integration
powerful
emerging
progressive
design

Bakersfield College
Technology Plan 2014
# Table of Contents

**Overview**
- Mission Statement ........................................ 4
- General .................................................. 4
- Staffing .................................................. 4

**Review of 2011-14 Technology Plan Goals** ........................................ 8

**Strategic Objectives** ........................................ 11
- Support Student Success with Technology .................. 11
- Support Instruction and Learning through Technology .... 11
- Develop Sustainable Technology Funding Strategies .... 11
- Support Green Initiatives ................................... 11
- Enhance End-User Education on Security .................. 11
- Improve Communication to Campus Community ........... 11
- Employee Professional Development ......................... 11
- Improved Support for Online Education ..................... 11

**Strategic Goals & Initiatives** ........................................ 12
- Classroom Technology Improvements and Standardization 12
- Improve Wireless Access and Infrastructure ............... 12
- ISIT Technology Requests .................................. 12
- Video Production and Streaming Framework ............... 12
- Event Coordination ......................................... 12
- Support the Academic Technology Roadmap ............... 12
- Capital Construction Projects Support ....................... 12
- Professional Development ................................... 13
  - General Overview ........................................ 13
  - Faculty Professional Development ......................... 14
  - Classified Support Staff Professional Development .... 15
  - Administrator Professional Development ................. 15
- TEDx Partnership ............................................ 15
- Predictive Analytics ........................................ 16
  - Near Future Technology Vision with SARS Alert ........ 16
  - Future Technology Vision with Predictive Analytics .... 16
- Online Learning Support .................................... 17
- Accessibility ............................................... 18
- Total Cost of Ownership ..................................... 18

**Governance and Committees** ........................................ 19
- Technology Committee (ISIT) ................................ 19
- District IT Managers Committee ............................. 19
- Staff Development Coordinating Council .................... 20
- Facilities Committee ......................................... 20
Overview

Mission Statement
Technology Support Services develops, installs, maintains, and supports the technological environment at Bakersfield College. We enable students, faculty, and staff to carry out the mission of the college with greater efficiency and flexibility. We are committed to providing exceptional support to facilitate teaching, learning, training, and campus goals throughout our community.

General
The focus for Bakersfield College in the next three years will be student success. With the recent changes and mandates every employee is looking for opportunities to contribute to student success. Technology, of course, plays a large part in being the underlying framework for many of the student success initiatives.

One of the Institutional goals in the area of infrastructure is to maintain, expand, and take full advantage of technology and equipment in the pursuit of a richer learning experience for the students. The Information Services and Instructional Technology Committee (ISIT), a participatory governance committee, facilitates collaboration from a cross representation of campus constituent groups on technology-related issues in order to identify needs and requirements. The ISIT committee communicates its recommendations to the campus president and/or IT Director and takes issues raised by that committee back to its constituents. The recommendations of this committee are brought to the attention of the appropriate college-governing committees for action.

Underlying all institutional goals is the need to maintain a robust information technology infrastructure and to continue to provide reliable, accessible, high-quality information technology services upon which academic programs, student services, and operations can depend. The Technology Support Services departmental operational plans and goals are updated annually to address changing requirements for providing these services. These plans and goals are guided by the operational plans of other departments, both academic and administrative, and are driven by the Educational Master Plan.

Technology on the Bakersfield College campus and surrounding sites is supported by Technology Support Services. In the last year, Information Services and Media Services merged to form one support unit. Information Services primarily supports the data network as well as all printers, computers, servers and switches, and other related hardware. Media Services supports all multimedia equipment used in classrooms as well as distance education, broadcast cable television, online classes, and streaming technology. The two areas have worked together for a long time under current leadership and have now merged as Technology Support Services.

Staffing
The staff of the Technology Support Services Department is made up of six Systems Support Specialist I, one Systems Support Specialist II, one Information Services Coordinator, one Media Services Coordinator, and one Media Specialist. There is also an Educational Media Specialist supporting online instruction. The staff provides support for the Bakersfield College, Delano, and
Weill campuses. With over 2500 total computers and a plethora of other network attached devices, this department works diligently to keep things running. The Media Services Coordinator and Media Specialist facilitate the implementation of all media related-equipment requests including setup, video production, Instructional Television broadcasts, interactive instructional and administrative videoconferencing, and video streaming. Staff covers all non-computer related multimedia equipment at the main campus, the Weill Institute, and the Delano Center. Staff also supports the equipment provided for classes at our remote high school locations such as Arvin High School although we do not have an onsite person. The department is constantly looking for opportunities to improve efficiency, reduce waste, and improve processes to make the technology experience better for the Bakersfield College students, staff, and faculty.

Bakersfield College has over 1,000 computers in specialized computer labs supporting student learning outcomes in the areas of math, tutoring services, computer graphics, multimedia, drafting, business, and health sciences. The college has one large, open computer lab with 160 computers located in the library and another 90 computers located on the 2nd floor of the Student Services building used for a large Academic Development and Writing lab.

Bakersfield College recognizes the importance of keeping its computer labs equipped with as up-to-date equipment and software as is fiscally possible. A three- to five-year replacement cycle has been unofficially agreed upon and has been followed as closely as budget will allow. Office computers,
with the exception of some used by high-end users, have historically gone longer than three years before replacement. Each department is responsible for reviewing its own needs for upgrading and then utilizing a formal procedure for requesting replacement equipment. The Technology Support Services department, in conjunction with the ISIT Committee, has established and publishes a minimum configuration for all desktops.

Technology Support Services actively participates in district-wide committees and decision relating to technology. The Director, Information Technology, is a member of the IT Managers committee and plays two roles on the committee. The first role is as an advocate for the needs of Bakersfield College, communicating needs and priorities. The second role is to help solve district-wide technology problems and to set standards and provide recommendations for how technology is used within the Kern Community College District. The Information Services Coordinator participates in the ISIT committee and the Staff Development Coordinating Council. The Media Services Coordinator participates in the facilities planning committee, ISIT Committee, Program Review Committee, and SSPP committee. Also, information is shared within the IT Managers committee relating to district office equipment and software upgrades. Those updates are then communicated to the campus via the ISIT committee or, in some cases, campus-wide communications. More information about IT Staff involvement on campus committees can be found in the Governance and Committees section of this document.

We are consistently looking to best utilize resources and create various replacement policies, which have been suggested to help support technology in the most effective way. Bakersfield College has media equipment stationed in most classrooms on campus and at remote sites and also offers equipment for faculty and staff checkout. When equipment is stolen, we replace with repurposed equipment. We do not replace equipment such as projectors with brand new units unless funding becomes available. A project is created for the ISIT unit plan and it’s added to our request for replacement equipment.

Bakersfield College is a Regional Production Center for the California Community College Satellite Network now known as 3C Media Solutions. Technology Support Services maintains and operates the Bakersfield College video production studio. The facility is available to all faculty and staff for the production of course materials and campus productions. We recently acquired Wirecast software that allows us to screen capture during a video production and immediately upload the production once completed with titles and effects. This software also allows us to create a virtual studio environment for our video projects. We are currently looking to develop our streaming media solution involving video production, streaming live events and conferences, closed-captioning for those events, and digital archiving.

Bakersfield College is part of the Kern Educational Telecommunications Consortium (KETC), allowing the shared resource use of a cable channel on both cable systems in the metropolitan Bakersfield viewing area. Kern Educational Telecommunications Network (KETN) is comprised of consortium members at the K-12, community college and university levels. We maintain our presence on KETN by advertising with our BC Billboard that airs most weekdays.

We support district-wide videoconferencing efforts, both instructional and administrative. We serve
as technical support for the four distance education classrooms (two in Bakersfield and two in Delano) and develop and implement policies and procedures for instructional and administrative videoconferences.

All multimedia equipment used on campus such as projectors and other forms of technology are selected by our staff based on the flexibility and reliability of the equipment and the needs of the requesting campus departments. We have recently added video streaming of live events and conferences to our service offerings and are slowly growing our capabilities.
# Review of 2011-14 Technology Plan Goals

<table>
<thead>
<tr>
<th>Goal</th>
<th>Objectives</th>
<th>Strategy</th>
<th>Timeline</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bakersfield College will adequately meet the technology needs of our administration, classified, faculty, and students.</td>
<td>Improve access to our many technology systems.</td>
<td>Consolidate our 4 district Active Directory domains to one Active Directory domain.</td>
<td>1-2 years</td>
<td>Completed</td>
</tr>
<tr>
<td></td>
<td>Improve our ability to manage processes and approvals.</td>
<td>Collaborate districtwide with the implementation of Workflow.</td>
<td>1 year</td>
<td>It was determined the product would not be used</td>
</tr>
<tr>
<td></td>
<td>Provide a system with better clarification for degree requirements.</td>
<td>Collaborate districtwide with the implementation of Degree Works.</td>
<td>1 year</td>
<td>Completed</td>
</tr>
<tr>
<td></td>
<td>Improve our ability to track facilities issues and scheduled maintenance.</td>
<td>Collaborate districtwide with the implementation of School Dude.</td>
<td>1 year</td>
<td>Completed</td>
</tr>
<tr>
<td></td>
<td>Efficiently provide access to internal web resources when accessing from offsite.</td>
<td>Collaborate districtwide to implement the Unified Application Gateway for publishing internal web sites and applications for external use.</td>
<td>1-3 years</td>
<td>Status unknown</td>
</tr>
<tr>
<td></td>
<td>Provide a system for maintaining contracts across the district.</td>
<td>Collaborate districtwide to implement a Contract Management System.</td>
<td>1-2 years</td>
<td>In Progress</td>
</tr>
<tr>
<td></td>
<td>Provide a system for managing facilities projects across the district.</td>
<td>Collaborate districtwide to implement the Primavera facilities management software.</td>
<td>1 year</td>
<td>Completed</td>
</tr>
<tr>
<td></td>
<td>Provide a district wide purchasing management system.</td>
<td>Collaborate districtwide to implement the Sciquest Purchasing System.</td>
<td>1-2 years</td>
<td>Completed</td>
</tr>
<tr>
<td></td>
<td>Bakersfield College will adequately meet the need for video and classroom materials production.</td>
<td>Improve ability for faculty to present diverse materials to their classes.</td>
<td>Utilize cutting edge software that will allow us to instantly make a DVD or stream live to the web with graphics.</td>
<td>1 year</td>
</tr>
<tr>
<td>Goal</td>
<td>Objectives</td>
<td>Strategy</td>
<td>Timeline</td>
<td>Status</td>
</tr>
<tr>
<td>------</td>
<td>------------</td>
<td>----------</td>
<td>----------</td>
<td>--------</td>
</tr>
<tr>
<td>Bakersfield College will provide reliable infrastructure by maintaining, updating and planning for future growth.</td>
<td>Upgrade outdated infrastructure.</td>
<td>Upgrade the current Exchange 2003 server to Exchange 2010.</td>
<td>1-2 years</td>
<td>Completed</td>
</tr>
<tr>
<td></td>
<td>Upgrade outdated infrastructure.</td>
<td>Media Services will continue to engage with the District Office to update videconference infrastructure both administrative and instructional classrooms. Collaborate districtwide to implement new policies and procedures related to videconferencing.</td>
<td>1-2 years</td>
<td>Ongoing</td>
</tr>
<tr>
<td></td>
<td>Continue to upgrade switches and improve backbone bandwidth.</td>
<td>Ongoing</td>
<td>Ongoing</td>
<td>Ongoing</td>
</tr>
<tr>
<td></td>
<td>Continue to upgrade labs on campus to maintain a 3-5 year rotation of new computers.</td>
<td>Ongoing</td>
<td>Ongoing</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Replace older technology with newer technology.</td>
<td>Continue to update outdated equipment to meet needs.</td>
<td>Ongoing</td>
<td>Ongoing</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Improve planning and maintenance of equipment.</td>
<td>Update inventory system to a more robust platform with reporting.</td>
<td>1-2 years</td>
<td>Ongoing</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Provide documentation on strategic technology initiatives.</td>
<td>Update this document each year.</td>
<td>Ongoing</td>
<td>Ongoing</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Develop web framework and design for college websites.</td>
<td>Collaborate districtwide in the implementation of a content management system.</td>
<td>1-2 years</td>
<td>Completed</td>
<td></td>
</tr>
<tr>
<td>Standardize on a one card payment system for use across the district.</td>
<td>Upgrade the current CBORD system and move to the district office as part of the pay-for-print upgrade.</td>
<td>1 year</td>
<td>Completed</td>
<td></td>
</tr>
<tr>
<td>Bakersfield College will look for alternative funding sources to supplement budget</td>
<td>Look for alternative methods of funding equipment through grants and other funding possibilities</td>
<td>Seek grant assistance, look at campus available funding through such programs as VTEA, etc.</td>
<td>Ongoing</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Task</td>
<td>Description</td>
<td>Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>-----------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bakersfield College will maintain presence on KETN (Kern Educational Telecommunications Network)</td>
<td>Look for alternative local programming to air on our channel. Continue to maintain BC Billboard and add new events as they become known.</td>
<td>Ongoing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bakersfield College will provide support and training for administration, classified, faculty and students.</td>
<td>Seek assistance from PIO and other departments to advertise events.</td>
<td>Ongoing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improve communication between campus and district technology staff.</td>
<td>Develop a specific procedure for communicating network problems, system outages and other key events.</td>
<td>1 year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Media Services serves as the liaison with faculty and staff for Edustream and any potential lecture capture infrastructure or solution.</td>
<td>Continue to research the impact of lecture capture and report back to ISIT and other campus groups. Maintain campus accounts and manage presence with Edustream.</td>
<td>1-2 years and Ongoing for Edustream</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Media Services will foster collaboration with Information Services.</td>
<td>Improve communication between the two departments.</td>
<td>Ongoing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Encourage and support innovation.</td>
<td>Develop a specific procedure or policy for introducing new technology into the campus environment.</td>
<td>1 year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consolidate help desk ticket systems across the district.</td>
<td>Collaborate district wide in moving all ticket systems to the Parature ticketing system.</td>
<td>1 year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provide support for all applications via the external help desk.</td>
<td>Collaborate district wide on the Phase II implementation of the external help desk.</td>
<td>2-3 years</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Strategic Objectives

The purpose of the Strategic Objectives section of this document is to give a brief overview of the technology focus in each of the listed areas. In the next section are specific strategic initiatives that will fall under one or more of the strategic objectives listed in this section.

Support Student Success with Technology
Use technology to provide and enhance student support services enabling greater student access and success. Such support services could include tools like online financial aid resources, scholarship application resources, online orientation, online tutoring, self-service degree audit, 24/7 help desk, and greater access to digital learning materials.

Support Instruction and Learning through Technology
Provide leadership and support for effective, high-quality instruction, and learning outcomes through the appropriate use of technology. Continue to enhance the focus on academic technologies.

Develop Sustainable Technology Funding Strategies
Develop funding strategies in order to sustain and enhance mission-critical technologies in times of economic scarcity. Continue to evaluate and develop processes for fair and timely technology allocation.

Support Green Initiatives
Implement ‘green’ technologies to reduce overall energy consumption and extend hardware lifecycles. Identify opportunities for minimizing the use of printed material and moving to electronic mediums.

Enhance End-User Education on Security
Proactively provide end-user education to reduce the risk of social engineering and to increase general technology security competence.

Improve Communication to Campus Community
Provide timely and relevant communication to all campus constituents related to planning, improving, changing, upgrading or removing campus technology.

Employee Professional Development
Provide technology-related professional development opportunities to all employees to improve technology literacy.

Improved Support for Online Education
Provide resources and technology tools to better support online classes.
Strategic Goals & Initiatives

Classroom Technology Improvements and Standardization
Maintain and update existing technology to meet the development of innovative instructional practices. Develop standards that are broad enough to foster innovation but narrow enough to be able to support.

Develop new methods and procedures for improving inventory and asset tracking,

Work with our District Facilities in the coordination and facilitation of districtwide construction standards for technology and infrastructure.

Improve Wireless Access and Infrastructure
Continue to expand and improve the wireless access on the Bakersfield College campus with a goal of complete wireless coverage by 2017.

ISIT Technology Requests
Review and maintain current infrastructure and classroom technology by supporting requests made to the Instructional Technology Committee. Prioritize and determine best use of department and college funding to update and maintain technology.

Video Production and Streaming Framework
Develop a video streaming framework that will encompass live event capture, editing, and digital archiving of materials. This infrastructure will be accessible to the campus community for on-demand training and materials. Review of budget, equipment, and facility needs as required.

Event Coordination
Develop process for seamless event coordination from initial technology request to execution of event at a designated time. Work in tandem with other campus resources to provide technology and coordinate with outside vendors to facilitate equipment if not available in-house.

Support the Academic Technology Roadmap
Develop process and plan work on infrastructure changes needed to develop the Student Success Support Plan (SSSP). Implement a number of new technologies including SARS Alert and Accuplacer.

Capital Construction Projects Support
The IT Department provides multiple services related to the construction of new facilities. Services are coordinated with the various departments under the direction of the Maintenance and Operations department and include the following:

• Spend time and effort with the architects and their subcontractors on the building specifications for technology infrastructure
• Interview stakeholders to determine long-term technology needs
• Provide input on bid specifications
• Review bid submissions
• Meeting with the general contractor and subcontractor to review and discuss details of the infrastructure
• Review work completed in conjunction with contract administration
• Work with Purchasing and the colleges on equipment budgets and procurement
• Install equipment in facility (network, computers, phones, audio/visual)
• Assist with moves into the new facilities

There are typically multiple construction projects of various sizes in progress at any given time. IT will continue to provide services for all projects through completion and will maintain the infrastructure after occupancy.

Benefits:
• All work conforms to District IT and campus infrastructure standards
• Sufficient infrastructure ensured for initial needs and potential growth
• All new technology equipment and software is deployed to campus and District standards

Professional Development
General overview
In 2013-14, Professional Development was added as one of six strategic goals for Bakersfield College. The professional development needs for each of the three groups on campus (classified, faculty, and administration) are different, but there are areas of overlap. Technology touches all groups in many different ways. Historically, technology can change rapidly which requires an aggressive approach to keeping employee technology skills updated and relevant. The Director of Information Services and the Information Services Coordinator along with one faculty member co-chair the Staff Development Committee. The committee focuses on all aspects of professional development, but having representation from within Technology Support Services ensures that technology training will be a key component of staff development. The next three sections will explore more in-depth some of the strategic initiatives for each of the three employee groups.
Faculty professional development

Historically, Bakersfield College has been on the forefront of academic technology, leveraging the interest and willingness of faculty to try out new and even cutting-edge technologies in the physical and online classrooms. Bakersfield College is a leader in providing online education; we have consistently been on the cutting edge of providing distance education via closed-circuit, interactive television, and we have been a part of other initiatives including lecture-capture and flipping the classroom. Our faculty have experimented with tablet computing as well as more exotic technologies such as Google Glass for annotated video capture. Social networks, blogs, and a multitude of other tools have become everyday parts of our curricular landscape.

After a period of time during which support for advancing technology on campus was limited by statewide budget constraints, Bakersfield College is experiencing a surge of renewed energy toward advancing our instructional technology and increasing our participation in statewide technology initiatives. Bakersfield College has a wealth of talent and interest in technology among our faculty and several individuals who are ready to lead the charge.

The 2014 NMC Horizon Report details several key trends in technology use that will affect higher education in the coming years. Bakersfield College is in a strong position to participate in the larger educational community discussion around some of these opportunities because of our wealth of personal and technological resources. The NMC report discusses two trends that are driving immediate change in higher education: the “Growing Ubiquity of Social Media” and The “Integration” of different modalities of learning. These are areas with which many Bakersfield College faculty have a level of comfort. Many of our faculty have taught classes in multiple formats, and many faculty are fluent in the use of social media. While these numbers might not reach the critical mass that would equal institutional-level participation in these trends, they are large enough that when coupled with a strategic faculty-development program they will be able to mobilize significant numbers of faculty.

The NMC report also mentions “Data-Driven Learning” and a shift in how students are viewed from “Consumers” to “Creators” in the three to five year planning zone for higher education. These are two specific concepts that Bakersfield College has already begun discussing in the last year, and many faculty have begun to embrace the key ideas of each.

Moving forward, Bakersfield College will continue to act progressively when it comes to technology in education. Our immediate plans focus on a strong push for faculty development that will not only develop technological fluency but also pedagogical strength enhanced by the use of technology in our classes. Our technology purchases will not be driven by what is available in the market but by what is demanded to meet the growing needs of strong, data-driven and effective pedagogy, both online and face-to-face. Our goal is that innovative teaching and dynamic, technology-enhanced learning will become the norm for every class, in every department, campuswide.

The Staff Development Committee continues to provide a wide assortment of training opportunities on academic technology. These range from sessions on very specific technologies to broader brown bag sessions for the purpose of sharing ideas and pedagogical strategies for using various technologies in the classroom. The availability of various grant monies like STEM, BSI, and
C6 have created opportunities for enhancing our classroom technology. For example, monies have been used to create a Design Center that allows students to design and then 3D print their designs. Hands-on maker technologies will continue to be advanced at Bakersfield College along with the necessary faculty development to use these technologies.

**Classified support staff professional development**

The administrative technology systems used daily require training. For example we have systems to manage classes, grades, payroll, student records, enrollment, work orders for technology, work orders for maintenance, the content management system for the website, and the phone system. The challenge with training our classified support staff is finding times for training that do not impact the support they provide. The college has moved to closing the campus before each semester for one day so that all classified staff (along with faculty and administrators) can take advantage of professional development training.

There has also been effort to encourage managers not only to allow, but to encourage their staff to participate in professional development opportunities. Sometimes with creative coverage, managers can create more opportunities for staff development. Also, many of our presenters and trainers are willing to train whole departments on a specific technology with some planning and coordination.

**Administrator professional development**

Administrators also benefit from much of the same training offered to classified staff. The administrative team also meets periodically for retreats, and professional development plays a key role in those retreats. Although not specific to technology, technology literacy and training does often result from the administrative retreats.

Although administrators are also encouraged to attend Staff Development Committee training, there are also opportunities for administrators to participate in conferences. These are typically conferences relating to strategic initiatives already going on campuswide. For example, we’ve had administrators attend conferences on accessibility, diversity, emerging technologies, Clery Act reporting, and scholarships. Again, these conferences may not all be specific to technology but all involve varying levels of technology literacy and familiarity with specific technology tools.

Finally, Bakersfield College hosts 2-3 conferences a year. Recently there were two conferences related to the use of data in the organization. The purpose of the conferences was to increase data literacy and also to make faculty, staff, and administrators aware of the various technology tools available for mining data. Administrators are learning better how to use these tools to find the data so they can make better data-informed decisions. The college will continue to focus on providing professional development opportunities for improving technology literacy across all groups.

**TEDx Partnership**

As part of our Staff Development strategy Bakersfield College would also like to create opportunities for professional development that involve the community. Bakersfield College has an interest in becoming a TEDx partner (http://www.ted.com/about/programs-initiatives/tedx-program) realizing that a partnership like this would create relationships with Bakersfield and Kern County. TED talks are known for sparking innovative and creative conversations within
communities. Building this relationship with our community has many positive outcomes because it promotes sharing of ideas and allows for creative and engaging discussions.

**Predictive Analytics**

*Near future technology vision with SARS Alert*

In the near future (next semester) we will pilot a process for about 500 students in about 20 classrooms which will notify faculty, counselors, and student service areas, via SARS Alert about student needs. Students will also be messaged regarding specifically identified individual needs through the SARS Early Alert System. For example, if a student fails the first quiz or exam, the faculty member will send an early alert which will indicate to all relevant parties any necessary action such as tutoring or supplemental education. Or if a student indicates health, financial or family issues, faculty may notify the appropriate support and resource centers for direct student contact. The student will receive a message about setting up an appointment, and after the appointment is set up, the student will receive texts prior to the meeting to remind them of the meeting time and location. This will require updating of some faculty computers and training on SARS.

*Future technology vision with predictive analytics*

This project is directed at creating messaging for student success based upon predictive analytics or the analysis of historical student data in order to determine patterns that provide a measure of predictability. The concept applies data mining to create insights and suggestions that save students time, money, and energy ultimately resulting in greater efficiency and success for the student and the institution.

Amazon and Net-flicks, are just a few well-known companies among many others, that employ advanced data analysis, computer-based data mining, and risk analysis to create predictive messaging and marketing. While those companies suggest “others who purchased this same item also bought XXX” or “another book you may enjoy is XXX,” we will suggest information that can guide a student through what appears to be an indiscernible maize for many First-Generation students. The goal of this project is to use substantial analysis of student behaviors, course-taking patterns and success in order to determine what types of messages to send to the student with a goal of increasing the likelihood of success.

Currently, matriculation steps include some form of predictive analytics with regards to multiple measures that augment placement test information to determine what math and English courses are most likely to result in success. This project proposes going beyond those matriculation steps and intends to study and apply predictive analytics in order to provide timely messaging to students in a deliberate and intentional manner that helps them to keep on track with their declared majors, find open courses, remember appointments, and address specific interventions that contribute to success.

Currently data analysis of Bakersfield College’s historical student data is being conducted by researcher Dr. Peter Riley Bahr, University of Michigan. The data will be examined to determine patterns contributing to success as well as patterns that appear to contribute to students’ failure. The long term goal is to use “machine learning” in order to inform student services and to create early warning messaging within the institution for any area that could provide support, guidance, or other necessary interventions to help sustain and guide the students’ efforts. Interventions related to
these key points will be identified and tracked in order to create a college guidance system accessible perhaps through an APPLE or DROID app. The guidance system will message students via email and text in order to provide real-time, relevant guidance on a regular basis.

The information gleaned from these data will be used for interventions with students; examples of these interventions include basic things:

If students indicate on the application that they are veterans, they will be sent messages about the veterans’ center and given information about services.
If students indicate that they have children, they will be sent messages about the child care center on campus.
If students have applied for BOG (Board of Governors) waivers, they will be sent messages concerning FAFSA due dates and other relevant and timely information. The goal is continuous and relevant messaging informed through data mining and organized through machine learning.

In addition, BC will use this information to further fine-tune and inform our pathways and interventions by performing the following activities:

• Analyzing and using high school data to guide students
• Tracking and improving our Multiple Measures Placement
• Analyzing the efficacy of our placement test, including practice and diagnostics to improve more accurate placement
• Tracking and measuring student completion of remediation courses and the pathway to college level courses
• Tracking and measuring BC student completion of college outcomes
• Incorporating California Statewide career pathways – using messaging about http://www.statewidepathways.org/ and other career pathway guidance

This work will be informed through continuum data which is currently housed in a central CalPASS website. Cal-PASS Plus’ mission is to provide actionable data to help improve student success along the education-to-workforce pipeline. Collaboration using this data will inform better instruction, help close achievement gaps, identify scalable best practices, and improve transitions. Cal-PASS Plus offers longitudinal data charts, detailed analysis of pre-K through 16 transitions and workplace outcomes, information and artifacts on success factors, and comparisons among like universities, colleges, K-12 schools.

**Online Learning Support**
The Bakersfield College online learning support has gone through several upheavals over the last two decades. Thankfully, technology support and support services are on the upswing, and with our new leadership there is a renewed focus on providing quality online learning. To provide quality online learning we are improving our efforts to offer online student support services. There is a renewed focus on improving our online tutoring, counseling, and orientation. All of these will have a technology component to make them happen. The new SARS Alert early alert system will also be beneficial to our online students.

Separate from the support services there are also new and constantly evolving academic technologies that are ideal for online learning. The bulk of the efforts to improve this are encompassed within
the faculty professional development initiatives. Several academic technologies can be used in face-to-face classes or in an online environment. Video lectures have gained in popularity and also screen capture technology, which allows instructors to provide a video recording of their desktops while narrating the experience for the students.

**Accessibility**

Bakersfield College always tries to keep accessibility in mind when adding or using technology across campus. Depending on the computer lab, each lab has one or several accessible workstations. These stations provide software and hardware to assist our hearing impaired and blind students. We also have accessible workstations in our open computer labs and our assessment center. Our Alternative Media department has several tools for converting books to braille, various audio options, screen readers, and other key technologies that make learning available to all of our students.

The college also focuses on finding software that is accessible and 508 and other regulations compliant. We strive to keep our campus website and resources compliant and accessible. Although all of our technology may not be 100% accessible, we make every effort to provide accommodations when the software we use is not accessible. The biggest challenge to our accessibility efforts is raising the accessibility literacy of our support staff, faculty and administrators, which continues to be addressed by our professional development efforts.

**Total Cost of Ownership**

Bakersfield College is moving toward integrating the business practice commonly referred to as the Total Cost of Ownership, which provides an estimate of the total cost to deploy and maintain a given technology over its lifetime. This is considered an essential aspect of financial planning because technology deployments typically incur, over their lifetime, a variety of direct or indirect operational costs that are less apparent than the initial capital expense of deployment.

One specific aspect of total cost of ownership planning is the cost to replace the technology as it ages. This is particularly relevant to Bakersfield College because while many technology deployments at the College are initiated by special one-time funds (such as grants, new building funds, special programs, etc.), the replacement costs are typically borne by the District. As one-time funded projects age, the District must allocate funds to renovate obsolete systems. By budgeting for the inevitable replacement costs, the college will be better able to plan instructional and administrative programs confident that the underlying technology will be maintained at an appropriate standard.
Governance and Committees

Committee participation is a key part of involvement on the campus. The Director of Information Technology and various staff members are involved in both non-technology and technology related committees to ensure the technology needs of the campus are being met. IT staff participate in non-technology committees such as Program Review Committee, Accreditation and Institutional Quality Committee, Student Success Stewardship Team, Student Success and Support Plan, President’s Cabinet, Administrative Council, College Council and serve as committee co-chairs. Those committees with direct linkage to technology are detailed below.

**Technology Committee (ISIT)**
The Information Services and Instructional Technology Committee (ISIT) is a participatory governance committee. The committee is co-chaired by a faculty representative and an administrative representative. The current administrative co-chair is the Director, Information Technology. The membership also consists of 7 administrative representatives, 23 Academic Senate representatives, 3 classified representatives and 2 Student Government representatives. Currently, the BC IT Director, IT Coordinator and Media Services Coordinator participate on the ISIT Committee.

The charge of this committee is as follows:
- Recommend campus-wide technology policy and procedures.
- Determine and monitor campus software and hardware standards.
- Allocate technology resources.
- Review all significant technology projects.
- Determine and monitor procedures for obtaining technology services.
- Establish a system of communication between users, district and campus technology resources, and the Academic Senate.
- Assess how well the implementation of new technology resources support institutional goals and improve student success.
- Proposed: Assure that technology support meets the needs of learning, teaching, college-wide communications, research, and operational systems.
- Proposed: Assure that technology planning is integrated with institutional planning.

The scope of this committee is to
- Make policy development and implementation recommendations regarding campus-wide technology.
- More information on this committee can be found at: [http://committees.kccd.edu/bc/committee/isit](http://committees.kccd.edu/bc/committee/isit)

**District IT Managers Committee**
There are seven members of the District IT Managers Committee. The members include the three IT Directors from each campus, two District Office Assistant Directors of Information Technology, the Director of Web Development and the Vice Chancellor of Operations. The Committee typically
meets once a month throughout the year and discusses operational issues related to district-wide initiatives.

**Staff Development Coordinating Council**

The Staff Development Coordinating Council (SDCC) is a participatory governance committee. The committee is co-chaired by a Classified representative, a Faculty representative and an Administrative representative. The current Administrative co-chair is the Director of Information Technology. Additionally, membership is made up of 5 administrative representatives, 5 Academic Senate representatives, 5 classified representative and 2 CSEA representatives.

The charge of the committee is as follows:

- To provide and support activities and opportunities which will enhance job performance, personal growth, and social interaction among all Bakersfield College employees, thereby developing a sense of campus community.

The scope of the committee is to

- Make recommendations for staff development activities to the College President and oversee the expenditures created to fund such activities.

More information on this committee can be found at: [http://committees.kccd.edu/bc/committee/scdc](http://committees.kccd.edu/bc/committee/scdc)

**Facilities Committee**

The Facilities committee is a participatory governance committee. The committee membership consists of 3 administrative representatives, 3 faculty representatives, 3 classified representatives and 1 Student Government representative.

The charge of the committee is as follows:

- To review and/or provide recommendations for new and improved facilities and infrastructure improvements to enhance current and future learning environments for students, community, faculty, and staff to the College Council.

The scope of the committee is to

- Provide the President with a venue for reviewing ongoing and proposed projects that impact the physical campus plants and facilities.

More information about this committee can be found at: [http://committees.kccd.edu/bc/committee/facilities](http://committees.kccd.edu/bc/committee/facilities)