20 | 1,586.9 | 79.3 | 52.9 | 60 | 0 | 15 | 1,812.0 | 0.0 | 1,812.0 | 60.4 | 17 | 2,091.0 | 0.0 | 2,091.0 | 69.70 | 20 | 2,440.0 | 0.0 | 2,440.0 | 81.3 |
| Sociology DE | 10 | 605.0 | 60.5 | 20.2 | 30 | 0 | 7 | 736.0 | 0.0 | 736.0 | 24.5 | 8 | 850.0 | 0.0 | 850.0 | 28.33 | 9 | 992.0 | 0.0 | 992.0 | 33.1 |
| ***subtotal*** | **37** | **2,992.9** | **80.9** | **99.8** | **111.0** | **0** | **30** | **3430.0** | **0.0** | **3430.0** | **114.3** | **34** | **3958.0** | **0.0** | **3958.0** | **131.9** | **39** | **4620.0** | **0.0** | **4620.0** | **154.0** |
| ***Social Science*** | **59** | **4747.8** | **80.5** | **158.26** | **177.0** | **0** | 46 | **5458.7** | **0.0** | **5458.7** | **182.0** | **52** | **6300.0** | **0.0** | **6300.0** | **210.0** | **61** | **7352.4** | **0.0** | **7352.4** | **245.1** |
| **Grand Totals** | **368** | **32,198** | **87.5** | **1,073** | **1,239** | **357** | **312** | **30,246** | **6,925** | **37,171** | **1,239** | **360** | **34,906** | **8,023** | **42,929** | **1,431** | **421** | **40,740** | **9,363** | **50,103** | **1,670** |

Source: Barstow College Office of Institutional Effectiveness, analysis by Cambridge West Partnership, LLC

| | Actual | | | | | | Projected | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Profile - Fall Semester 2015 | | | | | | 2020 | | | | | 2025 | | | | | 2030 | | | |
| Fort Irwin | # of Sec | WSCH | WSCH Sec | FTES | Lec Hrs | Lab Hrs | # of Sec | Lec WSCH | Lab WSCH | Total WSCH | FTES | # of Sec | Lec WSCH | Lab WSCH | Total WSCH | FTES | # of Sec | Lec WSCH | Lab WSCH | Total WSCH | FTES |
| Communication 0600 | 4 | 1,363.0 | 340.8 | 45.4 | 12 | 0 | 3 | 1,505.8 | 0.0 | 1,505.8 | 50.2 | 3 | 1662.6 | 0.0 | 1,662.6 | 55.42 | 4 | 2,123.6 | 0.0 | 2,123.6 | 70.8 |
| Child Development 1300 | 2 | 18.0 | 9.0 | 0.6 | 6 | 0 | 1 | 19.9 | 0.0 | 19.9 | 0.7 | 1 | 21.9 | 0.0 | 21.9 | 0.73 | 1 | 28.0 | 0.0 | 28.0 | 0.9 |
| CBIS 0700 | 1 | 66.9 | 66.9 | 2.2 | 3 | 3 | 1 | 36.9 | 36.9 | 73.8 | 2.5 | 1 | 40.8 | 40.8 | 81.6 | 2.72 | 1 | 52.1 | 52.1 | 104.2 | 3.5 |
| Management 0500 | 1 | 40.8 | 40.8 | 1.4 | 3 | 0 | 1 | 45.0 | 0.0 | 45.0 | 1.5 | 1 | 49.7 | 0.0 | 49.7 | 1.66 | 1 | 63.5 | 0.0 | 63.5 | 2.1 |
| English 1500 | 7 | 188.5 | 26.9 | 6.3 | 21 | 0 | 2 | 208.1 | 0.0 | 208.1 | 6.9 | 2 | 229.8 | 0.0 | 229.8 | 7.66 | 3 | 293.5 | 0.0 | 293.5 | 9.8 |
| History 2200 | 2 | 78.7 | 39.4 | 2.6 | 6 | 0 | 1 | 86.9 | 0.0 | 86.9 | 2.9 | 1 | 95.9 | 0.0 | 95.9 | 3.20 | 1 | 122.5 | 0.0 | 122.5 | 4.1 |
| Humanities 1500 | 1 | 102.0 | 102.0 | 3.4 | 3 | 0 | 1 | 112.6 | 0.0 | 112.6 | 3.8 | 1 | 118.6 | 0.0 | 118.6 | 3.95 | 1 | 158.8 | 0.0 | 158.8 | 5.3 |
| Speech 1500 | 1 | 77.1 | 77.1 | 2.6 | 3 | 0 | 1 | 80.0 | 0.0 | 80.0 | 2.7 | 1 | 124.3 | 0.0 | 124.3 | 4.14 | 1 | 120.0 | 0.0 | 120.0 | 4.0 |
| Biology 0400 | 2 | 85.5 | 42.8 | 2.9 | 6 | 0 | 1 | 94.4 | 0.0 | 94.4 | 3.1 | 1 | 104.2 | 0.0 | 104.2 | 3.47 | 1 | 133.1 | 0.0 | 133.1 | 4.4 |
| Mathematics 1700 | 5 | 255.7 | 51.1 | 8.5 | 20 | 0 | 2 | 282.3 | 0.0 | 282.3 | 9.4 | 2 | 311.7 | 0.0 | 311.7 | 10.39 | 3 | 398.1 | 0.0 | 398.1 | 13.3 |
| Political Science 2200 | 1 | 21.6 | 21.6 | 0.7 | 3 | 0 | 1 | 23.9 | 0.0 | 23.9 | 0.8 | 1 | 26.3 | 0.0 | 26.3 | 0.88 | 1 | 33.6 | 0.0 | 33.6 | 1.1 |
| Psychology 2000 | 3 | 41.0 | 13.7 | 1.4 | 9 | 0 | 1 | 45.3 | 0.0 | 45.3 | 1.5 | 1 | 50.0 | 0.0 | 50.0 | 1.67 | 1 | 63.8 | 0.0 | 63.8 | 2.1 |
| Sociology 2200 | 1 | 33.0 | 33.0 | 1.1 | 3 | 0 | 1 | 36.4 | 0.0 | 36.4 | 1.2 | 1 | 40.2 | 0.0 | 40.2 | 1.34 | 1 | 51.4 | 0.0 | 51.4 | 1.7 |
| *subtotal* | 31 | 2,371.8 | 76.5 | 79.1 | 98 | 3 | 17 | 2,577.5 | 36.9 | 2,614.4 | 87.1 | 17 | 2876.0 | 40.8 | 2916.8 | 97.2 | 20 | 3,642.0 | 52.1 | 3,694.1 | 123.1 |

Source: Barstow College Office of Institutional Effectiveness, analysis by Cambridge West Partnership, LLC

## Appendix H- Room and Space Allocation Projections by Discipline 2015-2030

| | | SPACE INVENTORY | | | | CURRENT | | | | PROJECTED | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2015 | | | | 2015 | | | | 2020 | | | | 2025 | | | | 2030 | | | |
| | | Lec | Lab | Other | Total | # of | Lec | Lab | Total | # of | Lec | Lab | Total | # of | Lec | Lab | Total | # of | Lec | Lab | Total |
| **Department** | | **ASF** | **ASF** | **ASF** | **ASF** | **SEC** | **ASF** | **ASF** | **ASF** | **SEC** | **ASF** | **ASF** | **ASF** | **SEC** | **ASF** | **ASF** | **ASF** | **SEC** | **ASF** | **ASF** | **ASF** |
| **Basic Skills** | | | | | | | | | | | | | | | | | | | | | |
| Academic Support | | | | | 0 | 4 | 138 | 249 | 387 | 4 | 159 | 288 | 447 | 5 | 184 | 333 | 517 | 6 | 214 | 388 | 602 |
| | Education | | | | 0 | 2 | 1 | 0 | 1 | 10 | 1 | 0 | 1 | 12 | 1 | 0 | 1 | 14 | 1 | 0 | 1 |
| | ESL | | 616 | | 616 | 9 | 124 | 100 | 225 | 4 | 144 | 117 | 260 | 5 | 166 | 135 | 301 | 6 | 194 | 157 | 351 |
| | Orientation | 1,015 | | | 1,015 | 7 | 287 | 0 | 287 | 7 | 332 | 0 | 332 | 8 | 383 | 0 | 383 | 10 | 447 | 0 | 447 |
| | Reading | 0 | | | 0 | 1 | 21 | 23 | 44 | 1 | 25 | 26 | 51 | 1 | 28 | 30 | 58 | 1 | 33 | 35 | 68 |
| | ***Total*** | ***1,015*** | ***616*** | ***0*** | ***1,631*** | ***23*** | ***571*** | ***372*** | ***943*** | ***26*** | ***660*** | ***431*** | ***1,091*** | ***31*** | ***762*** | ***498*** | ***1,260*** | ***37*** | ***889*** | ***580*** | ***1,469*** |
| | | | | | | | | | | | | | | | | | | | | | |
| **CTE Programs** | | | | | | | | | | | | | | | | | | | | | |
| | Accounting | | | | 0 | 1 | 18 | 16 | 34 | 1 | 21 | 19 | 40 | 1 | 24 | 22 | 46 | 1 | 28 | 25 | 53 |
| Admin of Justice | | | | | 0 | 3 | 68 | 0 | 68 | 2 | 79 | 0 | 79 | 2 | 90 | 0 | 90 | 3 | 106 | 0 | 106 |
| | Allied Health | 1013 | | | 1,013 | 10 | 122 | 26 | 148 | 8 | 142 | 27 | 169 | 10 | 164 | 31 | 195 | 11 | 191 | 36 | 227 |
| | Automotive | | 2,975 | | 2,975 | 9 | 141 | 2,542 | 2,683 | 6 | 162 | 2,939 | 3,101 | 9 | 187 | 3,391 | 3,578 | 11 | 219 | 3,959 | 4,178 |
| Business Administration | | | 1,456 | | 1,456 | 1 | 40 | 0 | 40 | 1 | 46 | 0 | 46 | 1 | 53 | 0 | 53 | 1 | 62 | 0 | 62 |
| | CBIS | | 2,443 | | 2,443 | 6 | 66 | 282 | 349 | 2 | 80 | 320 | 400 | 2 | 93 | 369 | 462 | 3 | 108 | 431 | 539 |
| | Child Care | 450 | | | 450 | 3 | 45 | 0 | 45 | 1 | 53 | 0 | 53 | 2 | 61 | 0 | 61 | 2 | 71 | 0 | 71 |
| | Cosmetology | 867 | 2,619 | | 3,486 | 5 | 105 | 2,846 | 2,951 | 5 | 119 | 3,301 | 3,420 | 6 | 137 | 3,809 | 3,946 | 7 | 160 | 4,446 | 4,606 |
| Electrical Tech | | | | | 0 | 1 | 6 | 0 | 6 | 1 | 7 | 0 | 7 | 1 | 8 | 0 | 8 | 1 | 9 | 0 | 9 |
| Industrial Main Mech | | | 1,851 | | 1,851 | 13 | 53 | 472 | 524 | 5 | 61 | 541 | 602 | 7 | 71 | 624 | 695 | 8 | 83 | 728 | 811 |
| | Management | | | | 0 | 2 | 32 | 0 | 32 | 1 | 37 | 0 | 37 | 1 | 43 | 0 | 43 | 1 | 50 | 0 | 50 |
| | Photography | | 409 | | 409 | 1 | 40 | 286 | 326 | 1 | 46 | 330 | 376 | 1 | 53 | 381 | 434 | 1 | 62 | 445 | 507 |
| | Welding | | 1,301 | | 1,301 | 6 | 136 | 1,387 | 1,523 | 5 | 158 | 1,603 | 1,761 | 8 | 182 | 1,850 | 2,032 | 9 | 212 | 2,159 | 2,371 |
| | Workforce | | | | 0 | 5 | 22 | 0 | 22 | 1 | 25 | 0 | 25 | 2 | 29 | 0 | 29 | 3 | 34 | 0 | 34 |
| CTE Lecture (4) | | 2,042 | | | 2,042 | | | | | | | | | | | | | | | | |
| Other (Graphic Arts) | | | 917 | | 917 | | | | | | | | | | | | | | | | |
| ***total*** | | ***4,372*** | ***13,971*** | ***0*** | ***18,343*** | ***66*** | ***893*** | ***7,857*** | ***8,751*** | ***40*** | ***1,035*** | ***9,079*** | ***10,114*** | ***53*** | ***1,194*** | ***10,477*** | ***11,671*** | ***62*** | ***1,395*** | ***12,229*** | ***13,624*** |

Source: Barstow College Space Inventory; analysis by Cambridge West Partnership, LLC

| | SPACE INVENTORY | | | | CURRENT | | | | PROJECTED | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2015 | | | | 2015 | | | | 2020 | | | | 2025 | | | | 2030 | | | |
| | Lec | Lab | Other | Total | # of | Lec | Lab | Total | # of | Lec | Lab | Total | # of | Lec | Lab | Total | # of | Lec | Lab | Total |
| **Department** | ASF | ASF | ASF | ASF | SEC | ASF | ASF | ASF | SEC | ASF | ASF | ASF | SEC | ASF | ASF | ASF | SEC | ASF | ASF | ASF |
| **Fine Arts & Humanities** | | | | | | | | | | | | | | | | | | | | |
| Art | | 1,431 | | 1,431 | 4 | 146 | 936 | 1,081 | 4 | 169 | 1,078 | 1,247 | 4 | 195 | 1,244 | 1,439 | 5 | 228 | 1,452 | 1,680 |
| English | 829 | | | 829 | 17 | 370 | 276 | 646 | 20 | 428 | 318 | 746 | 23 | 494 | 367 | 861 | 27 | 577 | 429 | 1,006 |
| History | | | | 0 | 8 | 305 | 0 | 305 | 7 | 353 | 0 | 353 | 9 | 407 | 0 | 407 | 10 | 475 | 0 | 475 |
| Humanities | 580 | | | 580 | 1 | 48 | 0 | 48 | 1 | 56 | 0 | 56 | 1 | 64 | 0 | 64 | 2 | 75 | 0 | 75 |
| Music | | 1,865 | | 1,865 | 3 | 24 | 196 | 220 | 2 | 28 | 226 | 254 | 3 | 32 | 261 | 293 | 3 | 37 | 305 | 342 |
| Philosophy | | | | 0 | 3 | 99 | 0 | 99 | 1 | 115 | 0 | 115 | 2 | 132 | 0 | 132 | 2 | 154 | 0 | 154 |
| Religious Studies | | | | 0 | 2 | 34 | 0 | 34 | 1 | 39 | 0 | 39 | 1 | 45 | 0 | 45 | 1 | 53 | 0 | 53 |
| Spanish | | | | 0 | 1 | 80 | 0 | 80 | 1 | 92 | 0 | 92 | 1 | 106 | 0 | 106 | 1 | 124 | 0 | 124 |
| Speech | 844 | | | 844 | 7 | 270 | 0 | 270 | 5 | 312 | 0 | 312 | 6 | 360 | 0 | 360 | 7 | 420 | 0 | 420 |
| Theatre Arts | 360 | | 2901 | 3,261 | 2 | 21 | 233 | 254 | 1 | 25 | 270 | 295 | 1 | 28 | 312 | 340 | 2 | 33 | 364 | 397 |
| ***total*** | ***2,613*** | ***3,296*** | ***2,901*** | ***8,810*** | ***48*** | ***1,397*** | ***1,640*** | ***3,037*** | ***43*** | ***1,616*** | ***1,893*** | ***3,508*** | ***51*** | ***1,863*** | ***2,184*** | ***4,047*** | ***60*** | ***2,176*** | ***2,550*** | ***4,726*** |
| | | | | | | | | | | | | | | | | | | | | |
| **Natural Science/Math** | | | | | | | | | | | | | | | | | | | | |
| Astronomy | | | | 0 | 2 | 37 | 147 | 183 | 2 | 42 | 105 | 148 | 2 | 49 | 122 | 171 | 2 | 57 | 142 | 199 |
| Biology | | 2,106 | | 2,106 | 11 | 381 | 1,310 | 1,691 | 10 | 440 | 1,518 | 1,958 | 12 | 507 | 1,752 | 2,259 | 14 | 592 | 2,045 | 2,637 |
| Chemistry | | | | 0 | 4 | 105 | 571 | 676 | 3 | 121 | 660 | 781 | 3 | 140 | 761 | 901 | 4 | 164 | 888 | 1,052 |
| CSIS | | | | 0 | 4 | 97 | 349 | 445 | 5 | 112 | 403 | 515 | 5 | 129 | 465 | 594 | 6 | 150 | 543 | 693 |
| Mathematics | 1,595 | | | 1,595 | 15 | 761 | 0 | 761 | 13 | 879 | 0 | 879 | 15 | 1,015 | 0 | 1,015 | 17 | 1,184 | 0 | 1,184 |
| Physical Sciences | | 1,477 | | 1,477 | 1 | 43 | 0 | 43 | 1 | 49 | 0 | 49 | 1 | 57 | 0 | 57 | 1 | 66 | 0 | 66 |
| Lecture (1) | 580 | | | 580 | | | | | | | | | | | | | | | | |
| ***total*** | ***2,175*** | ***3,583*** | ***0*** | ***5,758*** | ***0*** | ***37*** | ***1,422*** | ***2,376*** | ***3,799*** | ***0*** | ***34*** | ***1,643*** | ***2,687*** | ***4,330*** | ***38*** | ***1,897*** | ***3,100*** | ***4,997*** | ***44*** | ***2,213*** | ***3,618*** | ***5,831*** |
| | | | | | | | | | | | | | | | | | | | | |
| **Physical Education** | | | | | | | | | | | | | | | | | | | | |
| Athletics | | | | 0 | 12 | 0 | 2,151 | 2,151 | 8 | 0 | 2,487 | 2,487 | 9 | 0 | 2,869 | 2,869 | 11 | 0 | 3,349 | 3,349 |
| Health | 723 | | | 723 | 10 | 523 | 0 | 523 | 10 | 604 | 0 | 604 | 12 | 697 | 0 | 697 | 14 | 814 | 0 | 814 |
| PE Act | | | 16,258 | 16,258 | 11 | 0 | 1,816 | 1,816 | 6 | 0 | 2,013 | 2,013 | 6 | 0 | 2,423 | 2,423 | 8 | 0 | 2,828 | 2,828 |
| PE Lecture | | | | 0 | 1 | 40 | 0 | 40 | 1 | 46 | 0 | 46 | 1 | 53 | 0 | 53 | 1 | 62 | 0 | 62 |
| PE Theory | | | | 0 | 1 | 10 | 208 | 218 | 1 | 12 | 241 | 252 | 1 | 14 | 278 | 292 | 1 | 16 | 324 | 340 |
| ***total*** | ***723*** | ***0*** | ***16,258*** | ***16,981*** | ***35*** | ***572*** | ***4,175*** | ***4,748*** | ***0*** | ***26*** | ***662*** | ***4,740*** | ***5,402*** | ***29*** | ***764*** | ***5,570*** | ***6,334*** | ***35*** | ***892*** | ***6,501*** | ***7,393*** |

Source: Barstow College Space Inventory; analysis by Cambridge West Partnership, LLC

| | SPACE INVENTORY | | | | CURRENT | | | | PROJECTED | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2015 | | | | 2015 | | | | 2020 | | | | 2025 | | | | 2030 | | | |
| | Lec | Lab | Other | Total | # of | Lec | Lab | Total | # of | Lec | Lab | Total | # of | Lec | Lab | Total | # of | Lec | Lab | Total |
| **Department** | ASF | ASF | ASF | ASF | SEC | ASF | ASF | ASF | SEC | ASF | ASF | ASF | SEC | ASF | ASF | ASF | SEC | ASF | ASF | ASF |
| **Social Science** | | | | | | | | | | | | | | | | | | | | |
| Economics | | | | 0 | 2 | 82 | 0 | 82 | 1 | 94 | 0 | 94 | 2 | 109 | 0 | 109 | 2 | 127 | 0 | 127 |
| Ethnic Studies | | | | | 1 | 45 | 0 | 45 | 1 | 53 | 0 | 53 | 1 | 61 | 0 | 61 | 1 | 71 | 0 | 71 |
| Political Science | | | | 0 | 4 | 198 | 0 | 198 | 4 | 228 | 0 | 228 | 4 | 264 | 0 | 264 | 5 | 308 | 0 | 308 |
| Psychology | | | | 0 | 10 | 314 | 0 | 314 | 7 | 363 | 0 | 363 | 8 | 418 | 0 | 418 | 10 | 488 | 0 | 488 |
| Sociology | | | | 0 | 5 | 192 | 0 | 192 | 3 | 222 | 0 | 222 | 3 | 256 | 0 | 256 | 4 | 299 | 0 | 299 |
| Lecture (3) | 2,674 | | | 2,674 | | | | | | | | | | | | | | | | |
| ***total*** | ***2,674*** | ***0*** | ***0*** | **3,535** | ***22*** | ***830*** | ***0*** | ***830*** | ***16*** | ***960*** | ***0*** | ***960*** | ***18*** | ***1,108*** | ***0*** | ***1,108*** | ***22*** | ***1,293*** | ***0*** | ***1,293*** |
| ***Grand Total*** | **13,572** | **21,466** | **19,159** | **55,058** | **231** | **5,686** | **16,421** | **22,107** | **185** | **6,575** | **18,830** | **25,405** | **220** | **7,588** | **21,829** | **29,416** | **260** | **8,858** | **25,478** | **34,336** |

| | SPACE INVENTORY | | | | CURRENT | | | | PROJECTED | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2015 | | | | 2015 | | | | 2020 | | | | 2025 | | | | 2030 | | | |
| | Lec | Lab | Other | Total | # of | Lec | Lab | Total | # of | Lec | Lab | Total | # of | Lec | Lab | Total | # of | Lec | Lab | Total |
| **Department** | ASF | ASF | ASF | ASF | SEC | ASF | ASF | ASF | SEC | ASF | ASF | ASF | SEC | ASF | ASF | ASF | SEC | ASF | ASF | ASF |
| **Fort Irwin** | | | | | | | | | | | | | | | | | | | | |
| Communication | | | | | 4 | 645 | 0 | 645 | 3 | 712 | 0 | 712 | 4 | 861 | 0 | 861 | 4 | 1,005 | 0 | 1,005 |
| Child Development | | | | | 2 | 9 | 0 | 9 | 1 | 9 | 0 | 9 | 1 | 11 | 0 | 11 | 1 | 13 | 0 | 13 |
| CBIS | | | | | 1 | 16 | 57 | 73 | 1 | 18 | 63 | 81 | 1 | 21 | 75 | 96 | 1 | 25 | 89 | 114 |
| Management | | | | | 1 | 19 | 0 | 19 | 1 | 21 | 0 | 21 | 1 | 26 | 0 | 26 | 1 | 30 | 0 | 30 |
| English | | | | | 7 | 89 | 0 | 89 | 2 | 98 | 0 | 98 | 2 | 119 | 0 | 119 | 3 | 139 | 0 | 139 |
| History | | | | | 2 | 37 | 0 | 37 | 1 | 41 | 0 | 41 | 1 | 50 | 0 | 50 | 1 | 58 | 0 | 58 |
| Humanities | | | | | 1 | | 0 | 0 | 1 | 53 | 0 | 53 | 1 | 64 | 0 | 64 | 1 | 75 | 0 | 75 |
| Speech | | | | | 1 | 40 | 0 | 40 | 1 | 38 | 0 | 38 | 1 | 49 | 0 | 49 | 1 | 57 | 0 | 57 |
| Biology | | | | | 2 | 121 | 0 | 121 | 1 | 45 | 0 | 45 | 1 | 54 | 0 | 54 | 1 | 63 | 0 | 63 |
| Mathematics | | | | | 5 | 10 | 0 | 10 | 2 | 134 | 0 | 134 | 2 | 161 | 0 | 161 | 3 | 188 | 0 | 188 |
| Political Science | | | | | 1 | 19 | 0 | 19 | 1 | 11 | 0 | 11 | 1 | 14 | 0 | 14 | 1 | 16 | 0 | 16 |
| Psychology | | | | | 3 | 16 | 0 | 16 | 1 | 21 | 0 | 21 | 1 | 26 | 0 | 26 | 1 | 30 | 0 | 30 |
| Sociology | | | | | 1 | 17 | 0 | 17 | 1 | 17 | 0 | 17 | 1 | 21 | 0 | 21 | 1 | 24 | 0 | 24 |
| ***total*** | ***0*** | ***0*** | ***0*** | | ***0*** | ***31*** | ***1,039*** | ***57*** | ***1,096*** | ***17*** | ***1,219*** | ***63*** | ***1,282*** | ***0*** | ***18*** | ***1,477*** | ***75*** | ***1,552*** | ***0*** | ***20*** | ***1,723*** | ***89*** | ***1,812*** |

Source: Barstow College Space Inventory; analysis by Cambridge West Partnership, LLC

Barstow Community College

# COMPREHENSIVE MASTER PLAN

Jantuary 2030

CW/P + HPI architecture