COLLEGE OF THE CANYONS

Technology Master Plan / 2017-2022

2017-2022
Technology Master Plan

College of the Canyons
Santa Clarita Community College District
26455 Rockwell Canyon Road
Santa Clarita, CA 91355
May 1, 2017

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Introduction

The purpose of the Districts Technology Master Plan is twofold. First, to reflect on both where we were and where we are in terms of technology across the District. Second, to identify the goals and objectives for technology in support of the Districts mission, vision, strategic goals and values over the next five years. This plan represents the sixth Technology Master Plan since 1996 and utilizes previous Technology Master Plans and the current District Educational and Facilities Master Plan as a guide.

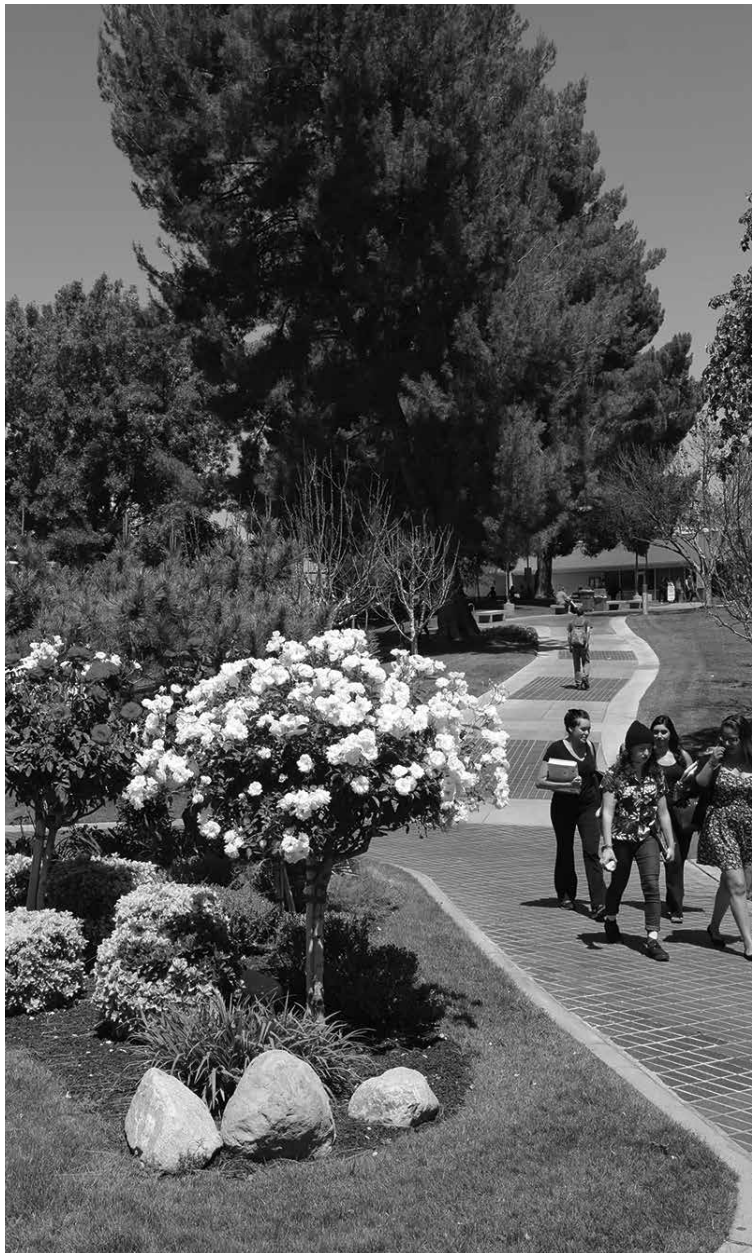
The Technology Committee began development of the 2017-2022 Technology Master Plan in the fall of 2015. In addition to surveying constituents, evaluating industry standards, and reviewing Technology Plans developed by other institutions, the committee strengthened the connection between the Technology Master Plan and the District's Educational and Facilitates Master Plan by extracting the technology needs provided by the academic and administrative departments in the Educational and Facilities Master Plan and integrated those needs into this plan. The Technology Committee reviewed the recommendations in the plan at their meeting on May 1, 2017 and voted to recommend the plan for approval.

History of Technology at College of the Canyons

Technology at College of the Canyons has been steadily evolving since the early 1990's. Beginning with a mainframe and dumb terminals along with a small collection of Apple computers and generic PCs, the availability of technology on the Valencia campus was limited to just 325 computers until late 1996 with the opening of the college's new library and media fine arts building (later renamed Mentry Hall). The availability of computers exploded by the year 2000, adding 775 computers to the college's inventory and going from nine computer labs prior to 1996 to 29 labs by the end of 2000. A T1 line providing internet access and a single computer operator in the Computer Center (now MIS) providing support for the mainframe and the small computer population was replaced with two Computer Support Technicians and a Network Manager in 1997.

Over the next nineteen years, the quality and quantity of technology across all areas of the District has increased at an exponential rate. At the start of the 2016-17 year, a District IT staff of 30 maintained 3,866 computers, 61 computer labs, 1 Student Information System, and over 200 physical and virtual servers spanning four District locations.

COLLEGE OF THE CANYONS



Mission, Vision, and Philosophy

Mission

As an innovative institution of excellence, College of the Canyons offers an accessible, enriching education that provides students with essential academic skills and prepares students for transfer education, workforce-skills development, and the attainment of learning outcomes corresponding to their educational goals. To fulfill its mission, College of the Canyons embraces diversity, fosters technical competencies, supports the development of global responsibility, and engages students and the community in scholarly inquiry, creative partnerships, and the application of knowledge.

Vision

College of the Canyons is dedicated to being a leading two-year college, recognized locally, regionally, statewide and nationally for technical advancement, institutional effectiveness, student support, model academic and professional programs, excellence in teaching and learning, fostering a broad range of community partnerships, maximizing student access, and for the sense of community that we provide to our students and staff.

Philosophy

We believe in the following values:

TEACHING AND LEARNING
We honor and reward high performance in teaching and learning.

RESPECT FOR ALL PEOPLE
We foster a climate characterized by civility, collegiality and acceptance. We expect honesty, integrity, social responsibility and ethical behavior.

PARTNERSHIP WITH COMMUNITY
We create relationships providing the foundation of success for chosen current and future partnerships with local schools, colleges and universities, businesses, government, and social agencies. These partnerships advance the educational, intellectual, artistic, civic, cultural, and economic aspirations of our surrounding community.

EXCELLENCE
We set the highest standards for ourselves and support the professional development of faculty, staff and administrators.

CREATIVITY AND INNOVATION
We are an innovative and creative community college. We encourage members of the college community to be entrepreneurial, forward thinking, creative, persistent, spontaneous, and welcome changes that will enhance the college's ability to fulfill its mission.

District Strategic Goals

The College District's Strategic Goals that identified for 2015 to 2018 are:

Teaching and Learning
College of the Canyons will provide a positive environment and necessary resources to support excellent teaching, student learning, and the completion of students' goals, including attaining degrees and certificates and transfer.

Student Support
College of the Canyons will provide student support to facilitate equitable student success and maximize opportunity for all students.

Cultural Diversity
College of the Canyons will promote, encourage, and celebrate the diversity of students and staff in our camps community.

Human Resources
College of the Canyons will select and develop high-quality staff.

Institutional Advancement
College of the Canyons will generate support, resources, networks and information to enhance the college's success.

Institutional Effectiveness
College of the Canyons will use outcomes data on progress being made towards college goals - including student learning outcomes, administrative unit outcomes, and other accountability measures - on a regular basis to inform planning and decisions.

Financial Stability
College of the Canyons will provide support, direction and oversight for all District financial resources to ensure fiscal compliance, proper accounting and positive audits and develop financial resources to maintain and improve programs and services consistent with institutional commitments (missions, goals, and objectives) and in alignment with our enrollment management plans.

Technological Advancement
College of the Canyons will utilize state-of-the-art technologies to enhance programs, services and operations.

Physical Resources
College of the Canyons will provide facilities that are clean, efficient, safe, and aesthetically pleasing to support college programs and services.

Innovation
College of the Canyons will dare to dream and make it happen!

Campus Climate
College of the Canyons will enhance and support a sense of community and cooperation on campus.

Leadership
College of the Canyons will assert its leadership to increase educational, economic, and cultural opportunities for the community, including business, industry, arts groups, and community-based organizations in the region.

Information Technology Division

The Information Technology (IT) Division at College of the Canyons is responsible for providing leadership in technology to support the needs of the entire District. IT encompasses five distinct areas covering all aspects of technology aligned with the Mission, Vision, and Strategic Goals of the District. The Vice President of Technology and an Administrative Assistant (2 FTE) provide administrative oversight for the division. A current organizational chart for the Information Technology Division is included in the Appendix of this document.

Audio/Visual: Audio/Visual (A/V) is staffed with a Coordinator II and a Technician IV (2 FTE) responsible for the ordering, installation, maintenance, and support of all District audio/visual equipment. The department schedules and provides technical assistance for the District's Video / Web conferencing needs and provides staff to handle audio/visual support at District functions and events.

Computer Support Services: The Computer Support Services (CSS) department is staffed with a Director, Coordinator II, (2) Coordinator I, (2) Technician IV, Technician III, (3) Technician II, and (2) Help Desk Specialists 72.5% (11.45 FTE) responsible for the ordering, evaluation, installation, maintenance, and support of all District end-user technology. To support this process, the CSS department staff providing training and technical support to employees, and assistance in the research and implementation of new and emerging technologies to enhance teaching, learning, and administrative functions.

Management Information Systems: Management Information Systems (MIS) is staffed with a Director, Senior Programmer/Analyst, (2) Web Programmer/Analyst, Programmer/Analyst, Programmer, Coordinator I, and a Business Analyst (8 FTE) providing students, faculty, staff, and administrators with reliable and secure access to information from the Enterprise Resource Planning (ERP) system and its connected applications. This information includes everything from student enrollment and financial aid awards to the college budgeting and human resources records. MIS strives to create a consistent set of processes that allow students, faculty and staff to access the information contained in the enterprise system smoothly and intelligently.

Network Operations: Network Operations is staffed with a Network Engineer/Analyst and a Technician IV (2 FTE) responsible for all data network connectivity, wireless, internet traffic, network security, and data communications within, to, and from all District locations.

System Administration: System Administration is staffed with a Director, Web Programmer/Analyst, System Administrator III (2), and a System Administrator I (5 FTE) providing the technological services, resources, training, security, and expertise to support the District's server (physical and virtual) and Active Directory environments. Systems Administration is responsible for providing the enterprise IT systems services, and support the District relies on in order to deliver services.

Technology Committee: Purpose and Focus

Purpose

The purpose of the Technology Committee is to facilitate the infusion of technology into our District structure and functioning. The Vice President of Technology and a member of the faculty, appointed by the Academic Senate, share the chairperson responsibilities of the committee. The Technology Committee reports to the Chancellor's Executive Cabinet via the Vice President of Technology.

Committee membership is open to all employees of the District and members of the Associated Student Government. The committee maintains a core voting membership reviewed each year and whose status is based on attending a majority of meetings in the previous year or through appointment by their respective representative groups.

Focus

The focus of the committee is to:

- Generate enthusiasm for the use of technology on campus to the benefit of student learning.
- Monitor the progress towards the implementation of the District's Technology Master Plan.
- Update the Technology Master Plan as needed with recommendations of specific objectives for action and improvement.
- Work with Facilities to ensure that the infrastructure and design of all District buildings support the current and future use of technology.
- Assess the success of technology training provided through Professional Development, Computer Support and self-guided training systems to ensure that the technology training needs of faculty and staff are met.
- Work with the Director of Professional Development to recommend technology-training ideas for the District.
- promote and set the tone for technology development.
- Serve to coordinate with and link efforts among departments and committees as appropriate across the District.
- Make recommendations related to the technology needs of the District to the Facilities Master Planning Committee, staffing committees, PAC-B, Chancellor, and College Planning Team, and the District Chancellor.

The Technology Committee maintains three standing sub-committees each with a specific Technology purpose that requires a more focused charter then the larger Technology Committee. The sub-committees provide regular reports to the larger body.

Educational Technology – The Educational Technology Committee focuses on excellence in teaching and learning with technology. The committee develops recommendations regarding online teaching and learning, reviews new teaching tools, and supports innovative uses of technology to help students succeed. The Director, Distance and Accelerated Learning Chairs the Educational Technology Committee along with a volunteer faculty member elected by the members of the Educational Technology Committee.

Datatel Standup – The Datatel Standup committee is comprised of staff members in the core areas that utilize our Colleague Enterprise Resource Planning system (ERP). The focus of the committee is to review and recommend changes to the ERP system and assist the MIS department by testing newly installed components and recommending priorities for new projects or functionality. The MIS Director chairs the Datatel Standup committee.

Web Committee – The Web Committee evaluates the College's web presence, develops policies and procedure recommendations for web related topics, and makes recommendations for design updates to the College's website. The committee is comprised of members of the IT staff, Public Information Office, and faculty interested and knowledgeable in web design and development. The Director of Enterprise Systems co-chairs the Web Committee with the Director of District Publications and Reprographics.

District Planning

The District's planning process is driven by statements of mission, values, and philosophy. The District engages in multiple processes to review its cycle of evaluation, integrated planning and resource allocation.

Departmental and District-wide plans are used to develop new programs and services and improve existing ones. Importantly, the plans drive financial resource allocation through the budget process. Areas not engaging in systematic planning receive lower priority in the budget development process.

College of the Canyons has created an innovative and creative college community in which members are encouraged to be entrepreneurial, forward thinking, creative, persistent, spontaneous and welcoming to changes that will enhance the College's ability to fulfill its mission. COC uses planning as a dynamic process that allows members of the College community - internal and external stakeholders - to discuss, explore solutions and make continual adjustments in response to ever-changing environments.

While complete descriptions of committees and processes are delineated in the Decision-Making structure at College of the Canyons, some key committees involved with the development of the plans include the following groups:

- College Planning Team (CPT)
- President's Advisory Committee: Budget (PAC-B)
- Facilities Master Plan Task Force
- Technology Committee
- Enrollment Management Team (EMT)
- Safety Committee
- Institutional Advancement Team
- College Policy Council

The District completed a new Educational Master Plan (EMP) in 2016 that drew from aspects of the previous EMP including population projections translated to the projections of student demand. It included department-level analysis device by department participation. However, the new EMP integrated more external data to show the impact of community factors.

Similarly, the Technology Master Plan (TMP) is regularly updated. Elements contained in this plan also continue to evolve as technology changes.

The Technology Committee delegated pieces of the Plan to subcommittees who then returned to the larger committee for review and discussion of the new content. This collaborative approach ensures inclusiveness and fosters innovation through thoughtful discussions on the direction of technology for the District.

Building on Previous Technology Plans

The 2017 – 2022 Technology Master Plan is developed by the District to guide the evolution of technology at College of the Canyons. Each section of the plan, through background information and historical context, highlight both where we have been and what we have done as an institution to ensure our technology decisions are well thought out, based on trends in education and administrative technology, and designed to keep the College competitive with other educational institutions in the area.

This Technology Master Plan is the sixth plan developed by the District since computer technology became mainstream and necessary for effective teaching and learning and to facilitate the administrative operations of the campus.

- 1996 – 2001 Technology Master Plan
- 1999 – Y2K Assessment Plan
- 2001 – 2006 Technology Master Plan
- 2007 – 2011 Technology Master Plan
- 2011 – 2016 Technology Master Plan
- 2017 – 2022 Technology Master Plan

Acceptable Use of District Technology

Acceptable Use

The District adopted a revised Board Policy and Administrative Procedure for acceptable use of the District's computing facilities by students, faculty, and staff in June of 2015. This policy provides guidelines and structure for the overall use of computing resources and should be reviewed by the Technology Committee on a regular basis. Additionally, Information Technology has established, in consultation with the Technology Committee and in-line with Board Policy, operational procedures to further define the acceptable use of District technology. A copy of the current Board Policy (BP3720) and Administrative Procedure (AP3720) is located in the Appendix of this document.

Technology Master Plan Overview

The Technology Master Plan has been divided into major sections covering hardware, software, network infrastructure, technical support, facilities, accessibility, distance learning, online services, training, ERP, website development, disaster recovery, information security, and learning resources. Members of the Technology Committee established workgroups to review each section, solicit input from the Campus Community, and develop an updated draft for each section. These drafts are then reviewed by the full Technology Committee and recommended for inclusion in the final plan. Each section includes a brief history, an explanation of the current environment and recommendations for the next five years.

To ensure the District is well positioned to provide the technology necessary to meet the Mission, Vision, and Strategic Goals of the District, this plan must be reviewed on an annual basis. The Technology Committee shall review the recommendations and direction of the plan for:

- Relevance of the priorities given the current technology needs of the District
- Progress towards the implementation of the Plan Recommendations

Any changes recommended by the Technology Committee and approved by the District will be incorporated into the Technology Master Plan as an addendum.

District Technology Inventory

The District's technology inventory continues to expand at a rapid rate. The increase in computer labs, mobile devices, and employees has pushed the number of computers owned by the District and supported by IT as of Spring 2017, to 3,866 broken down as follows:

Computer Type	Staff	Student
PC Desktop	1208	1089
Apple Desktop	61	121
Thin Clients	0	350
PC Laptop	355	252
Apple Laptops	40	56
Tablets	127	207

Staff computers include all machines installed in administrative areas, used by non-instructional staff, or faculty as their office computer. Student machines include all machines in classrooms, computer labs, or in other student-use areas. (Note: student use does not necessarily mean instructional for the purpose of budget categories.)

Peripherals & Servers

In addition to the computers, the District maintains 1,199 peripherals and servers in support of instructional and administrative computing.

Type	Staff	Student
Printers	277	118
Copiers	60	5
Projectors	50	200
Document Cameras	0	180
Digital Signage Devices	37	
Physical Servers	78	
Virtual Servers	194	

Computer Labs

The District maintains sixty-one (61) computer labs across three locations. These labs provide instructional support for District curriculum and unique areas for staff training and student support needs.

VALENCIA

Room	Department	PC	Thin Clients	Apple
ALLB-114	MESA	10	0	0
ALLB-319	Nursing	15	0	0
Career Services (STCN-123)	Career Services	7	0	0
DSPS (SCOH-103A)	DSPS	15	0	0
Technology Center (BONH-106)	Computer Support	23	0	2
BYKH-211	Biology	26	0	0
HSLH-133	Computer Science	35	0	0
HSLH-134	Computer Science	35	0	0
HSLH-206	Economics	35	0	0
HSLH-233	Business	37	0	0
HSLH-234	Business	33	0	0
HSLH-302	MISC	35	0	0
HSLH-303	CIT	31	0	0
HSLH-304	CIT	30	0	0
HSLH-305	CIT	33	0	0
HSLH-306	MISC	29	0	0
LIBR-224	Library	18	0	0
LTLC-126	LTLC	0	130	0
LTLC-145	LTLC	0	31	0
LTLC-156	LTLC	0	18	0
LTLC-157	LTLC	0	18	0
LTLC-158	LTLC	0	35	0
LTLC-159	LTLC	0	35	0
LTLC-160	LTLC	0	28	0
LTLC-161	LTLC	0	31	0
LTLC-168	LTLC	0	40	0
MENH-133	Photography	0	0	6
MENH-145	Photography	0	0	35
MENH-205-207	Graphics	0	0	30
MENH-209	Animation	25	0	0
MENH-221	Engineering	19	0	0
MENH-223	Drafting	22	0	0

VALENCIA *continued*

Room	Department	PC	Thin Clients	Apple
MENH-329	MEA	0	0	34
MENH-334	33	0	0	
MENH-338	33	0	0	
PCOH-111	Music	0	0	11
SSC-117	EOPS	9	0	0
STCN-124	ASG	36	0	3
TWSH-105	Computer Networking	29	0	0
TWSH-108	Computer Networking	25	0	0
TWSH-109	Computer Networking	30	0	0
TWSH-112	Computer Networking	30	0	0
X9	Veteran's Department	8	0	0
UCEN-201	University Center	7	0	0
UCEN-213	University Center	27	0	0
UCEN-309	University Center	29	0	0

CANYON COUNTRY

Room	Department	PC	Thin Clients	Mac
CCC-112	Assessment	8	0	0
CCC-113	Admissions	10	0	0
CCC-204	ASG Lab	5	0	0
CCC-304	Computer Lab #1	35	0	0
CCC-305	Computer Lab #2	35	0	0
CCC-305A	TLC Testing Center	4	0	0
CCC-306	TLC	25	0	0
CCC-307	Library	6	0	0
CCC-308	Basic Skills	24	0	0
CCC-309	Biology	2	0	0
CCC-603	Computer Lab #3	30	0	0
CCC-703	Applied Tech	34	0	0
CCC-708	Solar Laptop Cart	24	0	0

OFF CAMPUS LAB

Room	Department	PC	Thin Clients	Mac
Aerospace Dynamics #1	CACT	15	0	0
Aerospace Dynamics #2	CACT	23	0	0

Laptop Carts

Laptop carts provide a mobile computer classroom and are used in areas where a stand-alone lab is not needed or where the technology has to be mobile or used in conjunction with science lab environments. The District maintains 15 laptop carts, totaling 308 laptops, between both campuses.

Room	Department	PC
ALLB-111A	Engineering	24
BYKH-301	Chemistry	14
BYKH-304	Chemistry	24
BYKH-307	Chemistry	30
CCC	CTE	24
CHCS-155	Outreach	15
CHCS-201	Counseling	28
HSLH-135	Communications	5
HSLH-137	Board Room	17
HSLH-235	Business	30
ICUE-106	Culinary	34
MENH-253	Camp T./ASL	20
SCOH-103	DSPS	12
SSC	EOPS	9
UCEN-270	ETI	22

Smart Design Classrooms

Smart design classrooms are currently defined as a classroom that includes, at a minimum, a computer, projector, sound system, and document camera. All classrooms and computer labs that have the space and required power have been converted to smart design classrooms.

Network Equipment

The District maintains a robust and comprehensive data network encompassing three instructional locations and a co-location facility. The network provides internet connectivity to all buildings and access to District data. Security measures are in place to prevent unauthorized access and backup power is installed to ensure uptime for critical systems

	Valencia	CCC	ADI	COLO
Switches	113	23	2	1
Routers	1	1	1	1
Firewalls	1	1	0	1
Wireless Access Points	215	41	0	0
UPS	30	9	1	0

Department Technology Needs

The District Educational and Facilities Master Plan contains information on the technology needs of all the academic and administrative departments. In order to strengthen the connection between the Technology Master Plan and the Educational and Facilities Master Plan, those technology needs from the 2012 and 2016 plans have been incorporated below.

ACADEMIC DEPARTMENTS

Administration of Justice

Request	Year	Status
- Software that prepares students to use current and future technology utilized by law enforcement agencies	2012	
- No Request Made	2016	

American Sign Language

Request	Year	Status
- No Request Made	2012	
- 15-20 computers and workstations with video capability and headphones for digital lab program	2016	Completed

Anthropology

Request	Year	Status
- Replace outdated computers and peripherals and install new replacement "smart-classroom" equipment in Boykin Hall rooms #102, 103, 106, 107, 110.	2012	Completed
- One laptop cart (class set of 35) for the Valencia campus to support lecture/lab offerings	2016	
- Software for the planned forensics class (foreDisc) and increased licensing for the cataloguing software for archeology classes	2016	
- Updated computers and printer for department conference room	2016	

Architectural Drafting

Request	Year	Status
- Rhino, Illustrator, and Photoshop software.	2012	Completed
- Computers and software for CAD classrooms	2016	
- Two Smart Boards and other instructional equipment for department studio classroom	2016	Completed
- Equipment for resource room, including cutting boards, plotters, large flatbed scanners, 3D printers, and 3D scanners	2016	
- Mobile makerspace with capacity for 3D printing, modeling, and scanning ability for outreach in the community	2016	

Art

Request	Year	Status
- Add projection and mirrored ceiling systems to increase the student capacity of art labs.	2012	
- General equipment for the planned applied art studio space at the Canyon Country Campus, including track lighting, chairs, tables, white boards, projectors, and computers	2016	

Astronomy

Request	Year	Status
- No Request Made	2012	
- No Request Made	2016	

Automotive Technology

Request	Year	Status
- No Request Made	2012	
- No Request Made	2016	

Biological Sciences

Request	Year	Status
- Set of 24 iPads for student use on the field and/or research projects.	2012	
- Set of 24 iPads for student use in field research projects	2016	
- Replacement equipment for labs at the Valencia campus	2016	
- Technological updates in the department computer classroom (BYKH-211)	2016	
- Equipment for open lab classroom	2016	
- Technology necessary to establish the “living wall” project at the Canyon Country Campus	2016	

Business

Request	Year	Status
- Funding and training for faculty to implement web-enhanced educational tools such as Blackboard and social media, as well as to create instructional tools and curriculum to apply to new technology platforms, such a tablet computers and smart phones.	2012	
- Computers for proposed computer classroom	2016	
- Continued reliable access to business-related software	2016	
- Webhosting ability for e-commerce classes	2016	

Chemistry

Request	Year	Status
- (48) Laptop Cart Batteries for Valencia Campus	2012	Replaced Laptops
- SMART classroom technology at the Canyon Country Campus	2012	
- Smartboards for department classrooms	2016	
- Additional laptop carts for the Valencia campus laboratories	2016	Completed
- One laptop cart and printer for each lab at the Canyon Country Campus	2016	

Cinema

Request	Year	Status
- Internet streaming technology to allow for hybrid format for courses.	2012	
- Technology for live, on-air feeds for media events	2012	
- Replace and update projector and instructor station technology in Hasley Hall 101.	2012	
- Projector with 4K capability for HSLH-101 when current projector reaches the end of its lifespan (expected 2019)	2016	
- Additional equipment for the instructor station to allow for films to be switched from there	2016	
- Technology upgrades to allow for more effective streaming at a faster, more reliable rate.	2016	

Communication Studies

Request	Year	Status
- All classrooms on all campuses require up to date technology, including computer/LCD projectors, document cameras, DVD/VCR players, and digital recording device	2012	
- Wireless audio capability in all department classrooms	2016	
- New and more efficient computers and projectors for all department classrooms	2016	
- Equipment for speaker station in HSLH-135	2016	
- Equipment for speaker station in Canyon Country Campus classroom	2016	

Computer Applications + Web Technologies

Request	Year	Status
- Expand the capacity of CIT web server	2012	
- Mobile computer technology for student use	2012	
- Web cam and conferencing software	2012	
- Computers and other equipment for additional department computer lab classrooms	2016	
- Specialized and upgraded computer technology for existing department classrooms, including graphics tablets, large-scale monitors, additional RAM and SSD drives, solid state drives, virtual reality interfaces, and powerful video cards	2016	
- Continued access to the most recent versions of software being taught in department classes	2016	
- Offsite software licenses for enrolled students to allow for increased skills practice outside of class	2016	

Computer Networking

Request	Year	Status
- Continued upgrading of equipment as technology evolves	2012	
- Ongoing maintenance and support for equipment purchased through grants	2012	
- No Request Made	2016	

Computer Science

Request	Year	Status
- No Request Made	2012	
- Computers, video equipment, and software to develop video lectures for online classes	2016	

Construction Management

Request	Year	Status
- No Request Made	2012	
- No Request Made	2016	

Counseling

Request	Year	Status
- No Request Made	2012	
- Computers for computer classrooms and workshop rooms	2016	

Culinary Arts

Request	Year	Status
- No Request Made	2012	
- No Request Made	2016	

Dance

Request	Year	Status
- Add video capability and light board to studio	2012	
- Updated audio equipment for department classrooms at the Valencia campus	2016	
- Dance software	2016	
- Audio system for proposed Canyon Country Campus classroom	2016	
- Cart of 10 tablet computers with secure storage at the Valencia campus and a parallel cart available at the Canyon Country Campus	2016	

Early Childhood Education

Request	Year	Status
- No Request Made	2012	
- Equipment for modernized adult learning environments at both campuses, including SMART boards and iPads	2016	
- State of the art observation equipment at both campuses	2016	
- Security systems for both campuses	2016	

Economics

Request	Year	Status
- No Request Made	2012	
- Computers for one additional computer classroom	2016	

Education

Request	Year	Status
- No Request Made	2012	
- No Request Made	2016	

Electronics Systems Technology

Request	Year	Status
- Additional computers for new labs, along with instructional technology and network infrastructure.	2012	Completed
- No Request Made	2016	

Engineering

Request	Year	Status
- High end software updates (e.g., AutoCAD, Solid works, and MATLAB)	2012	Completed
- Replacement equipment for the Land Surveying program as well as additional equipment to support any dual enrollment offerings	2016	
- Access to scheduling/project management and estimating software for the Construction Management program	2016	Completed
- Continued access to additional specialized software for Land Surveying program	2016	
- Video conferencing equipment for classroom	2016	Completed

English

Request	Year	Status
- Expand language-learning software.	2012	
- Smart Boards for all department classrooms at both campuses	2016	
- Five to ten computers for each department classroom for student use during instructional activities	2016	
- Wireless projection capabilities for all department classrooms	2016	

Environmental Studies

Request	Year	Status
- No Request Made	2012	
- Binocular and Petrographic microscopes, EM River Geomorphology Simulator, laptop cart, computers for remodeled first-floor Boykin classroom, and GIS software for the Valencia campus	2016	
- Lab equipment for Geology and Astronomy at the Canyon Country Campus that is parallel to the equipment at the Valencia campus	2016	

Fire Technology

Request	Year	Status
- No Request Made	2012	
- No Request Made	2016	

General Studies

Request	Year	Status
- No Request Made	2012	
- No Request Made	2016	

Geography

Request	Year	Status
- ArcGIS software in the Expanded Tutoring, Learning, and Computer Lab	2012	Completed
- No Request Made	2016	

Geology

Request	Year	Status
- No Request Made	2012	
- No Request Made	2016	

Gerontology

Request	Year	Status
- No Request Made	2012	
- No Request Made	2016	

Graphic Multimedia Design

Request	Year	Status
- Update college technology plan to insure timely replacement of computers, software and equipment to maintain currency in the GMD program	2012	
- Ongoing and reliable replacement of existing equipment and software upgrades to stay current with industry standards	2016	
- Equipment for proposed Canyon Country Campus classroom, including at least 25 Macintosh desktop computer stations for students, one instructor's station with Macintosh desktop computer, Adobe Creative Cloud Site license, wide-screen HDMI hi-resolution project, wide-screen projection screen, white board, critique board, laser printer, color printer, scanners, and rolling trimmer	2016	

Health Science

Request	Year	Status
- Update college technology plan to insure timely replacement of computers, software and equipment to maintain currency in the Health Science program	2012	
- Replacement of equipment as needed to maintain currency and meet equipment requirements as mandated by the Los Angeles County EMS agency	2016	

History

Request	Year	Status
- Add smart boards to classrooms used by the History program.	2012	
- VCRs re-installed in classrooms at both campuses to allow the showing of materials not available in DVD format	2016	

Hotel Restaurant Management

Request	Year	Status
- No Request Made	2012	
- Classroom and other equipment for off-campus facility	2016	

Instructional Service Agreements

Request	Year	Status
- Online resources within Learning Management System	2012	
- Asynchronous online learning	2012	
- Continued access to a learning management system, such as Canvas	2016	

Interior Design

Request	Year	Status
- Rhino, Photoshop, Illustrator Software	2012	Completed
- No Request Made	2016	

Internships

Request	Year	Status
- No Request Made	2012	
- No Request Made	2016	

Land Surveying

Request	Year	Status
- No Request Made	2012	
- *See Engineering*	2016	

The Learning Center

Request	Year	Status
- No Request Made	2012	
- Additional computers at the Valencia campus for online tutoring (approximately 20) and statistics tutoring (approximately 20) as well as computers for each additional room at that campus	2016	
- Computers for industry-aligned testing facility	2016	
- Approximately 120 computer stations for student use at the Canyon Country Campus facility	2016	

Manufacturing Technology

Request	Year	Status
- Equipment and tools to support curriculum to be revised and updated	2012	
- Equipment for Canyon Country Campus facility, including CNC mills, CNC lathes, 5-aspect and 3-aspect lathes	2016	
- Design software	2016	
- High-end 3-D printers	2016	

Mathematics

Request	Year	Status
- Tablet computer technology and associated software to promote active learning in the classroom	2012	
- Wireless projectors in all department classrooms to facilitate visual, dynamic demonstrations of mathematical concepts	2016	
- Computers for additional computer classrooms	2016	
- Increased access to software, such as Mathematica and statistical programs, for both full-time and adjunct instructors	2016	

Media Entertainment Arts

Request	Year	Status
- Improve data infrastructure at all sites to create universal computer links and allow for video streaming	2012	
- Identify and acquire a software tracking system for inventory of equipment and student use	2012	
- Additional instructional equipment at the Valencia campus, including state-of-the-art high definition camera equipment, editing software and computers as well as equipment for a high definition presentation theater	2016	
- Computers for filmmaking and animation lecture/lab classroom at the Valencia campus	2016	
- Ongoing replacement and upgrades to equipment at the Valencia campus on a regular schedule to keep pace with industry advances	2016	

Medical Laboratory Technician

Request	Year	Status
- No request made	2012	
- Additional equipment for the state of the art BSL-2 simulated clinical laboratory	2016	
- Simulated laboratory information systems (LIS)	2016	
- Updated multi-media materials, including board exam review materials.	2016	

Modern Languages

Request	Year	Status
- Upgrade audio-visual systems in classroom spaces to present language materials	2012	
- Computers and other technology for language lab	2016	

Music

Request	Year	Status
- No request Made	2012	
- Mobile recording equipment	2016	
- Equipment for proposed recording studio at the Canyon Country Campus, including sound and mixing boards and a PA system	2016	

Nanotechnology

Request	Year	Status
- No Request Made	2012	
- No Request Made	2016	

Nursing

Request	Year	Status
- Additional simulation equipment to establish a simulation center	2012	
- Additional equipment for simulation lab	2016	
- Equipment for additional labs	2016	
- Additional simulation carts	2016	

Paralegal

Request	Year	Status
- Research available tracking software which will survey and track students and graduates with regard to qualify of program and job placement	2012	
- Continued access to the Westlaw electronic database	2016	Completed

Philosophy

Request	Year	Status
- No Request Made	2012	
- Access to Camtasia and other captioning software	2016	
- Access to video and graphics editing software	2016	
- Video and audio recording equipment for at least one Philosophy classroom to record lectures	2016	

Photography

Request	*Year*	*Status*
- Digital type C printer for outdated color wet lab.	2012	
- Ongoing replacement and upgrades to equipment on a regular schedule to keep pace with industry advances a and expected equipment lifespan	2016	
- Equipment inventory and checkout software	2016	
- Adobe certification software	2016	
- Equipment for classroom use and student checkout if expansion is determined to be feasible	2016	

Physical Education - Kinesiology

Request	Year	Status
- No Request Made	2012	
- Instructor station and related equipment to convert WPEK-108 and WPEK-13B to “smart classrooms”	2016	

Physical Science

Request	Year	Status
- No Request Made	2012	
- No Request Made	2016	

Physics

Request	Year	Status
- No Request Made	2012	
- Access to Matlab software at both campuses	2016	
- Lecture and board capture technology for classrooms at the Valencia campus to facilitate resource development for online and hybrid offerings	2016	
- Access to CAD software at the Canyon Country Campus	2016	

Plumbing Technology

Request	Year	Status
- No Request Made	2012	
- No Request Made	2016	

Psychology

Request	Year	Status
- No Request Made	2012	
- Updated projectors and other instructional equipment for department classrooms at the Valencia campus	2016	
- Access to the psycINFO database to support student research and scholarship	2016	

Real Estate

Request	Year	Status
- No Request Made	2012	
- No Request Made	2016	

Sociology

Request	Year	Status
- Conversion of VHS instructional materials to DVD	2012	
- No Request Made	2016	

Solar Technology

Request	Year	Status
- Equipment to complete build-out of solar thermal lab, and any additional labs required for new coursework	2012	
- No Request Made	2016	

Theatre Arts

Request	Year	Status
- No Request Made	2012	
- No Request Made	2016	

Water Systems Technology

Request	Year	Status
- Computer infrastructure and systems for integrated telepresence to allow remote use of technology based teaching and new instruction materials	2012	
- No Request Made	2016	

Welding

Request	Year	Status
- No Request Made	2012	
- No Request Made	2016	

Wine Studies

Request	Year	Status
- No Request Made	2012	
- *See Culinary Arts*	2016	

Administrative Departments

Admissions and Records

Request	Year	Status
- Scanners for each station at the front counter	2012	
- Admissions and Records will need significant additional computer data servers and storage.	2016	
- Computers will be needed for the additional staff	2016	
- Kiosks will be needed for students to use if they don't have their own mobile devices to connect	2016	

Academic Affairs

Request	Year	Status
- Room scheduling software such as AdAstra or EMS	2012	
- Data software	2016	
- Room scheduling software	2016	
- Computers, printers, copiers, scanners, software applications for personnel	2016	

Art Gallery

Request	Year	Status
- No Request Made	2012	
- One computer station for both Valencia and Canyon Country Student Galleries	2016	
- This gallery will require: Phone lines and equipment, one computer station, one large flat-screen television and a DVD player - CCC	2016	

Assistant Superintendent Vice President Academic Affairs

Request	Year	Status
- A data warehouse and management reports system	2016	

Business Services

Request	Year	Status
- Position Control Database		
- Program a comprehensive database for salaries, benefits and other pertinent information for employees that can be accessed by key users to provide consistent and accurate data	2012	
- Document Imaging Hardware/Software		
- Work with Information Technology to implement document imaging in all areas of Business Services to streamline storage of physical records based on record retention requirements	2012	

Business Services (continued)

- Document imaging technology to retain records based on legal requirements by using imaging software	2016	
- Software/Programming to streamline processes and reduce staff time	2016	
- Access Position Control Database – Program in New Software	2016	
- Budget/Program Review – Upload Into Datatel (Currently manually keyed)	2016	
- CCFS 311 Fiscal/Budget Reports - Program Datatel to upload data (Like K-12 SACS software)	2016	
- Budget/Actual Analytical Software – Provide fiscal and statistical trends – TABLEAU? (Currently downloaded from Datatel and manually formatted for each report)	2016	
- Payroll History Reports - Program data to be easily extracted for Benefits Statements, PRAs, 10 Year Salary History Reports for negotiations, etc.	2016	
- Electronic Timesheets – Purchase 3rd party software, i.e. KRONOS	2016	
- Travel Authorizations – Program forms to link to Datatel account numbers with authorization hierarchy with final output into Board agenda item	2016	
- Computers with necessary software	2016	
- Copy machine	2016	

Campus Safety

Request	Year	Status
- Camera hardware; cameras and upgraded software of existing Dibois system to strategically monitor parking lots	2012	
- Purchasing additional personal handheld citation machines	2016	
- iPads/Tablets	2016	

Canyons Extension

Request	Year	Status
- Establish computer lab classroom is in the community (GATEWAYSCV)	2016	

Canyon Country Campus

Request	Year	Status
- Addition of a technology center at CCC	2016	
- Addition of dual Wi-Fi on campus (student, staff).	2016	Completed
- Equipment and improvements necessary to support the Career Pathways grant	2016	
- Improved cellular phone service	2016	
- Upgrades to the current phone management system at CCC	2016	
- Upgrades to Reprographics	2016	
- Increased ports and technology infrastructure on campus	2016	
- Increased computer classroom and lab space at CCC	2016	
- Installation of an electronic campus marquee and additional LCD bulletin board displays	2016	Completed
- Utilization of remote video technology to facilitate inter-campus meetings and communication	2016	

Career Center

Request	Year	Status
- Media production assistance for interactive online and website resources for students	2012	
- Minimum six computer stations for computer lab	2016	
- The primary piece of equipment needed to operate the center is the computer. With career assessment and the majority of the job search process online, staff and students need access to computers on a regular basis	2016	
- A copier machine will also be needed due to the large amount of copying and scanning of workshops, internships, job openings, resumes, and related documents	2016	
- Access to a large computer lab with the software used to test career choices, create resumes and conduct career searches	2016	
- A copy machine will also be needed due to the large amount of copying and scanning of workshops, job openings, resumes, and related documents	2016	

Center for Civic Engagement

Request	Year	Status
- Two computers, a printer, scanner, office supplies, software	2016	

Chancellor's Office

Request	Year	Status
- Fully implement Board Docs software program	2012	Completed
- Investigate feasibility of implementing document retrieval system.	2012	
- Fully implement the Board Docs software program	2016	Completed
- Implement a document retrieval system	2016	
- Develop a system of consistent follow-up, using a project tracker	2016	
- Enhance the capability of the office team to prepare presentation materials and manage projects on behalf of the Chancellor's office	2016	

Classified Senate

Request	Year	Status
- The Classified Senate will need equipment and technology for Web communication	2016	
- Server space to archive and post documents, projects and communication files	2016	
- Server space for the Classified Senate's Website, as it grows	2016	

Community Education

Request	Year	Status
- No request made	2012	
- Access to a copier machine is needed	2016	
- The current computer equipment is sufficient, but once there is a fulltime director and support staff, updated computers will be needed, along with up-to-date software programs for marketing, registrations and tracking students	2016	

Contracts, Procurement and Risk Management

Request	Year	Status
- On-Line Submission of Business Services Forms		
- Programming for on-line submission of forms such as Travel, Budget Changes, etc. that can be processed internally as well as submitted for Board approval on monthly agendas	2012	
- No Request Made	2016	

Center for Early Childhood Education

Request	Year	Status
- Observation camera system for classroom at Canyon Country Campus	2012	Completed
- A state-of-the-art security system -- Install security features as recommended by Campus Safety and Cobra (i.e. replace/modify classroom locks, buzz-in system at gate)	2016	
- Updated technology throughout the center (i.e. digital signage software, equipment, digital signatures etc.)	2016	
- Include observation system in all infant/toddler outdoor play spaces and improve sound quality for the existing observation system throughout the Center	2016	
- Technology and documentation equipment (i.e. Color printers, Digital signage, CCC Monitor Camera, digital signature system, augmented reality sandbox)	2016	
- Observation equipment in the center	2016	
- Technology for both the children's classrooms and for the center staff working directly with the children	2016	

Dean of Students

Request	Year	Status
- No Request Made	2012	
- Purchase the appropriate database software presently available from vendors to manage caseload of students referred to BIT.	2016	
- See the pages dedicated to the specific programs supported and supervised by the Office of the Dean of Students for specific needs regarding technology and equipment for their future Canyon Country offices	2016	

Deputy Chancellor and Institutional Research

Request	Year	Status
- Enhance online systems for program review and other planning processes	2012	
- New software tools will be needed, and old ones updated to automate data reports, improve processes for disaggregating data, using data for improved planning processes	2016	

Distance and Accelerated Learning Program

Request	Year	Status
- Flash drives, software licenses, and media recording devices to support faculty	2012	
- Secure equipment needed for operation of the department	2016	
- Access to copiers/scanners/printers	2016	
- Webcam and microphones for all employees	2016	
- Professional setup for recording and editing software with High Performance PC, Recording Software, Professional Camera, and High Fidelity Microphone.	2016	

District Communications, Marketing, and External Relations

Request	Year	Status
- Need for increased computer memory required by the large image, text and video files that the department generates	2012	
- There is a constant need for the latest versions of several types of software to remain current and competitive with the materials that are required to be produced. The acquisition of a state-of-the-art electronic marquee with two locations on busy approach roads has significantly improved our ability to promote events, programs and new classes	2012	
- The campus recently purchased an emergency communications system, and training the staff on usage will be an important part of continued crisis communication training.	2012	
- Software as a service that streamlines the archiving, retrieval and sharing of digital photos and videos is urgently needed	2016	
- Technology needed for one staff member includes a laptop computer with standard office software, Adobe Design software, a professional-quality camera with high-definition video capability	2016	
- Implement the use of a campus-wide system/service to deliver pre-game/in-game/post-game music at COC athletic events and other campus events	2016	
- Establish enhanced Wi-Fi and data ports, audio/visual hookups for PA announcer at all athletic venues on campus	2016	
- Provide equipment and software needed to produce live video stream broadcasts.	2016	
- Access new equipment (tablets and computers) to more efficiently carry out in-game stat keeping and social media-related projects	2016	

District Communication Center and Mailroom

Request	Year	Status
- It will be necessary to keep up with changes in telecommunications technology in the future, as it changes rapidly.	2016	
- A high level of customer service is critical to the college's mission, so maintaining current technology in the phone system is paramount		

Economic Development

Request	Year	Status
- Database development for economic and employment data	2012	
- Maintain all CAD / CAM software tools to their latest release levels	2016	
- Equip the manufacturing technology center with a broad range of equipment appropriate to a significant manufacturing technology center. This includes, but is not limited to, Computer Numerically Controlled (CNC) machines including both three and five axis CNC mills; Coordinate Measuring Machines (CMM); optical comparators, precision measuring equipment, 3D laser scanners; and, 3D printers	2016	
- The thirty-seven engineering workstations in both CACT computer labs will need to be replaced to maintain the required computing capacity	2016	

Enrollment Services Division

Request	Year	Status
- No Request Made	2012	
- With the purchase of Comevo, the College now has the ability to create and maintain numerous online orientations. This product will allow other areas offering secondary orientations the ability to create an orientation and maintain it without the need for MIS programming. Areas that have expressed an interest include: Distance Education, Career Center, Nursing, ISP, Honors and various instructional departments	2016	
- The SARs software has moved far beyond its original use as a counseling appointment product. The suite now is being used to track MIS data elements that are directly attached to funding. We should continue to increase locations across campus to increase student contacts for secondary services: orientation, assessment, advisement, and follow-up services in the areas of early alert, undeclared major advisement and students in academic difficulty	2016	
- We will implement new recruitment software with database capabilities to track students all the way from elementary school through enrollment at the college. Once part of our database, we will have the ability to reach out to students through mobile applications on their cell phones and tablets as well as through social media. Numerous departments such as Outreach, ISP, Internships, and Career/Technical Education can use	2016	

EOPS/CARE/CalWORKs

Request	Year	Status
- No Request Made	2012	
- Upgrade the study lab with additional desktops	2016	
- Computers for a student lab, for counselors, and for a case manager, equipment for filing, scanning, etc…	2016	

Field Studies

Request	Year	Status
- Computers, iPad, laptops, and remote access equipment	2016	

Financial Aid

Request	Year	Status
- Portal system for online student access to financial aid information	2012	Completed
- Additional computer technology for processing applications	2016	
- Additional hardware and software support and maintenance funding	2016	
- Additional presentation and classroom technology for workshops	2016	
- Funding for SIS upgrades and ongoing maintenance costs	2016	

Graphic Design Center

Request	Year	Status
- Direct-to-plate printing technology	2012	
- Designers need the latest Mac Pro computers, software and other production equipment as it develops stay on top of developments in this field and produce work effectively and efficiently.	2016	

Grant/Categorical Accounting Services

Request	Year	Status
- Mobile Technology - iPad	2012	
- Computers, software applications, and access to printers, copiers, scanners, etc.	2016	

Honors Program

Request	Year	Status
- Tracking and database software	2012	
- Office equipment, including laptop docking stations, monitors, and a printer/copier	2016	
- Three laptop computers for counselor and classified staff	2016	
- Four computer workstations for student use	2016	

Human Resources

Request	Year	Status
- Software for position control system	2012	
- New or improved applicant tracking system	2016	Completed
- Software or program for performance evaluation tracking for all employee groups	2016	

Human Resources (continued)

- Software or program for electronic onboarding	2016	
- PC tablets with writing ability for hiring committee work as part of movement to a paperless process	2016	
- High volume scanner for document imaging purposes	2016	
- Position control software or program as a shared resource between HR and Business Services	2016	

Information Technology

Request	Year	Status
- Implement a Share Point Server to support the Datatel portal and better file collaboration across the District	2012	
- Increase the use of Virtual server technology	2012	Completed
- The District has a large investment in Technology that requires constant maintenance, upgrade, and replacement. Current projections put the cost of sustaining a standard maintenance and replacement schedule is estimated to be 1.2 million dollars annually. Failure to maintain a regular schedule of replacement could result in technology that is no longer adequate to support the District's administrative and instructional functions	2016	

Information Technology – Computer Support

Request	Year	Status
- Our greatest need is to have funds available to research, purchase, and support technologies that faculty will need to implement in the classrooms, and the technology they may not even know exists but will soon discover, or that will be invented in the near future	2016	
- Computer hardware and software necessary to implement a Virtual Desktop Infrastructure (VDI) on the Canyon Country campus	2016	
- Standardize classroom design and technology across both campuses	2016	

Information Technology – Management Information Systems

Request	Year	Status
- Migrate Datatel to a Microsoft SQL environment	2012	Completed
- Refresh of the servers and storage that host our Colleague ERP system	2016	

Information Technology – Systems Administration

Request	Year	Status
- Implement a SharePoint Server to support the Datatel portal and better file collaboration across the District	2016	
- Additional server/network equipment to expand hypervisor and provide high availability	2016	

Institute of Ethics in Law, Business and Global Policy

Request	Year	Status
- No new technology resources would be required	2016	
- We would seek to work with the current media resources on campus to record speakers, competition and related activities that could be placed into the online repository	2016	

Institute of Teaching and Learning

Request	Year	Status
- No request made	2012	
- A training space with banks of computers with general word-processing, spreadsheet, database and presentation software	2016	
- Computer workstation for clerical support. Printer for printing certificates and training transcripts. Comevo Software	2016	

Instruction Office

Request	Year	Status
- No Request Made	2012	
- Continued access to a learning management system, such as Canvas	2016	Completed

International Students Program

Request	Year	Status
- Document imaging system to maintain student records and reduce storage space needs	2012	
- Upgrade Access database software to add functionality	2012	
- A TV and a computer designated to the Digital Signage platform to be placed in the new International Hub	2016	
- A document imaging system to reduce the need for creating and storing paper files	2016	
- Integration of ISP databases into the College's databases.	2016	
- Language lab computers, equipment and software standard for teaching and learning modern languages ready when the ESL Language School is established	2016	

Library

Request	Year	Status
- Wireless printing	2012	
- Collaborative workstation (media scape).	2012	
- Updated computers for staff	2016	
- Updated computers for the computer lab	2016	
- Support for additional databases, and for such things as discovery system and chat reference that are primary entry points for online users	2016	

Library (continued)

- Change/credit card machines for printing, copying, scanning	2016
- Computer lab/instruction workstations (approximately 15 stations)	2016
- Public workstations (40-60 stations)	2016
- At least one public workstation equipped and dedicated for accessibility needs	2016
- Laptops and/or tablets that could be borrowed for use in the Library	2016
- Support for additional databases, and for such things as discovery system and chat reference that are primary entry points for online users	2016

Mathematics, Engineering, Science Achievement (MESA)

Request	Year	Status
- No request made	2012	
- SMART desks (tables with power outlets)	2016	
- Replace/upgrade desktops	2016	
- Replace/update laptop cart	2016	
- Replace/upgrade desktop monitors	2016	
- Additional desktops	2016	
- Additional printers	2016	
- Smart whiteboards around the center	2016	
- 3D Printer	2016	
- Laser Welder	2016	
- 3D Scanner	2016	

Noncredit

Request	Year	Status
- As the GED program continues to grow, there is need for increased software licensing and other support materials to insure currency with GED testing	2012	
- Ongoing update of department office computers	2016	
- Equipment for off-campus locations, including phones, photocopiers, office computers, and white boards and other classroom equipment (instructor computer, projector, screen), computers for computer lab (funded by Gateway SCV)	2016	
- Computers for planned department office	2016	
- Computers for Canyon Country Campus classrooms	2016	

Outreach and School Relations

Request	Year	Status
- No Request Made	2012	
- As the Outreach/Adult Reentry expands services to prospective students, the department will be implementing the Colleague enrollment management software to efficiently and effectively track prospective students contact information and allow for regular, personalized communication with the students until they have successfully matriculated and enrolled in courses at COC	2016	Completed
- 9 laptops: 8 student laptop stations for student use in the new center and shared by both programs, and 1 laptop for the additional Student Services Technician I.	2016	
- Five tablets for staff to perform outreach functions off campus and to fully utilize the Colleague enrollment management software	2016	
- A laptop-charging cart for the 8 laptops and five tablets	2016	
- A copier/printer/fax machine in the permanent office location	2016	

Payroll Services

Request	Year	Status
- No Request Made	2012	
- *See Business Services*	2016	

Performing Arts Center

Request	Year	Status
- No Request Made	2012	
- No Request Made	2016	

Physical Education and Athletics

Request	Year	Status
- No Request Made	2012	
- Instructor stations and related equipment to convert WPEK-108 and WPEK-13B to “smart classrooms”	2016	

Professional Development

Request	Year	Status
- Software system for automated professional development activities registration and attendance	2012	Completed
- Professional Development online workshop registration and tracking software	2016	Completed
- E-portfolios that faculty and staff can use to provide a visual demonstration of the professional development programs and training activities they have accomplished	2016	
- When an office is opened in Canyon Country, appropriate furniture, equipment, computers and software will be needed	2016	

Reprographics Center

Request	Year	Status
- Direct-to-plate printing technology	2012	
- No Request Made	2016	

Service Learning

Request	Year	Status
- Computer workstations and software that supports and expansion and improvement of the website	2016	
- Software to manage online applications and tracking of participating students and organizations	2016	

School of Applied Technologies

Request	Year	Status
- All programs require the heavy use of technology, which is both custom and unique to each program. As such, a technology plan will need to be designed when a physical build-out is determined	2016	
- The new Advanced Manufacturing Technology, expanded Construction Technology, expanded Automotive Technology, and Cyber Security Technology programs are each heavily technology dependent. Aside from a physical infrastructure that requires a large footprint for these areas, a technology plan to expand and enhance current technology needs is necessary	2016	

School of Career Technical Education

Request	Year	Status
- Student tracking software	2012	
- No Request Made	2016	

School of Fine and Performing Arts Division

Request	Year	Status
- Medium-use copier with fax and scanning capabilities	2012	
- New lighting board and a new sound board	2016	
- All theatrical equipment for a new small theater facility—lights, sound, soft goods/drapes, piano	2016	
- Obtain and maintain industry standard software in all disciplines	2016	
- Multiple 3-D printers, laser cutters for use in sculpture, stagecraft and digital media to facilitate the recruitment, retention and completion of CTE Pathways, and transfer degrees and certificates	2016	
- Increase instructional efficiency with discipline specific learning stations, including chairs, tables and revised teacher stations	2016	

School of Humanities

Request	Year	Status
- Add second computer monitors for all administrative personnel and faculty department chairs.	2012	
- Add ARTSTOR to library subscription databases to better support student research needs	2016	
- Appropriate technology, such as computer workstations for students in accelerated classes, smart lectures for faculty, as well as projection and audio/visual equipment for language instruction.	2016	

School of Mathematics, Science, Engineering and Health Professions

Request	Year	Status
- Class-capture technology in the expanded Tutoring-Learning-Computing Center for online/hybrid courses	2012	
- Technology for accepting online Allied Health program applications	2012	
- Digital imaging of student records for Allied Health programs	2012	
- Tablet PCs	2016	
- Expand class-capture technology for SMART classroom and online/hybrid courses	2016	
- Additional licenses for AutoCAD, Logger Pro, Mathematica, statistical programs, Solid works, and other related software needed to support the School of Mathematics, Sciences & Health Professions	2016	

School of Social and Behavioral Sciences

Request	Year	Status
- Convert VHS instructional materials to DVD	2012	
- Digital video cameras (COMS lab)	2016	
- Tablet PCs, expand class-capture technology for SMART classroom and online/hybrid courses	2016	
- Smart board for ECE classrooms	2016	
- Additional software and licenses for Sociology, Psychology and Anthropology courses	2016	
- Computers, projector, smart board for SSBS Group space and COMS lab	2016	
- Smart board (COMS lab)	2016	
- Large monitors/display screens for video presentations (COMS lab)	2016	
- Smart Board for ECE Classroom	2016	
- Whiteboards and projector (COMS lab)	2016	

School of Business

Request	Year	Status
- All classrooms on all campuses require up to date technology, including computer/LCD projectors, document cameras, DVD/VCR players, and digital recording devices	2012	
- Further automate all classrooms	2016	
- The School of Business will coordinate with Computer Support Services to create a budget to continue to update technology in the School's facilities on a recurring basis and install anticipated technology in classrooms and faculty offices, both in Valencia and Canyon Country	2016	

Student Business Office (SBO)

Request	Year	Status
- Develop a website that is modern and easy to use	2012	
- Display monitor/projector in order to offer information to students waiting in line and assist with staff training	2012	
- Document imager needed for record storage	2012	
- Update the web payment process so that students are automatically directed to the payment screen following registration	2012	Completed
- For safety, install an emergency notification system as well as conduct emergency training	2016	
- A scanner for document imaging	2016	
- A desk, computer and monitor will be needed for a scanning station	2016	
- A monitor for security viewing and training	2016	
- A monitor for information in the lobby	2016	
- Once additional staff members are hired computers, monitors and desks will be needed	2016	

Student Development

Request	Year	Status
- Computers & office equipment for staff	2016	
- ID machine, office computers, fax machine, copying machine, printers, card readers	2016	

Student Health and Wellness Center

Request	Year	Status
- No Request Made	2012	
- Computers for all offices, Laptops and iPads for medical and mental health assessments	2016	
- Blood pressure and temperature machines, Television and DVD for health education	2016	
- Computers for all offices, Furnishings and equipment for a lab	2016	
- Laptops and iPads for medical and mental health assessments	2016	

Student Learning Outcomes Coordinators

Request	Year	Status
- No Request Made	2012	
- No Request Made	2016	

Student Services

Request	Year	Status
- No Request Made	2012	
- No Request Made	2016	

Student Success and Support Program (3SP)

Request	Year	Status
- The Valencia Assessment Center runs off a Virtual Desktop system that slows down when multiple users log on. It cannot manage the Assessment Center need for a reasonable amount of processing time during peak testing months. We need to replace the VDI with traditional desktop independent computers	2016	Completed
- Continue to review software that will assist the College to meet student needs and make completion of mandatory services easier to manage	2016	
- Adopt a new communication model to reach students through their cell phones, tablets and social media	2016	

Interdisciplinary Sustainable Development Committee

Request	Year	Status
- No Request Made	2012	
- Office equipment for the Center for Sustainable Development, including several workstations with computer, phone, and printer/scanner	2016	
- Smart Board for Center for Sustainable Development to facilitate meetings and workshops	2016	

Physical Plant and Facilities Planning

Request	Year	Status
- No Request Made	2012	
- Maintain all CAD / CAM software tools to their latest release levels	2016	

Transfer Center

Request	Year	Status
- Additional computers to improve student access to transfer information and applications	2012	
- A computer lab is needed in the transfer center to assist students in their transfer process. This will be needed on both campuses	2016	

Veterans Resource Center

Request	Year	Status
- Digital Signage	2016	Completed
- Video technology to maintain a connection between campuses for meetings and training	2016	Completed
- Digital signage to provide relevant information to the student veteran population	2016	Completed

Volunteer Bureau and Student Employment

Request	Year	Status
- Multiple computer cubicles or computer stations are needed to allow students to apply for student employment and volunteer opportunities	2016	
- Equipment/technology with web browsers and word processing software would provide students the ability to complete their federal and state new-hire requirements, and provide our community members a resource area to explore new volunteer openings	2016	

University Center

Request	Year	Status
- No Request Made	2012	
- Install Smart Boards in some of the University Center classrooms	2016	

Hardware

Background:

The District first began regularly issuing staff computers in 1995. At the time, support for those computers was limited to a single staff member. In 1996, the college opened the doors of the Media Arts and Library buildings. The Media Arts building housed computer labs for drafting, photography, video editing, and computer science. The opening of this building marked the first in a number of "high tech" buildings that would grow the campus technology to what it is today. In addition to computers in the classroom, the District began making other technology available to instructors in traditional classrooms. The audiovisual department added computers and LCD projectors on carts to its fleet of easels and slide projectors. The technology was so well received that the original fleet of three grew to more than 12 projector/computer mobile carts. These carts were the precursor to the smart design classrooms we have today.

Even in 1995, the District had a mixed environment consisting primarily of PC-based computers but recognized the need for the high-end graphics capabilities of the Apple computer systems in areas relating to photography, graphics and video editing. The District departments that heavily utilize the Apple platform include the Public Information Office, Graphics, Audio Visual, Reprographics, Photography, Media Entertainment, Arts, and Music.

The District's Student Information System during the early 90s was known as the "Aldrich System" and was run on a Digital Equipment Corporation (DEC) VAX system. Users were connected to this system primarily using "dumb" terminals with some users connecting through their PC using basic sessions. The VAX system exclusively supported the District's registration process and did not integrate or support other related applications like budget or human resources. In 1998, the District upgraded to Datatel's Colleague application. Colleague is an Enterprise Relational Database (ERD) that integrated the registration function with budget, and human resources. The new system was installed on an HP UNIX box running IBM's Unidata as the backend database system.

Current Environment:

Computers:

The District's current environment consists of 3,866 computer systems spread over four geographical locations in faculty/staff offices, student-use computer labs, as well as permanently installed in smart design classrooms and meeting rooms. Every permanent employee of the District is provided with a computer system based on the needs of their classification and job duties. Most employees are issued desktop computer systems that are installed in their assigned offices where available. The District provides new District employees with new equipment including computer systems, software, and required peripherals that match the specifications of their assigned duties. Any employee who fills an existing vacancy is provided with the computer system of their predecessor.

Employees who are categorically or externally (grant) funded are provided a computer system through their categorical or external budget. Adjunct faculty and other short-term employees are provided with access to computer systems in their work area, the Technology Center (BONH-106/CCC 205), Library, or Adjunct-Faculty offices at both the Valencia and Canyon Country Campuses.

Laptops:
As funding is available, laptops are provided to employees who require a greater level of mobility. This includes, but is not limited to, faculty members teaching at multiple locations, administrators who travel regularly for college related work, and staff members who require mobility to complete assigned tasks.

Employees who are issued laptop computers as their primary computer are required to bring their laptop with them when they come to campus. Laptops should be connected to the District network on a regular basis to allow for the deployment of automated patches as well as updates to the electronic inventory information.

Once a year, laptop users are required to bring their issued laptop to Computer Support Services (CSS) for a physical inventory audit of the computer system and necessary hardware and software updates. Staff-issued laptops include Absolute tracking software that enables the District to recover lost or stolen laptops and the ability to remotely wipe all data from the laptops if needed.

Laptop computers remain District property and users understand that they are not authorized to install personal software without the permission of CSS. In addition, laptop users agree to assume financial responsibility for any negligent loss or damage to their laptops while in their possession. Users who desire a laptop in addition to their existing primary computer are required to obtain department or special funding. Additional computers assigned to District employees, are outside of the District's replacement cycle.

Mobile Devices and Tablet PCs:
With the increased adoption of mobile devices and tablet computers, the IT Department has continued to expand adoption of technologies that will aid in the use of and improve the security of mobile devices. These technologies include an expansion of the wireless infrastructure on both the Valencia and Canyon Country campuses allowing users to access network resources and adoption of wireless capable projectors allowing faculty and staff to present from devices while not being tethered to an instructor station. Finally, mobile device management services allow IT to remotely maintain and manage security features of mobile devices owned by the District.

Mobile devices such as iPads are classified as secondary devices and are not funded by general technology funds. Therefore, faculty and staff wishing to purchase mobile devices for District use must fund them from departmental budgets or other appropriate funding sources.

Servers:
The District's Windows-based server environment consists of more than 200 servers deployed on either individual physical hardware, or virtually using Microsoft's Hyper-V technology. The majority of the servers resides in the District's Data Center and support the primary functions of the District including email, websites, file sharing, SQL databases, work order systems, and attendance tracking. The servers are on the same replacement cycle as the PC workstations with the goal of virtualizing the majority of the servers that support the District's operations.

Smart Phones:
With the growth of smart phones and other mobile technologies, users are finding it possible to access their information on the move. The District provides access to these devices while on-campus with an extensive wireless network infrastructure. When faculty/staff are away from the campus, their information is accessible via secured servers over the Internet. CSS provides support for these smart phones devices through one-on-one and professional development based workshops. Smart phone and other mobile technologies are supported by the District for retrieving email. However, funds to purchase these devices and the data plans necessary to access email are paid by the individual or department.

Printers:
The District has moved to centralized network copiers for printing and scanning in areas where available. Centralized network copiers allow for groups of faculty/staff members to print to a single device instead of issuing each faculty/staff member an individual printer. District issued printers and peripherals do not have a set replacement cycle, resulting in printers on campus that function but may be in excess of 10 years old. Copier/printer repair and toner replacement for all printers in group areas are maintained by CSS or contracted through a third party and managed by Reprographics. Any individual in an office cluster or group area who desires a personal printer will be required to fund that printer and ink replacement out of their department budget or special funding.

Any individual who does not have access to a group printer will be issued a personal printer. CSS provides toner and maintenance for those users.

Student-use computer labs are provided with high-end black and white printers on a ratio of no more than fifteen to one. The need for high-end color printers within a computer lab is evaluated on a curriculum necessity basis. Toner for printers used in computer labs is the responsibility of the department that oversees the lab. Replacement or repairs for all District printer equipment are made on an as needed basis.

Scanners:
The District maintains an increasing number of scanners, including high-speed document scanners used for the document imaging process. Where possible, the District will furnish departments with a single scanner to perform document-imaging processes. Departments or individuals requiring additional scanners will be required to use department or special funding to purchase additional scanners. Replacement or repairs are made as needed.

Digital Signage:
Since 2000, the District has utilized some form of digital signage, which has included large street facing signs with local servers and standalone computers dispersed through the campus running PowerPoint presentations. In 2015, Information Technology moved forward with the intent to unify on- campus digital messaging and worked hand-in-hand with PIO to develop an implementation strategy. The result was two cloud-based solutions that manage the street facing signs on the Valencia and CCC campuses and another cloud based solution for Digital Signage TVs on the Valencia and CCC campuses. By moving to cloud based solutions, signage across both campuses can be easily managed by PIO and allows for users across campus to develop and provide content without the need of complicated user creation tools. When this project started, the District had three street facing signs that were three colors and allowed for limited resolutions. Today we have five HD quality signs across both campuses. In addition, Digital Signage TVs have grown from less than 10, to 37 displays dispersed throughout both campuses.

Projectors:
The District has adopted LCD projectors as the primary means for displaying information from computers in meeting rooms and classrooms. The projectors have been incorporated into our Smart Design rooms and are available on computer carts for checkout from the Computer Support office. The District standard is a mix of Epson and Canon projectors depending on the functionality needed in the location.

Document Cameras:
Document cameras connect to an LCD projector and can display both two and three-dimensional items. The document cameras provide more functionality then the old overhead units and are available in all Smart Design Rooms.

Sound Systems:
Though not technology in an absolute sense, the District maintains a number of fixed location and portable sound systems used to support District events and academic courses. The fixed systems in locations like the stadium, main gymnasium, and the cafeteria are used to provide sound for large events while the smaller, portable systems, can be utilized in any classroom our outdoor location. Information Technology handles repair and replacement of these systems.

The Performing Arts Center:
The Performing Arts Center (PAC) includes sophisticated technology to provide lighting, sound, and special effects for the multitude of performances held in the center. This equipment is supported by the full-time staff of the PAC and has a replacement cycle unique to those systems.

Status of Recommendations from the 2011-2016 Plan:

- Continue with the established five-year computer replacement cycle. **Completed**
- Establish a replacement cycle for the District's Student Information System. **In Progress**
- Fast track the development of a tiered structure for equipment replacement. **In Progress**
- Pursue ongoing funding to implement the equipment replacement plan. **In Progress**

- Establish a replacement cycle for the equipment supporting the Performing Arts Center. **Cancelled**
- Increase the overall staffing of the CSS department. **Completed**
- Secure funding to investigate new technologies. **Completed**
- Develop a searchable inventory of District technology equipment. **Completed**
- Determine the utilization of computer labs and classroom technology to maximize the use of existing computer labs. **Completed**

Recommendations 2017-2022:

- **Continue with the established five-year computer replacement cycle.** Computers and servers that are more than five years old typically no longer possess the processing power or memory to run current application programs and operating systems. Additionally, as a computer ages past the five-year mark, many of the major components begin to deteriorate, increasing downtime and maintenance costs.

- **Establish a replacement cycle for the District's Student Information System.** The ERP hardware should be on a regular replacement cycle. The system components, as they age, become more prone to failure and replacement parts are not easily procured. In addition, with the advances in virtualization, the need to replicate our Enterprise Relational Database in our co-location facility and the recent migration to Microsoft SQL solution, hardware replacement becomes even more critical.

- **Develop a tiered structure for equipment replacement.** The current replacement policy replaces computers and servers strictly based on the age of the hardware as opposed to taking into account what the systems are used for. The result of this policy has been labs and users who utilize resource intense applications wait just as long as other areas whose computing needs are not as critical. A new process should be developed that takes into account the computing needs of users and labs. This new process would require assessing the needs of the users, the applications used on the system, and the recommendations of the application manufacturers when making a replacement determination. A current list of computer labs and their last replacement date is listed in the Appendices of this document.

- **Pursue ongoing funding to implement the equipment replacement plan.** It is imperative that the District fully fund the replacement budget with ongoing funds, when possible, to move away from depending on one-time funding and ensure that the District's technology equipment is current and can support the instructional and administrative needs of the District.

Software

Background:

While computer technology has played a pivotal role in the mission of the college in recent years, it was not until 1997 that computer systems and their accompanying software really began to become critical to the District's operations.

In 1997, the establishment of the Computer Support Services (CSS) department marked the beginning of the centralization of department software and hardware budgets, as well as an official group to provide dedicated support to the District technology. The staff was tasked with the support of approximately 325 computers and a small handful of software applications, including Eudora for email, Microsoft Office 95, dumb terminals to access the student information system and Netscape 3.04 for web browsing. At the time, software was deployed via physical media and computers were setup and installed one computer at a time. As the District technology inventory began to grow, the software inventory followed suit. Critical applications such as Microsoft Office have gone through seven different versions, and Microsoft Operating systems has gone through six separate revisions. The campus implemented a new student information system – Datatel – that was accessible via the campus network. New software and database systems were implemented in nearly every department on campus.

Current Environment:

The current environment supported by the District consists of Apple and Windows operating systems and applications. These applications range from word processing to complicated media design and editing software.

All supported software is maintained, catalogued, and inventoried by the CSS staff. The District has standardized on the following applications for campus computers: Microsoft Office, Microsoft Outlook, Internet Explorer, Firefox, Microsoft Endpoint Security, and Colleague WebUI. The software environment consists of applications that fall into single-user licenses, multi-user licenses, site licenses, and serve- based license categories. CSS monitors and tracks all campus-licensed software. The District maintains a software budget that covers the purchase and subsequent maintenance of standard software used on District computer systems.

Individual departments may purchase and license additional software package once the IT department has reviewed the application's specifications, ensured they comply with District standards, and examined potential problems with their use, especially when integration with other systems is expected. The cost of upgrades and maintenance of individual department purchases is the responsibility of the department.

The District has consolidated the acquisition, installation, support, and cataloging of all standardized District software to the CSS department including Adobe Creative Cloud, Dell Data Protection, Ellucian WebUI, Deep Freeze, Microsoft Office, Microsoft Windows, and Microsoft System Center. The responsibility for inventorying and tracking additional software packages resides in the department that purchased the software. Funding for the purchase of District-wide software has been centralized to the CSS department to assure that all possible discounts are received, software purchased is supported, and that the funding is not reallocated to a different purpose.

The District currently participates in the Microsoft Campus Agreement program through the Foundation for California Community Colleges. The District has been an active participant in the program since its inception in 1999. The program provides the flexibility to install any version of MS Office and Microsoft's operating system on all District-owned computer systems to support our instructional and administrative functions. Participation in this program has saved the Computer Support staff countless hours managing software licenses and has given us the ability to quickly respond (or delay if needed) to operating system or office application upgrades. It also gives us the ability to ensure that all the computer systems in a lab or office area are running the same version of Windows and MS Office for consistency, ease of support, and collaboration.

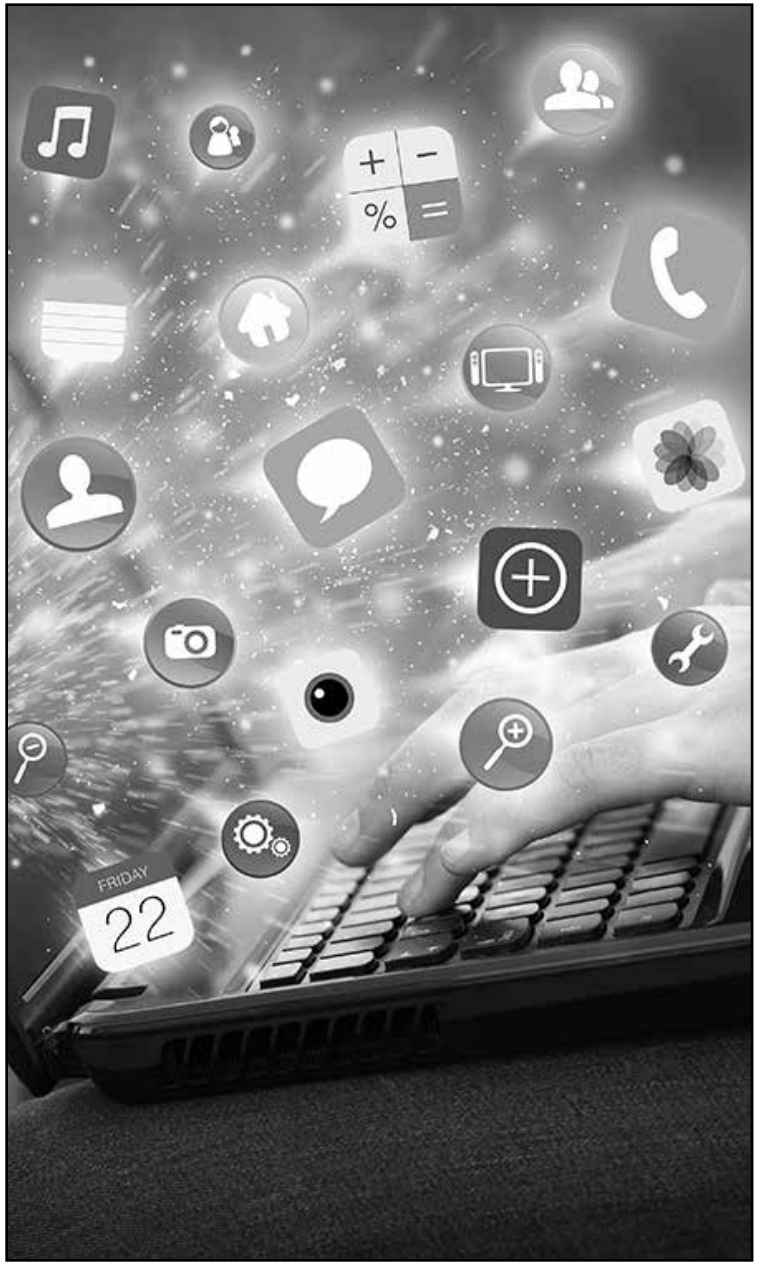
A list of core supported commercial software, freeware applications, and add-ins is maintained by the CSS department, reviewed annually by the Technology Committee and is listed in the Appendix of this document. As part of the District's emergency preparedness efforts, Blackboard Connect was chosen in 2012 to handle the emergency notification needs of the District. A cloud-based system, Blackboard Connect dispatches alerts to students, employees, and tenants via phone calls, email, and text messages.

Status of Recommendations from the 2011-2016 Plan:

- Continue exploration of server and cloud based software licensing. This would allow CSS to deliver application software on demand to computers throughout the District while maintaining compliance using a license server. This would reduce our software costs by reducing the number of copies purchased but making them available to more areas. **Completed**
- Explore Virtual Desktop software. **Completed**
- Continue to support the training of CSS and other staff to provide support for applications. **Completed**
- Evaluate new software as budget permits for possible inclusion in our supported software list. **Completed**
- Explore hiring a dedicated database developer to assist individual departments in maintaining and accessing data. **Not Started**

Recommendations 2017-2022:

- **Expand the deployment of virtual desktop software** to computer labs that would benefit from the flexibility it provides.
- **Expand the use of cloud-based applications** where needed to support the Districts mission and provide business continuity to critical applications in the event of a disaster.
- **Annually review the list of supported software** to reflect the current needs of the District.
- **Purchase and install a comprehensive archive system** for the District's extensive photograph and video collection.
- **Review emergency notification system** and implement necessary changes to meet the emergency notification needs of the District.



Accessibility and Assistive Technology

Background:

The Disabled Students Programs and Services (DSP&S) department and the DSP&S High Tech Center have been the central hub for accessibility and assistive technology and has been able to meet the accessibility needs of the District. Through expansion of accessibility related trainings for faculty and staff, targeted collaboration between DSP&S, Information Technology, and Distance and Accelerated Learning, and the revitalization of the Access Committee, DSP&S--in collaboration with the District have increased the awareness and access to assistive technology and accessible design requirements.

Current Environment:

College of the Canyons continues to grow rapidly. We are growing and expanding both the Valencia and Canyon Country Campus (CCC). The District also has a third, online campus, that continues to grow at a rapid pace. Currently, the majority of the students with disabilities who take classes within the District are eligible to receive services and support through the DSP&S Program, although students with disabilities are not required to enroll in the DSP&S program or accept DSP&S services.

Standardized Access Stations have been made available in many computer labs on campus to ensure accessibility in terms of facilities, furniture, and computer stations. Standardized access stations include 19" flat panel display, electronic adjustable desk that raises and lowers, speakers, headphones, trackball mouse, natural keyboard, and assistive software. Current assistive software that is deployed campus wide includes JAWS, Kurzweil 3000, and Dragon Naturally Speaking.

The Canyon Country Campus, which has grown significantly over the past five years, continues to prove somewhat of a challenge in terms of being made accessible to the high standards of the District. This is in large part due to the modulated and temporary buildings that will eventually be replaced by permanent facilities, including some schedule building removal/replacement that will be occurring over the next several years.

TTY phones are available in the Administration building, DSP&S office, and Facilities for hearing impaired students and staff at the Valencia campus. The District maintains one Braille printer, multiple audible document reader, and multiple scanners. The District also maintains screen reading software, voice recognition software, text to speech software, screen magnification software, and text grabbing software.

In addition, the Windows 7 and 10 operating systems provide the ability to adjust screen colors and resolution, as well as font size and contrast, with accessible web browsers such as Opera, Mozilla Firefox, and Chrome to provide access for visually impaired users. The Macintosh computers and Macintosh computer labs, feature built in accessibility options such as zoom, keyboard navigation, sticky keys, speech recognition, and visual alerts.

The staff of the District's DSP&S Lab are trained on the proper use of assistive technology and provides information when needed to faculty, staff, and students. Trainings for faculty and staff of the District are held throughout the year and cover a variety of topics including Section 508, Accessible Digital Content Design, Advanced Section 508, and other topics that cover accessibility within the District.

Accessibility FLEX trainings for faculty and staff are conducted at least once a month by the DSP&S High Tech Center/Access Coordinator III and most trainings are available online as archived sessions. In addition to providing scheduled training, the Access Coordinator provides on-demand or one-on-one training when requested, ensuring up to the minute answers to accessibility questions, concerns, and information are always available. The Access Coordinator coordinates with on legally required accessible technology and content design implementation.

Training is conducted on the ground (face-to-face) and online (CCCConfer, ConferZoom, and WebEx), utilizing live Internet and teleconferencing technologies, state Chancellor funded live captioning services, and open educational resources such as the state OEI project and the College of The Canyons OER repository for archived training videos and examples.

Finally, the DSP&S department has developed and maintains a "Faculty Resources" web page located on the District DSP&S homepage. This page hosts a broad range of information and training materials for District faculty and staff, helping to ensure access to valuable disability related guidelines and design requirements are available, and helping to facilitate a climate and culture of accessibility awareness and pro-activeness.

Status of Recommendations from the 2011-2016 Plan:

- Hire an Alternate Media Production Specialist for in-house captioning and media conversion (as budget permits) **Not Started**
- Install accessible door handles and electronic accessible doors at the Canyon Country Campus regardless of a buildings permanent or temporary status. **Completed**
- Install a TTY phone at the Canyon Country Campus. **???????????**
- Ensure accessible technology is annually inventoried and updated when necessary. **Completed**
- Continue to create a culture of disability awareness and understanding by conducting training workshops regarding disability issues and holding events that promote disability awareness. **Completed**
- Provide an access station in every student computer lab that includes 19" flat panel display, electronic adjustable desk that raises/lowers speakers, headphones, trackball mouse, and assistive software. DSP&S emergency laptops and technology should be factored in to any emergency or evacuation plan should College of The Canyons or the Santa Clarita Community College District be used as an evacuation site. **Completed**
- Continue to replace all third party, non-accessible service machines (Ex. ATMs, Phones, and other third party electronic devices) with accessible service machines. **Completed**
- Create adaptive curriculum in the PE field, consisting of adaptive athletic machines designed specifically for people with disabilities, or courses designed for rehabilitation or general fitness for people with disabilities. **Completed**
- Ensure accessible, electronic doors are installed in all buildings, including vital areas such as the Student Health Office, Admissions and Records, Library Services, and Student Services. **Completed**
- Conduct a semi-annual review of the Districts Web Page to ensure compliance with accessibility standards. **Completed**
- The District should create a faculty Frequently Asked Questions (FAQ) page on the DSP&S web page and should cover the most common questions received from faculty every semester. **Completed**

Recommendations 2017-2022:

- **Hire an accessible content specialist** for in-house digital captioning and digital media conversion (as budget permits).
- **Continue to investigate and adopt automated tools** and methods for our faculty and staff to utilize in creating accessible web based content, including PDF remediation and authoring tools.
- **Investigate and invest in a synchronous, live captioning system** in order to facilitate accessible, online meetings and instruction.
- **Investigate possible funding opportunities** for accessible tools, technologies, and resources, including captioning and electronic content creation.
- **Establish and publish a document or webpage** that containing information on the workflow of individuals and/or departments responsible for the various aspects of accessible technology, including 508 compliance, 504 compliance, accessible web based content, general accessibility services, accessibility policies and procedures, and contact information to address accessibility related issues.
- **Identify and install accessible, adjustable instructor stations** in all classrooms owned by the District.

Enterprise Resource Planning System

Background:

The District's Enterprise Resource Planning System (ERP) helps the college manage major tasks such as budgeting, student registration, class placement, as well as many peripheral needs.

In 1982 class registration was done with a punch card system written in RPG and COBOL programming languages. At the time, College of the Canyons FTES was 3,100. Then in 1990, the system migrated to a true database (Aldrich System). This system was built from scratch and responsible for schedules, rosters, course files, and the College catalog. FTES continued to increase and for the 1993-94 school year, the total was 4,280.

Between 1995 and 1998, phone registration was added (EPOS), and FTES reached 5,005. Staffing was increased to handle the additional systems including the first full-time programmer. In addition, the department began working on a solution for the Y2K problem that would make the existing Aldrich system obsolete.

In 1998, the department began migrating from the Aldrich registration system to Datatel's Colleague ERP system. The new system went live in Fall 1999 with registration, phone registration, and added Human Resources and the Colleague Financial modules. FTES for 1999-2000 was 6,957, and continued to rise.

2001-05 was spent adding additional functionality to the system including Web Registration. This allowed students to register online in addition to registering over the phone increasing the capacity of the registration system to accommodate the growing number of students attending the college.

2006-2008 began the evolution of the Datatel system from a proprietary database into a uniform software. This change would allow other third party products to connect to the system and improve the functionality and their services provided by the ERP system. The migration required a rebuilding and restructuring of the database that was significant but would bring great advantages to the college.

2009-2011 saw the addition of third party products and the improvement of reporting and tracking through the system. One of the biggest additions was a software called Informer. Informer allowed custom made reports to be built and shared across campus so that different departments could access data on demand instead of waiting for it to be produced by the MIS department. Well-informed users could also customize the reports to their own needs and allowed for accurate and timely reporting across the system.

2012-2014 continued to see a tremendous growth of students as well as an increase of the functionality of the ERP system. In 2014 the system was migrated from a Unidata database to a SQL database system for a more robust and reliable functionality of the system. The system gained the ability to text students before registration and counseling appointments that has vastly increased the rate of response to these events. The ERP was further enhanced with a self-service functionality that allows students to submit documents, check status, and get assistance concerning registration, financial aid, and soon to include student finance. The number of systems attached to the ERP system has grown in size over the past few years. The major additions of software that work in tandem with the ERP system are Informer, which performs the majority of our custom reports, and Tableau which gives a graphical representation of data over time. Both of these systems reference live system data, but in time, they will work off a reporting server to lower the amount of resources being taken from the live system during busy periods such as registration.

Current Environment:

The Colleague System tracks student enrollment, academic progress, financial aid, and other related student service items. This system also helps the college manage its course catalog, scheduling, financial records including the budget for all departments, as well as keeping records for the purposes of grades, evaluations, and human resources. The ERP system and third party reporting services are in use daily by over 200 employees to access information to help their departments be successful. Attached to the enterprise system are many software systems that complement the ERP functions. Some of these systems include online orientation and registration, texting students for class and campus updates, self-service modules that allow the students to have access to campus support from anywhere online, and increased web access to reports for staff that helps with the planning and scheduling of classes and events. While the ERP system accomplishes a lot of the college's needs, it is still being improved by routine patches and updates at the software level, and additional customizations and 3rd party additions that fit into College of the Canyons technological vision for the future.

The biggest goals for our ERP system are to increase the usability of the software for the college's primary constituents, the students. Over their academic career, students will spend hours in line and being helped by student services staff to get basic information that is only found in the record keeping system. The ERP system and its development seeks to reduce the time and hassle a student experiences by waiting in line to receive basic school related information. Common college student needs are being met by online program additions such as student education planning, student financial aid, and self-service graduation petitions that will allow students to understand their progress and make requests of the staff at any time and from any location. This allows students the flexibility to get answers when they need them and free up staff from front counter duties so that they can focus their time on more complex student needs.

The ERP system is also being leveraged to bring data not just to the student, but also to the student's laptop, tablet, and phone. Students these days are more connected to the internet than ever before. To cater to their success, the system provides the information and access to where they will most be able to take advantage of it. To this end, the ERP system now includes self-service modules for student education planning, registration, and financial aid. These modules allow students to check their status, register for classes, and turn in forms day or night from wherever they may reside. This allows our college to meet the demand of students in a timelier manner, and allows support staff to have access to data right away instead of needing to scan or enter the data manually.

While College of the Canyons has been at the forefront of programming customized screens and processes to make the work of staff easier, it has also hindered our ability to use the Colleague solution as was intended. This often results in excessive work being required for each set of patches, and limiting users from being able to take advantage of new programming provided by Ellucian. Planning and consulting is being secured to help reduce the amount of customizations and bring the system back to a more "vanilla" standard of usage. This will allow users to take full advantage of the software modules as they were intended, and allow the MIS department to focus on improved reporting and integration with external systems that is a very important need that has not always been the primary focus of the department during the time of customizations.

The amount of information stored inside the ERP system has grown in leaps and bounds over the past few years. Not only has the amount of students and classes increased consistently over the past 10 years, but the tracking of demographics, classroom size and availability, as well as other measures of student success have increased. To track and measure these metrics, reporting has grown into a high priority of the MIS department. To this end, there are currently a two additional reporting systems attached to the ERP system to help provide more intricate and intelligent data. The ERP system does not fully provide the necessary details of information for the state and staff who seek to measure every variable of success for students and the college as a whole. To improve upon this, the college has created and continues to refine the Informer and Tableau systems. Informer works to build custom reports in a flexible way that allows for faculty and staff to adjust reports and make reports responsive to their needs. There are currently over 1200 active Informer reports that range from Title V tracking to daily enrollment, to budget management. The other system is a Tableau visualization software that measures parts of the college's historical data as a whole, allowing high-level understanding of the attendance and fluctuations in student enrollment and success across the college departments. These systems are great steps at getting the right information to the right people for decision-making, but are constantly being improved and refined as new data and data models become available.

Status of Recommendations from the 2011-2016 Plan:

- Implement system changes necessary for the Student Success Task Force Recommendations. **Completed**
- Develop a comprehensive Educational Plan for students. **Completed**
- Develop online leave request form and approval process. **Completed**
- Maintain the currency of Datatel by applying patches and upgrades on a regularly, scheduled basis. **Completed**
- Upgrade the Datatel System Hardware and Convert the OS and Database to Microsoft products. **Completed**
- To provide and maintain the ability for students to pay their enrollment fees online through Web Advisor. **Completed**
- Created a room availability report in Informer to identify available rooms for scheduling, technology maintenance or facility work. **Completed**
- Create a consistent e-transcript to allow College of the Canyons and other colleges to integrate course transcripts to each other. **Completed**
- Integrate the Tableau software system to strengthen the reporting abilities for campus departments so that they can have information in an accurate and timely manner. **Completed**
- Implement recruiting software to assists ISP and Outreach programs in the recruitment and processing of students for easier transition to attending College of the Canyons. **Completed**

Recommendations 2017-2022:

- **Implement a Web Portal** that gives Students, Staff, and Faculty direct access to notifications, scheduling, messaging and appointments with student services and other person specific features.
- **Develop a mobile application for phones and tablets** that lets students have access to ERP such as registration and paying their fees anywhere they have online access.
- **Creating a single sign on process** that allows users to have a single log in and password for all campus resources.
- **Integrate more Self Service Functionality for both Students and Staff** so that they can perform more everyday functions from any online location without having to wait for an appointment or a staff member to serve them.
- **Create online documentation** for the major systems on campus to help facilitate end user learning and create consistent knowledge of processes amongst users.
- **Create Master Data Views from the Colleague system** that will allow end users to create and execute reports without the need to request the information from the MIS Department.
- **Implement the Elumen system** to help track SLOs in courses along with gathering curriculum data.
- **Allow a student on Financial Aid or who has been awarded a grant to have their fees deducted** from their award prior to distribution to prevent making the students pay out-of-pocket for registration.
- **Improve the parking permit functionality** within Web advisor
- **Reduce the number of customizations** in the system to improve overall operations

Distance Learning

Background:

The mission of the Distance Learning Department is to develop and deliver universally accessible, academically sound, and technologically advanced instruction in alternative delivery formats, while supporting student success, responding to community needs, and promoting faculty innovation.

The Distance Learning (DL) program began in the fall of 1987 with the introduction of College by Television (CTV) courses. The CTV component of the DL program has faded out replaced by online course offerings. The first online courses were offered in the spring of 1999. Prior to 2000, the use of virtual classrooms and online teaching at College of the Canyons was limited to a few early adopters. These individuals experienced little or no institutional training opportunities in the use of online teaching tools and in online teaching pedagogy. In 2000 College of the Canyons had 14 approved online courses and had 249 students enrolled in online courses. The District did not offer any student technical support. Subsequently, as a part of the college's enrollment management strategy in response to reduced state funding, the number of sections declined from 169 to 105 from fall 2008 to fall 2010. The unduplicated student headcount for these sections decreased from 3,806 to 2,330.

In fall 2008, two scheduling formats were introduced because of a Leadership Education in Action Program (LEAP) project "Go: College at the Speed of You." The GO format offers 5-week online classes, primarily in general education courses. The Personalized Accelerated Learning (PAL) format offers 8-week, cohort-based pairings of developmental English and math classes. These formats provide accelerated learning opportunities for students. In December 2007, the classified position of Instructional Design Coordinator was filled. This position supports the successful integration of technology into teaching and learning. The Coordinator designed and delivered training for faculty on distance learning applications and teaching strategies; provided technical and pedagogical assistance to faculty in the development and implementation of distance learning and web-enhanced courses; identified, developed, and maintained tools necessary to support teaching and learning as technology evolves. In summer 2010, this position was re-classified as an administrator with the title Director of Distance and Accelerated Learning. The focus on training faculty remained, with additional managerial tasks over Distance Learning grants and accelerated learning formats (PACE, PAL).

The Educational Technology Committee was re-established in fall 2001. The Educational Technology Committee has proven an important venue for the development of distance learning services for the District. Membership is open to all members of the campus community and is currently comprised of faculty, classified staff, and administrators. The Educational Technology Committee is a sub-committee of the Technology Committee, focused on excellence in teaching and learning. The Educational Technology committee's mission is to introduce, evaluate, and integrate educational technologies in support of excellence in teaching and learning in all delivery formats.

Current Environment:

College of the Canyons currently hosts 262 online sections (Spring 2017) which has increased from 14 in fall 2005. During that same time period, the unduplicated student headcount for these sections increased from 348 to 5,681.

Since spring 2006, The Learning Center (TLC) has provided learning support to students enrolled in distance learning. For students enrolled in online classes, technical support is available via telephone during the normal operating hours of the TLC; email inquiries may be submitted at any time with staff responding during normal operating hours.

For students enrolled in online classes, tutoring inquiries may be submitted via email at any time with staff responding during normal operating hours of the TLC. TLC plans to expand online tutoring in support of online students in other disciplines.

Online tutoring is available for students who are enrolled in an online course and whose instructor has approved tutoring for that course. Students can submit tutoring requests synchronously during business hours and asynchronously after hours through the District's Learning Management System (LMS).

During 2015, a cross-functional group conducted a review of Blackboard, our Learning Management System (LMS) and compared it with Canvas, the LMS adopted by the State Chancellor's office. 30 volunteers came forward, including 20 faculty to evaluate the two LMS systems and make a recommendation. A final recommendation to choose

Canvas as College of the Canyon's LMS was made to the Technology Committee at its summer, 2015 meeting. With support of the Technology Committee, and final board approval, IT and Distance Education have been hosting Canvas training workshops, open labs, and meeting with instructors to prepare for the new LMS launch in Summer 2016.

Recently, a Student Success Coach was added whose responsibilities include introducing our online student population to campus life and the opportunities that area available to them as students at College of the Canyons. In addition, with the implementation of Canvas, student support is now available 24/7 through a combination of the Canvas support center and the staff in the TLC lab on the Valencia campus.

Status of Recommendations from the 2011-2016 Plan:

- Branding and marketing Distance Learning. **Completed**
- Distance Learning presence on COC homepage. **Completed**
- Increase faculty training options/Instructional Designer position. **Completed**
- Online instructor qualifications. Completed
- Processes and procedures for faculty and students available online. **Completed**
- Counseling and student support services online. **Completed**
- 24/7 student technology / Blackboard support. **Completed**

Recommendations 2017-2022:

- **Promote the effective use of the online teaching and learning tools**
- **Increase instructional designer support for faculty**
- **Promote OER and pathways utilizing low to no cost textbooks**
- **Online education continues to be the faster growing sector of US higher education**. The college needs to remain competitive in order to avoid entering a cycle of decline from which it will be difficult to recover. Faculty need to keep their technology and teaching skills sharp, the public needs to know we are active in the market, our course design needs to remain current, our student services need to remain accessible to online students, in order to avoid having to re-build. In order to do so, the college should continue to include reference to the online format in promotional materials.
- A current departmental goal is **to promote quality instruction and effective student learning in hybrid, web enhanced, online, and accelerated formats**. To do so, the department aims to offer workshops and discussions around best practices in online teaching and learning.
- The District must consider how **to encourage and support faculty to integrate the evolving array of multi-media delivery options into their courses**, ranging from high-quality graphics to video conferencing.
- **The District should invest in a studio style room for recording of instructional videos**. The room would be outfitted with a high performance PC, professional grade camera, high fidelity microphone, soundproofing, and appropriate software. The location would provide an atmosphere for creating high quality instructional materials.
- To promote student learning via interaction on online classes, the department **will promote increased use of the web conferencing tools such as CCCConfer/ConferNow**. These free applications provide a rich array of interactive tools.
- **The increase of video presence in the online, hybrid, and web enhanced formats requires instructors and students have access to camera and microphone equipment.** Currently, some computers include camera and microphones. An effort should be made to include both of these technologies with all equipment that can incorporate the technology. This equipment should include staff machines, instructor stations, and computer labs where appropriate.
- The rapid growth of mobile technologies is likely to continue. We recommend that the college **develop a strategy for making teaching and learning opportunities available via mobile devices.** This should include, but not be limited to, MyCanyons, the College website, and distance learning tools such as our LMS. In addition, we should have the resources in place to cultivate the development of mobile learning applications and/or simulations for students. The functionality built into most smartphones (i.e. camera, video, augmented reality tools, etc.) could expand the level of interaction between the student and his or her learning on the device.

Web Site Access and Development

Background:

College of the Canyons' web site was originally hosted on an Apple Macintosh computer accessed by navigating to www.coc.cc.ca.us. The site was eventually transferred to a Windows server running Microsoft's Internet Information Server and the cumbersome URL was changed to www.canyons.edu. Faculty and staff were provided with either Dreamweaver or FrontPage application programs in order to edit the content of their site. Support was available through the Online Services Coordinator in Computer Support to assist the faculty and staff with their page updates.

Current Environment:

College of the Canyons' primary web site (www.canyons.edu) is hosted locally using Microsoft's SharePoint on a virtual server. Supporting sub-sites are hosted on additional servers in order to separate function and isolate systems for manageability. The majority of all web servers are currently virtual and all remaining physical servers are scheduled to be converted to virtual during the next upgrade cycle.

ASP.NET has replaced our previous standard of Active Server Page (ASP) as the primary supported scripting language for web application development. Microsoft SharePoint is the standard web site development application for all website content owners.

Web sites at College of the Canyons fall into three basic categories: administrative, academic departments and faculty. Author access to department web sites is provided to the department chair or supervisor of the department and any designee that they identify. Each faculty member, full-time and adjunct, is provided a web site should they choose to request one. Access to modify the web site content is provided through SharePoint site permissions.

Faculty and staff are provided web site development training through the Professional Development FLEX Training program. Workshops focus on the creation and maintenance of web sites as well as how to create accessible web sites.

Status of Recommendations from the 2011-2016 Plan:

- Evaluate and Implement a Content Management System (CMS). **Completed**
- Datatel UI: Implement the newest user interface to Datatel, which is web-based and will not require a client installation. **Completed**
- Social Networking: Encourage the use of social network technologies by the college community as a means to improve communication and access to the college community in general. **Completed**
- Research & Development (R&D) committee: Form a R&D sub-committee designed to research and evaluate new technologies. **Cancelled**
- Web Designer: Hire a Web Designer, when funding permits, responsible for designing CMS templates with a consistent look and feel, and ensure the college web sites adhere to templates to provide a professional look and feel and easy navigation to relevant content. **Completed**
- Web Programmer: Hire a Web Programmer, when funding permits, responsible for developing new and maintaining and updating existing web applications. **Not Started**

Recommendations 2017-2022:

- **Upgrade SharePoint 2010** to the latest version to increase functionality and provide for responsive design.
- **Add a Web Application Programmer and Web Deveoper** to support the web needs of the District

Learning Resources

Background:

The primary components of Learning Resources are The Learning Center, Library, and Distance and Accelerated Learning. The overarching goal of these departments is to support student success by providing academic support services and materials to all faculty and all students. These departments also support students and faculty at all District sites, including online. Given the heavy technical requirements of Distance Learning, this area will be treated in a separate section.

Library

The Mission of the Library is to support student learning and excellence in teaching, provide access to learning resources in all formats, assist students in locating and evaluating information, and to encourage lifelong learning.

Technology plays a regular role in delivery of services. The library has a wide range of books and databases available to students online, and continues to investigate additional options. Throughout the academic year, the library offers trials on databases. There is an electronic discovery system to make searching these varied resources more efficient. An online 24/7 reference service provides assistance to any library user. Staff rely on computers for daily use in reference, instruction, cataloging, circulation, and reporting. The library provides student-use computers, scanners, copiers, and print stations. These last items are among the most popularly requested.

Library resources have shifted more and more into the online sphere. While students still use print books, the usage of article databases has long been significant, and usage of eBooks grows. Finding the right resource among all of the options is not always easy, and a streamlined electronic discovery system and an online reference service both mitigate that difficulty. EBooks, the discovery system, and online reference have all been supported with endowment funds or other means, but need to have regular financial support through budget augmentation.

The Library maintains a collection of print, non-print, and electronic resources to meet the information demands of the District. The collection is accessed by an online catalog hosted at the Valencia campus. Besides the online catalog, the Library also provides access to a variety of electronic databases including ProQuest, a full-text database that provides access to over 10,000 periodicals; Encyclopedia Britannica Online; Daily Life Through History; Biography in Context; Country Watch; and Issues and Controversies. These databases are available on all networked computers throughout the campus and off-campus with a login provided by the library. Databases are regularly evaluated by librarians, with input solicited from faculty in relevant disciplines. The Library collection contains over 10,000 (through Ebsco Host), also accessible both on and off campus.

Technology available on-site at the Valencia campus library includes 115 student computers. Students also have access to two scanners and A/V equipment for viewing videos and DVDs in most of the group study rooms on the second floor. Except for three dedicated computers for the online catalog, all other computers provide unrestricted Internet access. Wi-Fi access is available throughout the building.

At the Canyon Country campus library there are two computer stations for staff use and eight stations for student use. Wireless access is also available in the Canyon Country campus library. Students on both campuses have access to networked computer systems.

The Learning Center

The mission of The Learning Center (TLC) is to develop student skills, prepare students to be independent learners, create a community of learning, and develop a passion for teaching among student tutors. TLC at the Valencia campus provides tutorial services to students enrolled in math, English, and a variety of other subjects. The lab also includes the largest number of general-use computers on the Valencia campus (124). All of these computers have controlled Internet access, because they are primarily used for instructional programs. The Valencia lab also has 7 joining labs with 187 computer stations. At the Canyon Country Campus, the TLC has 30 general use computers with similar configuration to that at Valencia.

Current Environment:

Every component of Learning Resources has used computer technology for some time; however, in 1997 when the new Library opened, the availability of this technology increased significantly, especially from a student perspective. Students and community members have access to more than 115 networked computer stations and wireless access for lap-

top use throughout the library. The library provides access to a number of online databases that put a vast amount of information at our user's fingertips. Students and College staff members can access these databases both on and off-campus. As new databases are added and print and non-print collections are maintained, the Library will need to continue to expand its instruction program to ensure students' information competency.

In the TLC, the demand for tutorial services has increased dramatically with student enrollment. Even the recently constructed Valencia TLC is reaching its capacity. The TLC Lab maintains more than 300 software programs and many online applications to meet students' educational needs. The TLC uses hardware such as telephones, fax machines, audio-visual equipment, black and white and color copiers, overhead projectors, flatbed scanners, and wheelchair accessible tables to assist students with various needs.

Skilled tutors trained in innovative usage of both software solutions and hardware solutions are required to maintain pace with the ever-evolving technological needs.

Current equipment and configurations include:

- 140 PC virtual computer workstations available for student coursework support
- 4 Macs including music keyboards
- 4 ADA (disability accessible) compliant computers available for disabled students
- Over 300 software programs and online applications with skilled tutors aid students in usage of software to maintain pace with ever-evolving technological needs
- CI Track software used to accurately track and report on positive attendance Computer-based math tutorials such as Course Compass and Academic Systems/Plato supplement classroom instruction
- Computer-based Guided Learning Activities supplement classroom instruction
- Online tutoring capability with Blackboard/Canvas & Webex
- 7 study rooms with flat-screen monitors, webcams, and built-in microphones designed for students to study and practice presentations with classmates and peers
- 4 classrooms with PolyVision smart boards
- 1 classroom with Educast Lecture Capture system used by instructors to record lectures and upload them to Blackboard
- Electronic monitoring software to monitor online exams
- 5 Smart pens,
- WebEx and video camera
- 4 Tablets to assist tutors with research needed to supplement tutoring sessions
- 5 Laptops to ssist tutors with online tutoring sessions, and assist students with self-registration in TLC SARS to schedule testing appointments 2 Pay-to-Print stations for student usage

Status of Recommendations from the 2011-2016 Plan:

- Systematically replace and upgrade, as budget permits, computers, and software for student, faculty, and staff use in all Learning Resources areas and address the technology needs of the new spaces in the Library/TLC addition. **Completed**
- Work with Computer Support Services to increase technical support in all Learning Resources areas. **Completed**
- Expand space in both campus libraries to serve increasing student needs; as permanent buildings are planned, permanent space should be included for the Library, and TLC that will allow them to serve the number of students projected for the Canyon Country Campus. **Completed**
- Library-specific recommendations:
  - Maintain an automated library system with broad functionality. **Completed**
  - Use social media and media sites such as Facebook, Twitter, and YouTube to communicate the library's message to students, faculty staff, and the community-at large and expand the parameters of library service. **Completed**
  - Improve student-printing capabilities through the implementation of wireless printing, the addition of more print stations, and the addition of color-printing service. **Not Started**
  - Assess the Library/Learning Resources support service needed by distance learners and address these needs as appropriate. **Completed**
  - Participate in the community college consortium to purchase additional electronic resources at advantageous rates. **Completed**

- Provide leadership in establishing campus-wide information competency standards. **In Progress**
- Increase the number of student computer stations to meet increased demand. **Completed**
- Update the library's security system to take advantage of the increased functionality and dependability of RF technology. **Completed**
- Meet the technology needs of the users of the new library space coming on-line in Fall 2012 by purchasing computers and computer furniture, collaborative workspace equipment such as Mediascape, and updated media viewing equipment for the study rooms. Add computer stations and new software to the Open Media Lab to accommodate the demand for instructional media viewing. **Completed**
- Purchase and install computers, media players, and other technology items needed to improve service to students at the Canyon Country Campus Library. **Completed**

- TLC specific recommendations
  - Enhance distance-learning support for students through Web-based interactions. Completed
  - Expand current facilities to accommodate the increased tutorial and computing needs of the campus. Completed
  - Enhance support for student use of traditional and specialized classroom software. Completed
  - Purchase and install computers and other technology items needed to improve service to students and staff at the Canyon Country Campus. Completed
  - Develop specialized lab spaces, and staff with required specialized training in the use of: Completed
    - Class capture technology
    - Smart boards
    - High-end document cameras

Recommendations 2017-2022:

The Learning Center

- **Upgrade current testing room** to accommodate specialized software to support and expand CTE and industry certification requirements.
- **Provide programmers** to create, add, update and maintain our Guided Learning Activities (GLAs) to support current classroom curriculum
- **Provide wireless printing** capability from student tablets, laptops and cell phones (e.g., EnvisionWare Software)
- **Provide video conferencing capability** and online tutoring
- **Provide document scanners** that would permit students to scan work to email
- **Provide laptops** to expand online tutoring.

Library

- **Provide wireless printing** throughout the Valencia and Canyon Country Library facilities.
- **Provide technology options** for students such as scanners and portable computer projectors.
- **Provide a change machine** or some means for students to get dollar bills to buy print cards.
- **Many staff computers** in office areas are older, running less efficiently, and should be replaced.
- EBooks, the discovery system, and online reference have all been supported with endowment funds or other means, but need to have **regular financial support** through budget augmentation.

District Data & Voice Network

Background:

A telecommunication infrastructure is a combination of physical connections, hardware, and software that provide for the transmission and reception of voice, data, and video. Data lines and internet access are provided to all student labs, faculty, and staff work locations, and to approximately 99 percent of the traditional classrooms on campus. A firewall, Intrusion prevention system and spam filter are in place to protect the systems from outside intrusion, and virtual LANs are used within the campus to segment the student access machines from those used by employees. A Virtual Private Network (VPN) solution allows employees access to District Data resources from off campus.

The Valencia Campus voice system infrastructure consists of a double stacked switch and a half-stack switch both located on the Valencia campus. These two systems connect via a simulated T1 circuit that enables users to access the voicemail system. The voicemail system is incorporated into each full-time end user's work location desk phone. The voicemail system has several advanced features including fax-on-demand, selective greetings and phone trees. The Valencia campus receives phone service via three Primary Rate Interface (PRI) lines used for both inbound and outbound trunks. 2000 DID (Direct Inward Dialing) lines are in place to allow direct calling of extensions from off campus bypassing both the main number and switchboard. Local and long-distance service is provided through AT&T.

The Canyon Country Campus opened during the 2007 calendar year. The data network consisted of one Main Distribution Frame providing the backbone for a Gigabit Ethernet Network. Internet access is provided via a Gigabit (Gigaman) connection accessed from CENIC. The network encompasses more than 20 pieces of network equipment. Connection between the modular buildings is established via single mode ABF "Air Blown Fiber" and category 6 cabling is used within the modular to provide connectivity to end-user locations. Dual point-to-point T1 lines are used for data connectivity between the Canyon Country Campus and the Valencia Campus.

The Canyon Country Campus voice system infrastructure consisted of a single-stacked switch, which connected via point-to-point T1 back to the double-stack switch at the Valencia campus. The point-to-point T1 allowed Canyon Country users full use of the voicemail system at the Valencia Campus.

The Center for Applied Competitive Technologies is connected to the Valencia campus by a point-to-point T1. This allows the students and employees located there to access District Resources as if they were on the campus. The T1 line also supports voice connections to the District's PBX and voicemail systems, eliminating the need for separate phone systems at the location. The network consists of three pieces of network equipment and category 5e cabling is used within the building to provide connectivity to end-user locations.

To ensure reliability of the data network, battery backups were installed in key locations including primary network closets and the main server room to reduce downtime in the event of a power outage. The campus network backbone and all related network equipment necessary to maintain online registration functions are attached to battery backups that will provide one to two hours of uninterrupted run time. Should a power outage last longer than two hours, a system is in place to properly shut down the equipment to prevent damage

A video network is available for video conferencing by request throughout the Valencia and Canyon Country campuses. The District's Gigabit communications line provides videoconference service to any room on campus with a data jack.

The main phone system at Valencia is connected to the campus generator, and the voicemail system is connected to a battery backup unit. This generator should keep the phone system running indefinitely and the backup will maintain the voicemail system for up to four hours, depending on the system load. Backups of the telephone system settings are done weekly by backing up the settings to the campus network, and then transferring the backups to tape.

One Telecommunications Coordinator supports the District's voice network and the cabling infrastructure for data. The Coordinator works out of the Facilities Department in close coordination with the members of the Computer Support Services staff. The Coordinator manages the PBX system through a PC interface and emulator.

Cell phone reception at the Canyon Country campus is limited due to the geographical location of the campus in relation to the cell towers maintained by the various service providers. As a result, there are very few locations on the campus where the signal is strong enough to send and/or receive phone calls and messaging services.

At the Valencia campus, while cell phone service is satisfactory in the open areas, reception in most of the permanent buildings is sporadic. The District relies on cell phones and text messaging as an important communication tool to inform students of important information about the campus.

Current Environment:

The second communication server on the Valencia campus also supports VOIP and traditional TDM voice communications, and supports over 2,000 ports. The two systems are connected via a single private T1 connection utilizing CCIS (Common Channel Inter-Office Signaling) technology. This enables the two separate systems to function together as if they were virtually one single system. It also enables users to access the VOIP Voicemail/Auto Attendant system that has several advanced features including advanced call processing, unified messaging, personal assistant, fax, speech, and notification.

The Valencia and Canyon Country campuses connect to the Internet via a 1-gigabit connection from CENIC. An additional 100Mbps data connection exists between the two Campuses for redundancy. Access to the Internet is available from all District computer systems and to all student devices via our Wireless Access Points supporting 802.11 a/b/g/n/ac standards.

The Campus receives phone service via three PRI (Primary Rate Interface) Circuits used for both inbound and outbound trunks. There are over 2,000 DID (Direct Inward Dialing) lines in place to allow direct calling of extensions from off-campus locations, bypassing both the main college number and the operator switchboard. AT&T provides campus local and long distance services under the Calnet 3 contract that provides an array of competitively priced telecommunications and network services to California State, and non-state, government entities.

The Valencia Campus also employs an Automated Call Distribution (ACD) system that distributes incoming calls to a specific group of terminals (agents) based on predefined rules. The platform integrates with the Campus Data Network via PC's and facilitates the handling of high call volume evenly among department employees. The system is currently deployed and utilized at the Campus Switchboard, Admissions and Records, Counseling, Student Business Office, Financial Aid, and in Early Childhood Education. Department Supervisors can visually see and track call volume in real-time and make necessary staffing changes to accommodate the influx of outside callers to our campus, therefore minimizing call answer, wait and hold times for better customer service.

The Canyon Country Campus voice system infrastructure consists of a Communications Server located in the communications bunker. It is connected to the Valencia Campus via dual T1 circuits utilizing CCIS (Common Channel Inter-Office Signaling) technology providing seamless integration to the Main Campus Voice Communications Network. This allows the Canyon Country end users full use and access to the voicemail system at the Valencia Campus. Recently, a second Automated Call Distribution (ACD) system was deployed at the Canyon Campus to provide the staff and public the same intelligent call routing technology and capabilities used at the Valencia Campus.

Status of Recommendations from the 2011-2016 Plan:

The future of the District's telecommunications network should be to continue support of the College's mission by providing opportunities for teaching and learning with access to the voice, video, and data network (including Internet access and the latest technologies), not only at the main College of the Canyons site, but at any and all offsite locations owned or leased by the District.

- The District's Local Area data network (LAN) should be expanded to accommodate new technologies including speeds of ten gigabit and faster. **Completed**
- The District should look into upgrading the wireless 802.11 a/b/g equipment to 802.11 a/b/g/n equipment to help increase speed and range. **Completed**
- The District should purchase the software and hardware necessary to integrate the District's email system with the voicemail system. **Completed**
- The District should look at implementing the existing NEC UCB Automated Call Distribution System at the Canyons Country Campus. **Completed**
- A Proctor E911 system should be deployed to accommodate the emergency 911 systems. **Not Started**
- The District should investigate tying the DID phone numbers to the caller identification system so outgoing calls display the actual extension that originated the call instead of the college's main phone number. **In Progress**
- Upgrade the data connection between Valencia and Canyon Country. **Not Started**
- The District should investigate ways to increase the cell phone reception at both campuses. **Completed**
- The District should investigate expanding the use of the generator to include the voicemail system and the servers maintained by Computer Support. **Not Started**

Recommendations 2017-2022:

- **Increase internet connectivity** at both campuses to 10gigabit
- **Increase connectivity between the buildings** at both campuses to 10gigabit
- **Establish a second data core** at the Valencia Campus for system redundancy.
- **Provide for auto system failover** for critical systems
- **Upgrade of the data connection between the campuses** to support the increased data needs as a result of the current and proposed expansion of the Canyon Country campus.
- **Upgrade of the data connection at ADI** from a shared T-1 line for voice and data to accommodate the increased data needs at this location.
- **The District should investigate expanding the use of the generator** to include the voicemail system and the servers maintained by Computer Support. The generator could provide lasting power to the systems in the event that power to the campus could not be restored in a timely manner. Otherwise, after the battery backup is expended on the current system, all voicemail boxes and other District Data resources would be inaccessible.
- **A Proctor E911 system should be deployed** to accommodate the emergency 911 systems. Currently, all calls to 911 from within the campus display the main campus address. A Proctor E911 system will provide the 911 operators with location specific information on the caller so that response time by emergency services could be reduced.
- **The District should tie the DID phone numbers to the caller identification system** so outgoing calls display the actual extension that originated the call instead of the college's main phone number.
- **District should expand the installation of uninterruptible power supplies** in all possible network rooms to maintain power in the event of a brief power outage or spike.
- **Conduct an external vulnerability assessment** of the District's Data network to check for vulnerabilities.

Disaster Recovery/Business Continuity

Backup and Disaster Recovery Background:

The District's technology support was initially separated into two groups: Management Information Systems (MIS), and Computer Support Services (CSS). Each group operated independently from one another with regard to backup and disaster recovery. MIS, maintained the District's Student Information System, running on a UNIX platform while Computer Support maintained the District's Windows server environment including email, file services, application servers, and the District's website.

In 2010, MIS and Computer Support were reorganized under a single Information Technology division. The new organizational model allowed for greater collaboration on backup and disaster recovery processes and started the migration to a unified back up and disaster recovery plan.

Current Environment:

College of the Canyons currently utilizes two data centers at the Valencia campus, a single data center at the Canyon Country campus and a disaster recovery data center located in central California. The data centers utilize virtualization technologies in order to leverage high availability from failover cluster features. Additionally, the Exchange email environment is replicated to the disaster recovery data center. Backups of server data from both the Valencia and Canyon Country campuses are conducted on a regular basis. Data is archived to removable media and transported between campuses on a weekly basis. Student email is hosted on the Microsoft O365 cloud and will be available regardless of the condition of any of the College infrastructure. Password reset functionality is currently linked to the Ellucian Web Advisor system and therefore may present issues to students attempting to reset their password if the Web Advisor system was unavailable. WebEx is a cloud-hosted solution that could be utilized by college faculty and staff who need to meet with their students or other staff members while the college may be uninhabitable.
While the Exchange email environment for college employees is replicated to the disaster recovery data center, it would require manual intervention in order to fail the environment over. This means that during a disaster, it would take some time to re-establish email communication for college employees. Employees with Internet enabled devices would be able to access their email once the Exchange environment fail over is complete.

Status of Recommendations from the 2011-2016 Plan:

- Develop District-Wide Backup/Restore Policies. **Not Started**
- Inform college community on backup/restore policies and procedures. **Not Started**
- Implement Disaster Recovery Plan. **In Progress**
- Investigate Vendor Data Tape Storage Options. **Complete**
- Investigate End-User backup solutions. **Complete**
- Investigate Utilization of Vendor Hosted Solutions. **Complete**

Recommendations 2017-2022:

- **Conduct a business continuity analysis** to identify the necessary processes from all departments of the college that are required to maintain business functionality in the event of disruption to normal processes.
- **Implement replication and high availability failover between all data centers.** This would include replication of the virtual environments between all data centers so that any data center could host the virtual server environment for the college. Alternatively, cloud hosted server environments could be utilized.
- **Identify resources required from all pertinent areas to maintain Business Continuity.** The IT department should develop a plan for quickly securing resources such as laptops and printers to provide to departments in order to maintain Business Continuity.
- **Modify student email password reset functionality** so that it is not dependent on My Canyons. Alternatively, move My Canyons into a cloud hosted server environment to match O365 service availability.
- **Move all critical, enterprise systems to a cloud hosted server environment.**
- **Add additional VPN access points** for remote administration for the various fail-over locations.

Information Security

Background:

Information Security has taken center stage in Information Technology. With the increasing reports of network and system breaches from leading businesses, government entities and even Information Security vendors and experts, it is without question that this topic should be at the forefront of any institution for the sake of protecting the information of their constituents and ensuring business continuity within the organization.

Current Environment:

College of the Canyons currently has a Computer and Network Use policy BP:3720 and associated Administrative Procedures AP:3720, located in the appendix of this document. College of the Canyons' employee user account passwords are set to expire, forcing users to change their passwords on a regular basis. Minimum password complexity requirements have been established in order to ensure utilization of complex passwords. Part time or temporary employee accounts are set to expire on a regular basis, minimizing the number of active accounts. Filters are utilized to limit spam and phishing attacks through email. Intrusion detection is utilized to monitor and respond to potential network threats. Communications between clients and servers are encrypted using industry standard cryptographic practices.

2017-2022 Recommendations:

- **Add/Create an Information Security position** to define, implement and maintain District security policies and procedures
- **Conduct a full security assessment** (threat, risk, and vulnerability) of the District's IT infrastructure
- **Perform routine security audits** to ensure policy compliance
- **Develop Business Continuity / Disaster Recovery plan**
- **Implement user awareness and security compliance** training program
- **Refrain from identifying specific models and versions of hardware and software** in all documents that are made publicly available
- **Refrain from identifying specific security practice details** in all documents that are made publicly available

Technology Support and Staffing

Background:

Prior to 1997, technical support for the District was primarily outsourced or handled by a single computer operator in the Computer Center (now MIS). The District's technology consisted of roughly 325 stand-alone computer systems; a dozen "dumb" terminals, one administrative server, and limited T1 access to administrative areas. The District's student information system was maintained by one Computer Operator, an Assistant Manager, who doubled as a programmer and the Computer Center Director.

In 1997, a Computer Support department was created with three full-time employees, including a Network Manager and two Support Technicians. Over the last 20 years, Information Technology has grown to include technical support, online services, and system administration. In 2005, Audio Visual merged with Information Technology to streamline and integrate the support we provide to the users. In December 2009, the MIS department (formally the Computer Center) merged with Information Technology. The current staffing levels of Information Technology as of February 2017 are 30 FTE.

Position	FTE
Vice President	1
Project Manager	1
Director	3
System Administrator	2
Network Engineer	1
Network Technician 60%	1
Senior Programmer	1
Web Programmer/Analyst	3
Programmer/Analyst	1
Programmer	1
Coordinator	5
Technician	8
Administrative Assistant	1
Help Desk	1.2
TOTAL:	**30.2 FTE**

A current organizational chart is included in the Appendices of this document

Current Environment:

The Information Technology department continues to receive high marks from end users through surveys conducted as part of program review. While the department has been able to maintain the level of customer service with daily work assignments, the department continues to fall behind on longer-term projects.

As of February 1, 2017, the MIS department had 125 work orders outstanding, with the oldest dating back to January 2004. In Computer Support, there are 328 work orders outstanding with the oldest dating back to October 2006.

To put the workload in perspective, over the last three years, the Information Technology area has taken in 32,536 work orders and, excluding cancelled work orders, completed 30,876 for a 90% completion rate.

A Gartner study commissioned by the Chancellor's Office as part of their technology plan II back in 2001 defines the following minimum levels of IT staffing necessary to successfully support an educational institution.

Position	Assumptions
Technical Management	1 Staff per 500 computers
Web Administration	1 Staff per 12,000 FTES
Technical Support Staff	1 Staff per 150 computers
Network Technical Staff	1 Staff
Application Development	2 Staff
Network Systems Admin and Wiring	1 Staff per 300 Computers

The District has made some progress towards the Gartner recommendations but the IT staffing levels are still below these recommendations. Information Technology staffing needs must compete with all other classified staffing requests and non-instructional funding requests from all other District departments. In the past years through savings from our Learning Management System contract, IT has been able to add permanent part time positions in Network and System Administration.

At this time, the CSS department maintains a ratio of one full time equivalent technician for every 444 computers. This is a step in the right direction as we have reduced the support number by 111 computers per technician, but this was achieved by reducing CSS budgets to acquire additional staff. While the department still maintains an excellent level of customer service, the campus technology is still expected to grow and the amount of technology will soon overtake the department's ability to maintain it. With the expected scarcity of future funding for replacements, the additional equipment expected due to new buildings, and the expected failures and end of life of existing campus inventory, it is vital that the CSS department be adequately staffed to maintain the campus technology. The State Chancellor's Office has established a guideline back in 2001 of one technician for every 150 computers, and it is imperative that the District attempt to close this gap when the budget permits.

Status of Recommendations from the 2011-2016 Plan:

- Develop a formula for District-wide technical support staff. **Not Started**

2017-2022 Recommendations:

- The District should add staff in the following areas to ensure adequate support is available for our extensive IT infrastructure:
  - Cyber Security Analyst
  - Administrative Assistant (MIS)
  - Administrative Assistant (CSS)
  - Help Desk CCC
  - Programmer/Analyst
  - Associate Programmer
  - System Administrator III
  - Technology Trainer

Technology Training

Background:

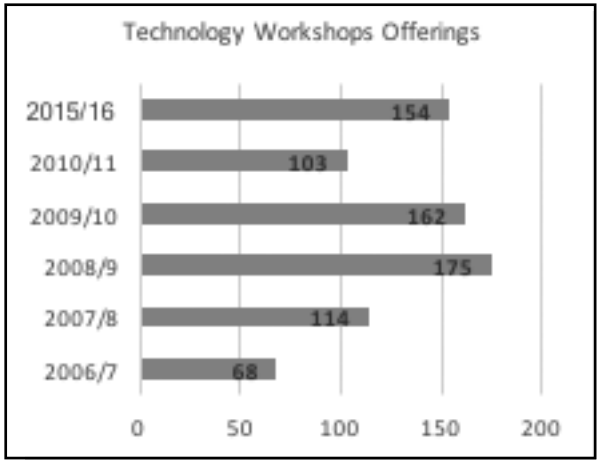
Training in technology was almost non-existent in the 80s and early 90s. Computers represented less than 5 percent of the instructional equipment found on most college campuses. Mainframe systems were widely used and restricted to administrative areas and student services. Presently, computers and technology can be found in every aspect of education from classroom to laboratories to student orientation. Student's currently taking classes have increased technical sophistication over those just a few short years ago. Bring your own device or BYOD has become the norm in many college classrooms. It is imperative that we provide training to our faculty, staff, and administrators to maintain currency in their jobs and disciplines.

Current Environment:

The District, through the Office of Professional Development, provides support for faculty, staff, and administrators to receive technology training. The Director of Professional Development, working with three committees representing administrators, faculty, and classified staff, plans events and advertises upcoming workshops both on and off campus.

Workshops are offered year round to provide employees with on-campus instruction in a variety of software programs. (See Figure 1) These workshops are both one-day and multiple session courses of varying skill levels and intensity, from a basic overview of a product's features to a more comprehensive multi-day session where certain components of a program are highlighted and explained in detail. In addition to in-person workshops, employees have access to online trainings offered through the college's subscription to Lynda.com and other online resources on the IT department website www.canyons.edu/IT.

Fig 1: Technology workshops Offerings



Since faculty have limited time during the semester to attend training classes, Professional Development offers a Spring Flex session and a Fall Flex session. The Spring Flex session is held in January before classes resume for the spring, and the Fall Flex session is held before classes begin in August. During FLEX, faculty are provided with a variety of classes hosted by trainers, District staff, and even publishers. These workshops are meant to highlight new technology and give faculty an opportunity to view up-and –coming trends in educational technology.

All offerings through Professional Development are geared to support a broad audience from the technologically challenged, to the true "techie".

In 1997, a faculty/staff Technology Center was opened. This center provides a location where employees can receive formalized training as mentioned above, drop-in to "play around" with the equipment and software, or receive one-on-one instruction from a Computer Support Services staff member or Professional Development trainer. The Technology Center maintains the latest in technology in both hardware and software. This allows employees to "test drive" certain application programs, Websites, or computer hardware before implementing new technology in their classroom or work location. The Office of Professional Development launched the Summer Technology Institute

in 2009 (see Figure 2). These technology specific workshops are offered during the summer to give employees the opportunity to expand their knowledge and acquire new skills related to technological advancement. And since the summer months are traditionally not as busy as the regular school year, providing these workshops over the summer affords employees the opportunity to obtain technology training that otherwise may be more difficult to obtain during the regular school year.

Fig 2: Summer Technology Institute workshop offerings

Status of Recommendations from the 2011-16 plan:

- Ongoing technology training. **Completed**
- Funding for technology training. **In-Progress**
- Technology trainers. **In-Progres**s
- Continued student training. **Cancelled**
- Online workshop registration. **Completed**

Recommendations 2017-2022:

- **Promote the new Professional Learning Network** offered through the Chancellor's Office
- **Develop COC specific technology training videos**
- **Ongoing Technology Training** for IT Staff
- **Develop Technology Trainers**
- **Information Security Training** for all employees

Online Services

Background:

Online Services is the broad description of services offered to the college community in an online format. These services are typically in lieu of or in addition to a traditional face-to-face or paper-based service. In recent years, departments from all disciplines have been making strides in providing online services to all facets of the college community. Providing online services allows end users flexibility and convenience that could not otherwise be achieved through traditional service models. For example, a student can register for classes in the comfort of their own home rather than stand in line at the Admissions and Records office.

Additionally, online services are facilitated through automated programming methods that do not require the same staffing as traditional service models. For example, the online registration services require only a handful of programmers to develop and maintain while registering the same number of students using traditional service models would require many more Admissions and Records staff members. These services have been further streamlined with the implementation of the newest user interface to Datatel, WebUI.

Current Environment:

Students are provided with access to computer labs found in various locations throughout the District, like Career Services, the Library, the Student Center building, and Canyons Hall. In addition, Student Services offers in-person services for students not yet comfortable with utilizing online services. A District generated student email allows faculty and staff to easily contact and disseminate class information and official college business. Additionally, an online student education plan allows students to develop an individualized plan of courses that meet the educational requirements of students' academic goals.

Full-time faculty and staff are provided with computer workstations that allow them to access the online services from their offices. Part-time faculty can use any computer in the student labs, the Technology Center in BONH-106 or there are several computers available to them in adjunct faculty offices on both campuses. Additionally, wireless network access is available, throughout both campuses, to enable any wireless device access to the online services.

Trained staff are available in open access computer labs, to assist students in the utilization of technology and online services and answer questions on how to access the appropriate services to complete their educational goals. The Professional Development FLEX Program is available to faculty and staff to provide training in the utilization of technology and online services. Additionally, the Computer Support Services staff is available to answer technical questions.

Other administrative online services assist in the day-to-day operation of the college. Curricunet manages curriculum content for all courses taught at COC. Board of Trustees meeting agendas are also managed electronically in an easy to use online system, BoardDocs.

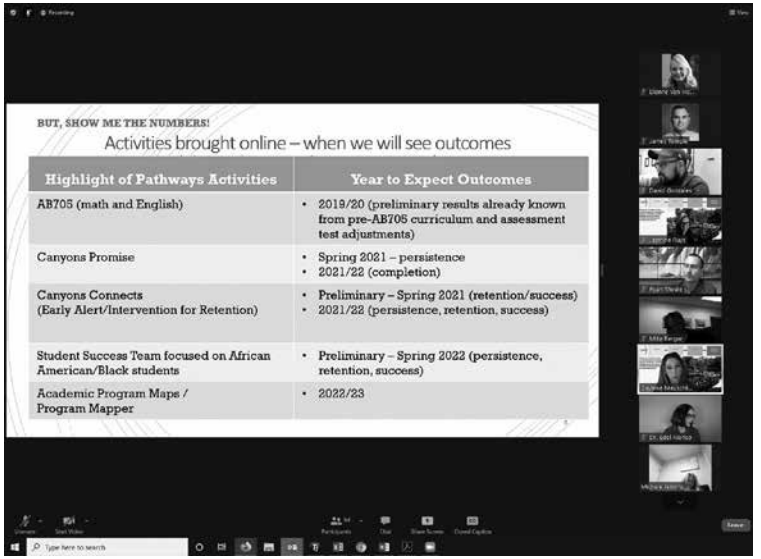
Status of Recommendations from the 2011-2016 Plan:

- Student Email. Research and evaluate Microsoft Live mail and Google Gmail to determine which system to implement for student email. **Completed**
- Datatel Portal. Implement Datatel's portal solution to provide enhanced access to the Web Advisor system and additional features to the online community of users. **Not Started**
- Datatel UI. Implement the newest user interface to Datatel. **Completed**
- Datatel MOX. Implement Datatel's mobile App module to provide end-users access to Web Advisor through their phone. Not Started
- Schedule 25 / R25. Implement the R25 room scheduling system to improve the process of room scheduling and utilization. **Cancelled**
- Curricunet. Migrate from WebCMS to Curricunet for curriculum management. **Completed**
- Student Education Plan. Implement an individualized plan of courses that meet the educational requirements of students' academic goal. **Completed**
- Career Advisor. Allow students and the community to submit career related questions. **Completed**

- Career Related Workshop Clips. Explore the possibilities of providing career related workshop clips on the Career Services web site to expand student and community member accessibility to resources and information. **Not Started**
- Online Board Agenda. Enable the management of Board of Trustees meeting agendas in an easy-to-use online system. **Completed**

Recommendations 2017-2022:

- **Implement Datatel's portal solution** to provide enhanced access to the Web Advisor system and additional features to the online community of users. The Datatel portal will provide future enhancements to the Web Advisor system and provide more community and social networking options to the website.
- **Implement Datatel's mobile App module** to provide end-users access to Web Advisor through their Phone or tablet.
- **Fully implement eTranscriptCA**. This allows users to send and submit collegiate transcripts from COC to outside institutions and receive external transcripts electronically. This process will streamline the time it takes to move transcripts from weeks to minutes.
- Student Services believes it **can achieve an entirely paperless processing system for our staff and students in the next 5 years.** We are currently utilizing a document imaging system, Singularity by Hyland, that has helped the Student Services division step in the right direction of digital document manipulation and archival and are looking to expand those services to allow for a more robust workflow process. In order to accomplish this goal, we will need to migrate our existing system into a new more robust enterprise level document management system and we are currently exploring options to do so. Admissions and Records will utilize the new system to digitize petitions and web forms and make use of digital signatures, all within the context of a workflow platform.
- Work with the MIS and Institutional Research, Planning and Institutional Effectiveness offices to **increase access to Admissions and Records and SSSP related data through Tableau**.
- The District is in the process of deploying **Dell Data Protection and Encryption software to secure information being stored on District owned desktop and laptop computers**. These computers may contain sensitive student, staff or District information, including but is not limited to, social security numbers, credit card information, personnel records, or any other uniquely identifiable information.
- The **addition of the SARS•MSG component** will allow students to be notified and updated via text message when scheduling appointments through the SARS system. This platform will send a brief confirmation upon making an online appointment for a workshop Student Services appointment. Additionally, when checking in to an appointment the service will push out a notification when the student is nearing the front of a wait queue; this informs the student to come back to the service office much like similar restaurant and service technologies.
- **Implement an online Board of Governors Fee Waiver (BOGW) application**. The previous online application service, through XAP Corporation, was discontinued and not replaced.
- **Create and implement an online database** that allows students to register themselves for career related workshops.



Electronic Communication

Background:

The use of electronic communication (email, instant messaging, text messaging, social media sites) as a means of instant communications continues to expand rapidly. Each allows for the efficient exchange of information regardless of the distance between the parties. Electronic communication has become a collaborative tool allowing colleagues to stay in touch, and teachers and students to communicate easily.

Prior to 1997, the college offered limited email accounts, hosted on our Student Information System under the coc.cc.ca.us domain. In 1997, a new email system, NTmail was commissioned and expanded the use of email across the District. With the new email system, the domain name was modified to mail.coc.cc.ca.us.

College of the Canyons moved to a Microsoft Exchange environment in 2000 to provide greater functionality to our email system. In 2001, the Technology Committee approved the addition of canyons.edu as our new email domain. All current users received a new email address in the domain and retained their mail.coc.cc.ca.us address. New users added to the system are provided with an email account in the canyons.edu domain only.

Text messaging is used by the District for the transmission of information. Employee use of text messaging on their personal cell phones to communicate with other staff members has become an internal part of our operation. In addition, the District's Emergency Notification System utilizes text messaging along with emails and phone calls to contact members of our staff and student body in case of a campus emergency.

The District's Public Information Office, as well as other departments, use social media sites like Facebook and Twitter to provide up-to-the-minute information about college events. These social media sites provide yet another conduit for instantly providing information to our constituents.

Current Environment:

District email is provided using a clustered Microsoft Exchange environment in a virtual setting with Microsoft Outlook clients. All full-time faculty and staff have Outlook mail accounts and access is provided for adjunct faculty and part-time employees when requested. Microsoft Outlook for the PC and for the Macintosh are the supported email clients for the District. Outlook seamlessly integrates with Exchange and provides greater functionality than other programs with collaboration options, calendar, contacts, and tasks. In addition, a Web client for Outlook (Outlook Web Access), allows employees with email accounts to check their mail anywhere in the world that has an Internet connection. The District provides employees with access to their email information on their smart phone.

The College email system is setup with a domain name of "canyons.edu". A standard naming convention for all users has been established as first name last name with a period separating the two (example john.smith). This naming convention differs slightly from the logon for the new student information system (Datatel) and the District's network logon.

Each user is provided with a base storage limit for their email account. This space is used to store calendar items, contacts, and email. Requests for an increase in storage space are evaluated and accommodated based on need.

Status of Recommendations from the 2011-2016 Plan:

The District has made great strides in improving the way we communicate electronically. Over the next five years, the District should:

- Pursue the option of integrating the voicemail and email systems. **Completed**
- Standardize the naming convention for email accounts. **Completed**
- As part of our Disaster Recovery plan, house an additional email server at our Colocation facility or at our Canyon Country campus. **Completed**
- Analyze the space needs of our various users and expand our email storage limits. **Completed**
- Deploy a student email solution. **Completed**

Recommendations 2017-2022:

- **Further expand the email storage space.** Storage has been increased over the last five years but still pales in comparison to other colleges and most commercial vendors.
- **Investigate moving employee email to a cloud hosted service like** Google or Microsoft.
- **Eliminate support for the mail.coc.cc.ca.us** legacy email addresses
- **Develop a policy for email accounts for Adjunct faculty and retirees** that addresses the need to maintain the account for continued access.

Facilities

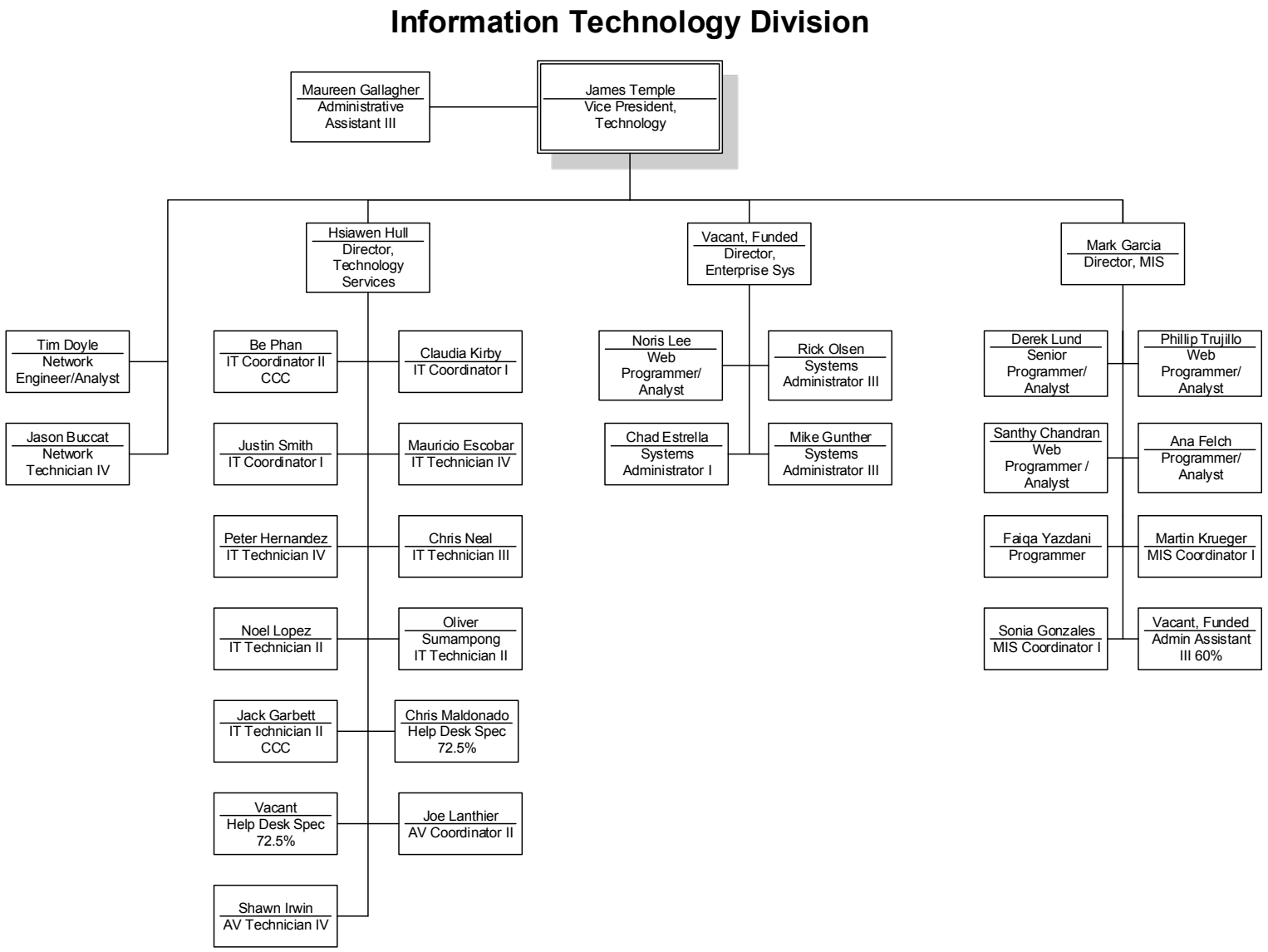
The physical plant that encompasses all of the structures and equipment owned or leased by the District is vital to the success of this Plan. Certain technological considerations must be included to support the future technology growth of the District. Since the facilities of the District fall under their own master plan and it would be redundant to go into detail, below is a list of requirements necessary for this Plan to be successful:

- Adequate power to smart classrooms, server rooms, and network rooms.
- Cabling that meets District standards and reflects current trends in the industry.
- Provisions in new buildings for future technology including additional conduits, equipment rooms, and easily accessible spaces.
- Network rooms that are sufficiently large, properly ventilated, and secured.
- Power receptacles that meet building and fire codes in type, quantity, and location.
- Proper environmental conditions for heating, conditioned, and air conditioning.
- Connection to generator power for critical elements of the data and voice network.
- Security measures such as secured classrooms, key control, and video surveillance.
- Sufficient storage facility to hold computer equipment and peripherals.
- Space for Information Technology in a future permanent building on the Canyon Country Campus that provides office space for staff, storage, an expanded Technology Center, and room for expansion.
- Secure data center to house multiple servers with environmental controls, secure access, and backup power.
- Smart design classrooms and computer labs built to ensure functionality and mobility.
- Proper accessibility for people with disabilities that either meets or exceeds ADA requirements.

Information Technology works closely with the Facilities department to ensure the physical plant is designed to support the current and future technology needs of the District.

Appendice

IT Organizational Chart



As of 7/01/2017

BP 3720 Computer and Network Use

Replaces Policy 815

Reference:

Education Code Section 70902;
Government Code Section 3543.1(b);
Penal Code Section 502;
Cal. Const., Art. 1 Section 1;
17 U.S. Code Sections 101 et seq.

Employees and students who use District computers, networks, related resources and the information they contain have a responsibility not to abuse those resources and to respect the rights of others. The CEO shall establish procedures that provide guidelines to students and employees for the appropriate use of information technologies. The procedures shall include that users must respect software copyrights and licenses, respect the integrity of computer-based information resources, refrain from seeking to gain unauthorized access, and respect the rights of other computer users.

Board Approved: June, 24 2015
See Administrative Procedure 3720
Next Review Date: Fall, 2020

AP 3720 Computer and Network Use

References:

17 U.S. Code Sections 101 et seq.;
Penal Code Section 502,
Cal. Const., Art. 1 Section 1;
Government Code Section 3543.1(b);
Federal Rules of Civil Procedure, Rules 16, 26, 33, 34, 37, 45
Education Code Section 70902

The District Computer and Network systems are the sole property of the Santa Clarita Community College District. The Computer and Network systems are for District instructional and work related purposes only. Any person without proper authorization of the District may not use these resources.

This procedure applies to all District students, faculty, staff, administrators, and to others granted use of District information resources (referred to hereafter as users). This procedure refers to all District information resources whether individually controlled or shared, stand-alone or networked. It applies to all computer and computer communication facilities owned, leased, operated, or contracted by the District. This includes personal computers, workstations, mainframes, minicomputers, and associated peripherals, websites and electronic mail, software and information resources, regardless of whether used for administration, research, teaching or other purposes.

Conditions of Use

Information Technology may define additional conditions of use for information resources under their control. These statements must be consistent with this overall procedure but may provide additional detail, guidelines and/or restrictions.

Legal Process

This procedure exists within the framework of other District Board Policies and state and federal laws. However, this procedure is not intended to restrict the academic freedom of the faculty as stated in other District Board policies. A user of District information resources who is found to have violated any of these procedures will be subject to loss of information resources privileges and possible disciplinary action as described in Board Policy 7360 (Academic Employees), 7365 (Classified Employees), 5530 (Student), and their associated Administrative Procedures and/or civil or criminal legal action.

Copyrights and Licenses

Computer users must respect copyrights and licenses to software and other on-line information.

- **Copying** - Software protected by copyright may not be copied except as expressly permitted by the owner of the copyright or otherwise permitted by copyright law. Protected software may not be copied into, from, or by any District facility or system, except pursuant to a valid license or as otherwise permitted by copyright law.
- **Number of Simultaneous Users** - The number and distribution of copies must be handled in such a way that the number of simultaneous users in a department does not exceed the number of original copies purchased by that department, unless otherwise stipulated in the purchase contract.

- **Copyrights** - In addition to software, all other copyrighted information (text, images, icons, programs, etc.) retrieved from computer or network resources must be used in conformance Page 1 with applicable copyright and other law. Copied material must be properly attributed. Plagiarism of computer information is prohibited in the same way that plagiarism of any other protected work is prohibited.

Integrity of Information Resources
Computer users must respect the integrity of computer-based information resources.

- **Modification or Removal of Equipment** - Computer users must not attempt to modify or remove computer equipment, software, or peripherals that are owned by others without proper authorization.
- **Unauthorized Use** - Computer users must not interfere with others access and use of the District computers. This includes but is not limited to: the sending of chain letters or excessive messages, either locally or off-campus; monopolizing printing resources by making excess copies of documents, files, or data when efficient alternatives are known by the user to be available; running grossly inefficient programs when efficient alternatives are known by the user to be available; unauthorized modification of system facilities, operating systems, or disk partitions; attempting to crash or tie up a District computer or network; and damaging or vandalizing District computing facilities, equipment, software or computer files.
- **Unauthorized Programs** - Computer users must not intentionally develop or use programs which disrupt other computer users or which access private or restricted portions of the system, or which damage the software or hardware components of the system. Computer users must ensure that they do not use programs or utilities that interfere with other computer users or that modify normally protected or restricted portions of the system or user accounts. The use of any unauthorized or destructive program will result in disciplinary action as provided in this procedure, and may further lead to civil or criminal legal proceedings.

Unauthorized Access
Computer users must not seek to gain unauthorized access to information resources and must not assist any other persons to gain unauthorized access.

- **Abuse of Computing Privileges** - Users of District information resources must not access computers, computer software, computer data or information, or networks without proper authorization, or intentionally enable others to do so, regardless of whether the computer, software, data, information, or network in question is owned by the District. For example, abuse of the networks to which the District belongs or the computers at other sites connected to those networks will be treated as an abuse of District computing privileges.
- **Reporting Problems** - Any defects discovered in system accounting or system security must be reported promptly to the appropriate system administrator so that steps can be taken to investigate and solve the problem.
- **Password Protection** - A computer user who has been authorized to use a password protected account may be subject to both civil and criminal liability if the user discloses the password or otherwise makes the account available to others without permission of the system administrator. Page 4

Usage
Computer users must respect the rights of other computer users. Attempts to circumvent these mechanisms in order to gain unauthorized access to the system or to another person's information are a violation of District procedure and may violate applicable law.

- **Unlawful Messages** - Users may not use electronic communication facilities to send defamatory, fraudulent, harassing, obscene, threatening, or other messages that violate applicable federal, state or other law or District policy, or which constitute the unauthorized release of confidential information.
- **Commercial Usage** - Electronic communication facilities may not be used to transmit commercial or personal advertisements, solicitations or promotions (see Commercial Use, below). Public discussion groups may be designated for selling items by Information Technology and may be used appropriately, according to the stated purpose of the group(s).

- **Information Belonging to Others** - Users must not intentionally seek or provide information on, obtain copies of, or modify data files, programs, or passwords belonging to other users, without the permission of those other users.
- **Rights of Individuals** - Users must not release any individual's (student, faculty, and staff) personal information to anyone without proper authorization.
- **User identification** - Users shall not send communications or messages anonymously or without accurately identifying the originating account or station.
- **Accurate Information** – Users shall not knowingly post on the District's Web server or distribute by any other electronic means information that the user knows to be inaccurate or in violation of other Board policies or District procedures.
- **Political, Personal, and Commercial Use** - The District is a non-profit, tax-exempt organization and, as such, is subject to specific federal, state and local laws regarding sources of income, political activities, use of property and similar matters.
    - **Political Use** - District information resources must not be used for partisan political activities where prohibited by federal, state, or other applicable laws.
    - **Personal Use** - District information resources should not be used for personal activities not related to appropriate District functions, except in a purely incidental manner.
    - **Commercial Use** - District information resources should not be used for commercial purposes. Users also are reminded that the domains registered by the District on the Internet have rules restricting or prohibiting commercial use, and users may not conduct activities not appropriate within those domains.

Nondiscrimination

All users have the right to be free from any conduct connected with the use of the Santa Clarita Community College District network and computer resources which discriminates against any person on the basis of national origin, religion, age, gender, gender identity, gender expression, race or ethnicity, color, medical condition, genetic information, ancestry, sexual orientation, marital status, physical or mental disability, pregnancy, or military and veteran status, or because he/she is Page 3 perceived to have one or more of the foregoing characteristics, or based on association with a person or group with one or more of these actual or perceived characteristics. No user shall use the District network and computer resources to transmit any message, create any communication of any kind, or store information which violates any District policy, District procedure state law, or federal law regarding discrimination or harassment, or which is defamatory or obscene, or which constitutes the unauthorized release of confidential information.

Disclosure

No Expectation of Privacy - The District reserves the right to monitor all use of the District network and computer resources to assure compliance with these policies. Users should be aware that they have no expectation of privacy in the use of the District network and computer resources. The District will exercise this right only for legitimate District purposes, including but not limited to ensuring compliance with this procedure and the integrity and security of the system.

Possibility of Disclosure - Users must be aware of the possibility of unintended disclosure of communications.

Retrieval - It is possible for information entered on or transmitted via computer and communications systems to be retrieved, even if a user has deleted such information.

Public Records - The California Public Records Act (Government Code Sections 6250 et seq.) includes computer transmissions in the definition of "public record" and nonexempt communications made on the District network and computer must be disclosed if requested by a member of the public.

Litigation - Computer transmissions and electronically stored information may be discoverable in litigation.

Dissemination and User Acknowledgment

All users shall be provided copies of these procedures and be directed to familiarize themselves with them. All users will be asked to sign or electronically accept the following statement acknowledging their responsibilities under Board Policy 3720.

I understand that I have been granted access to the District's Information Technology resources and may have access to confidential information. I agree to abide by the standards set forth in this procedure and I am aware that violations of the Board Policy on Computer and Network Usage (Board Policy 3720) may subject me to disciplinary action.

Furthermore, all faculty, staff and administrative users of the District information system will be presented with the following statement when logging into the system:

CONFIDENTIALITY STATEMENT

State and federal law protect the confidentiality of student, employee, and application records. I understand that all records accessed are confidential and subject to all policies and state or federal laws.

I agree that I will not access any information unless authorized to do so.

I agree that I will maintain the confidentiality of information in compliance with college policies and state and federal laws, both during and after employment.

I understand that if I fail to abide by these conditions I may be subject to formal disciplinary action up to and including, loss of information resource privileges, disciplinary suspension or termination from employment, and/or civil or criminal legal action.

I understand that by proceeding into the College of the Canyons College software system, I agree to comply with this statement.

Revised 12/02, 5/03, 11/14, 5/15

Reviewed: 06/24/15

List of District Supported Software

Operating Systems

Windows 10
Windows 7
OS X 10.11 or Later
Android
iOS

District Applications

Colleague
WebAdvisor
Onbase
Greentree
Canvas
Program Review
Fotoware
Sharepoint
SARS
MyGradeBook
Alertus

Desktop Applications

Chrome
Firefox
Internet Explorer
Edge
Safari
Microsoft Office
ConferZoom
WebEx
DropBox
BitDefener
OneDrive
FortiClient
Dell DDPE
Netsupport
VLC

Student Applications

Office 365
AdobeCC
Canvas
WebAdvisor
AutoDesk
Deep Freeze
SPSS (Student Use Only)
Final Cut Pro (MEA)
Solidworks
JAWS
Voyager

Summary of Recommendations 2017-2022

Hardware

- **Continue with the established five-year computer replacement cycle.** Computers and servers that are more than five years old typically no longer possess the processing power or memory to run current application programs and operating systems. Additionally, as a computer ages past the five-year mark, many of the major components begin to deteriorate, increasing downtime and maintenance costs.
- **Establish a replacement cycle for the District's Student Information System.** The ERP hardware should be on a regular replacement cycle. The system components, as they age, become more prone to failure and replacement parts are not easily procured. In addition, with the advances in virtualization, the need to replicate our Enterprise Relational Database in our co-location facility and the recent migration to Microsoft SQL solution, hardware replacement becomes even more critical.
- **Develop a tiered structure for equipment replacement.** The current replacement policy replaces computers and servers strictly based on the age of the hardware as opposed to taking into account what the systems are used for. The result of this policy has been labs and users who utilize resource intense applications wait just as long as other areas whose computing needs are not as critical. A new process should be developed that takes into account the computing needs of users and labs. This new process would require assessing the needs of the users, the applications used on the system, and the recommendations of the application manufacturers when making a replacement determination. A current list of computer labs and their last replacement date is listed in the Appendices of this document.
- **Pursue ongoing funding to implement the equipment replacement plan.** It is imperative that the District fully fund the replacement budget with ongoing funds, when possible, to move away from depending on one-time funding and ensure that the District's technology equipment is current and can support the instructional and administrative needs of the District.

Software

- **Expand the deployment of virtual desktop software** to computer labs that would benefit from the flexibility it provides.
- **Expand the use of cloud-based applications** where needed to support the Districts mission and provide business continuity to critical applications in the event of a disaster.
- **Annually review the list of supported software** to reflect the current needs of the District.
- **Purchase and install a comprehensive archive system** for the District's extensive photograph and video collection.
- **Review emergency notification system** and implement necessary changes to meet the emergency notification needs of the District.

Accessibility and Assistive Technology

- **Hire an accessible content specialist** for in-house digital captioning and digital media conversion (as budget permits).
- **Continue to investigate and adopt automated tools** and methods for our faculty and staff to utilize in creating accessible web based content, including PDF remediation and authoring tools.
- **Investigate and invest in a synchronous, live captioning system** in order to facilitate accessible, online meetings and instruction.
- **Investigate possible funding opportunities** for accessible tools, technologies, and resources, including captioning and electronic content creation.
- **Establish and publish a document or webpage** that contains information on the workflow of individuals and/or departments responsible for the various aspects of accessible technology, including 508 compliance, 504 compliance, accessible web based content, general accessibility services, accessibility policies and procedures, and contact information to address accessibility related issues.
- **Identify and install accessible, adjustable instructor stations** in all classrooms owned by the District.

Enterprise Resource Planning System

- **Implement a Web Portal** that gives Students, Staff, and Faculty direct access to notifications, scheduling, messaging and appointments with student services and other person specific features.
- **Develop a mobile application for phones and tablet**s that lets students have access to ERP such as registration and paying their fees anywhere they have online access.
- **Creating a single sign on process** that allows users to have a single log in and password for all campus resources.
- **Integrate more Self Service Functionality for both Students and Staff** so that they can perform more everyday functions from any online location without having to wait for an appointment or a staff member to serve them.
- **Create online documentation for the major systems** on campus to help facilitate end user learning and create consistent knowledge of processes amongst users.
- **Create Master Data Views from the Colleague system** that will allow end users to create and execute reports without the need to request the information from the MIS Department.
- **Implement the Elumen system to help track SLOs** in courses along with gathering curriculum data.
- **Allow a student on Financial Aid or who has been awarded a grant to have their fees deducted** from their award prior to distribution to prevent making the students pay out-of-pocket for registration.
- **Improve the parking permit** functionality within Web advisor
- **Reduce the number of customizations** in the system to improve overall operations

Distance Learning

- **Promote the effective use of the online teaching** and learning tools
- **Increase instructional designer support** for faculty
- **Promote OER** and pathways utilizing low to no cost textbooks
- **Online education continues to be the faster growing sector of US higher education.** The college needs to remain competitive in order to avoid entering a cycle of decline from which it will be difficult to recover. Faculty need to keep their technology and teaching skills sharp, the public needs to know we are active in the market, our course design needs to remain current, our student services need to remain accessible to online students, in order to avoid having to re-build. In order to do so, the college should continue to include reference to the online format in promotional materials.
- A current departmental goal is **to promote quality instruction and effective student learning in hybrid, web enhanced, online, and accelerated formats.** To do so, the department aims to offer workshops and discussions around best practices in online teaching and learning.
- The District must consider how **to encourage and support faculty to integrate the evolving array of multi-media delivery options into their courses**, ranging from high-quality graphics to video conferencing.
- **The District should invest in a studio style room for recording of instructional videos**. The room would be outfitted with a high performance PC, professional grade camera, high fidelity microphone, soundproofing, and appropriate software. The location would provide an atmosphere for creating high quality instructional materials.
- To promote student learning via interaction on online classes, the department **will promote increased use of the web conferencing tools such as CCCConfer/ConferNow**. These free applications provide a rich array of interactive tools.
- **The increase of video presence in the online, hybrid, and web enhanced formats requires instructors and students have access to camera and microphone equipment.** Currently, some computers include camera and microphones. An effort should be made to include both of these technologies with all equipment that can incorporate the technology. This equipment should include staff machines, instructor stations, and computer labs where appropriate.
- The rapid growth of mobile technologies is likely to continue. We recommend that the college **develop a strategy for making teaching and learning opportunities available via mobile devices.** This should include, but not be limited to, MyCanyons, the College website, and distance learning tools such as our LMS. In addition, we should have the resources in place to cultivate the

development of mobile learning applications and/or simulations for students. The functionality built into most smartphones (i.e. camera, video, augmented reality tools, etc.) could expand the level of interaction between the student and his or her learning on the device.

Web Site Access and Development

- **Upgrade SharePoint 2010** to the latest version to increase functionality and provide for responsive design.
- **Add a Web Application Programmer and Web Designer** to support the web needs of the District

Learning Resources

- **The Learning Center**
  - **Upgrade current testing room** to accommodate specialized software to support and expand CTE and industry certification requirements
  - **Provide programmers** to create, add, update and maintain our Guided Learning Activities (GLAs) to support current classroom curriculum
  - **Provide wireless printing capability** from student tablets, laptops and cell phones (e.g., EnvisionWare Software)
  - Provide video conferencing capability and online tutoring
  - **Provide document scanners** that would permit students to scan work to email
  - **Provide laptops** to expand online tutoring

- **Library**
  - **Provide wireless printing** throughout the Valencia and Canyon Country Library facilities.
  - **Provide technology options** for students such as scanners and portable computer projectors.
  - **Provide a change machine** or some means for students to get dollar bills to buy print cards.
  - Many **staff computers** in office areas are older, running less efficiently, and should be **replaced**.
  - EBooks, the discovery system, and online reference have all been supported with endowment funds or other means, but need to have **regular financial support** through budget augmentation.

District Data & Voice Network

- **Increase internet connectivity** at both campuses to 10gigabit
- **Increase connectivity between the buildings** at both campuses to 10gigabit
- **Establish a second data core** at the Valencia Campus for system redundancy.
- **Provide for auto system failover** for critical systems
- **Upgrade of the data connection between the campuses** to support the increased data needs as a result of the current and proposed expansion of the Canyon Country campus.
- **Upgrade of the data connection at ADI** from a shared T-1 line for voice and data to accommodate the increased data needs at this location.
- **The District should investigate expanding the use of the generator** to include the voicemail system and the servers maintained by Computer Support. The generator could provide lasting power to the systems in the event that power to the campus could not be restored in a timely manner. Otherwise, after the battery backup is expended on the current system, all voicemail boxes and other District Data resources would be inaccessible.
- **A Proctor E911 system should be deployed** to accommodate the emergency 911 systems. Currently, all calls to 911 from within the campus display the main campus address. A Proctor E911 system will provide the 911 operators with location specific information on the caller so that response time by emergency services could be reduced.
- **The District should tie the DID phone numbers to the caller identification system** so outgoing calls display the actual extension that originated the call instead of the college's main phone number.
- **District should expand the installation of uninterruptible power supplies** in all possible network rooms to maintain power in the event of a brief power outage or spike.
- **Conduct an external vulnerability assessment** of the District's Data network to check for vulnerabilities.

Disaster Recovery/Business Continuity

- **Conduct a business continuity analysis** to identify the necessary processes from all departments of the college that are required to maintain business functionality in the event of disruption to normal processes.
- **Implement replication and high availability failover** between all data centers. This would include replication of the virtual environments between all data centers so that any data center could host the virtual server environment for the college. Alternatively, cloud hosted server environments could be utilized.
- **Identify resources required from all pertinent areas to maintain Business Continuity**. The IT department should develop a plan for quickly securing resources such as laptops and printers to provide to departments in order to maintain Business Continuity.
- **Modify student email password reset functionality** so that it is not dependent on My Canyons. Alternatively, move My Canyons into a cloud hosted server environment to match O365 service availability.
- **Move all critical, enterprise systems to a cloud hosted server environment.**
- **Add additional VPN access points** for remote administration for the various fail-over locations

Information Security

- **Add/Create an Information Security position** to define, implement and maintain District security policies and procedures
- **Conduct a full security assessment** (threat, risk, and vulnerability) of the District's IT infrastructure
- **Perform routine security audits** to ensure policy compliance
- **Develop Business Continuity / Disaster Recovery plan**
- Implement user awareness and security compliance training program
- **Refrain from identifying specific models and versions of hardware and software in all documents** that are made publicly available
- **Refrain from identifying specific security practice details** in all documents that are made publicly available

Technology Support and Staffing

- **The District should add staff in the following areas** to ensure adequate support is available for our extensive IT infrastructure:
  - Cyber Security Analyst
  - Administrative Assistant (MIS)
  - Administrative Assistant (CSS)
  - Help Desk CCC
  - Programmer/Analyst
  - Associate Programmer
  - System Administrator III
  - Technology Trainer

Technology Training

- Promote the new Professional Learning Network offered through the Chancellor's Office
- Develop COC specific technology training videos
- Ongoing Technology Training for IT Staff
- Develop Technology Trainers
- Information Security Training for all employees

Online Services

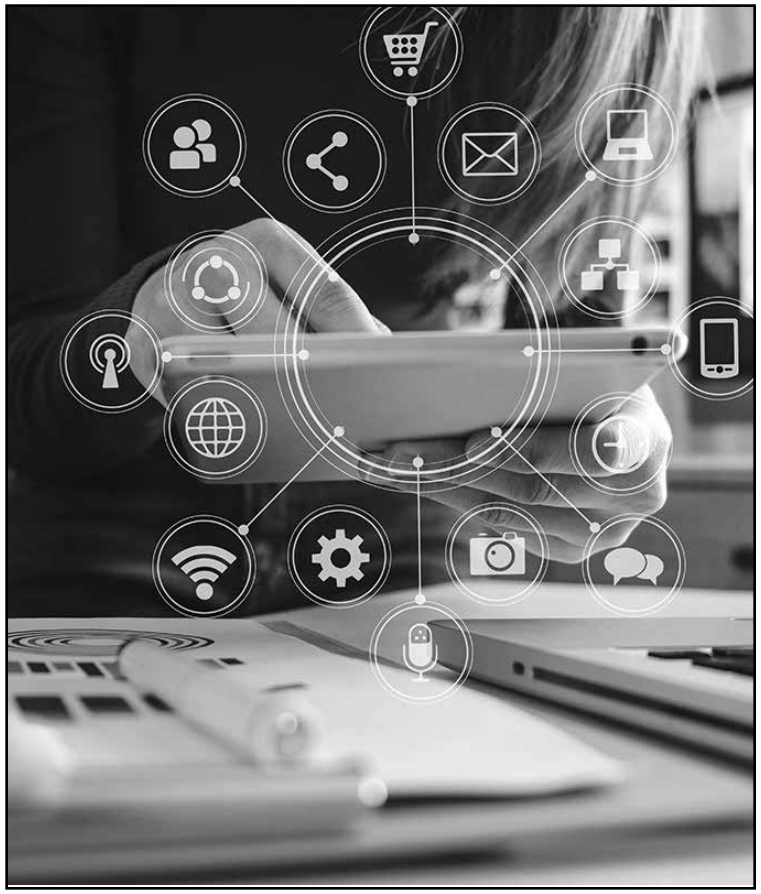
- **Implement Datatel's portal solution** to provide enhanced access to the Web Advisor system and additional features to the online community of users. The Datatel portal will provide future enhancements to the Web Advisor system and provide more community and social networking options to the website.
- **Implement Datatel's mobile App** module to provide end-users access to Web Advisor through their Phone or tablet.
- **Fully implement eTranscriptCA.** This allows users to send and submit collegiate transcripts from COC to outside institutions and receive external transcripts electronically. This process will streamline the time it takes to move transcripts from weeks to minutes.
- Student Services believes it can **achieve an entirely paperless processing system for our staff and students in the next 5 years.** We are currently utilizing a document imaging system, Singularity by Hyland, that has helped the Student Services division step in the right direction of digital document manipulation and archival and

are looking to expand those services to allow for a more robust workflow process. In order to accomplish this goal, we will need to migrate our existing system into a new more robust enterprise level document management system and we are currently exploring options to do so. Admissions and Records will utilize the new system to digitize petitions and web forms and make use of digital signatures, all within the context of a workflow platform.

- Work with the MIS and Institutional Research, Planning and Institutional Effectiveness offices to **increase access to Admissions and Records and SSSP related data through Tableau**.
- The District is in the process of deploying **Dell Data Protection and Encryption software to secure information being stored on District owned desktop and laptop computers**. These computers may contain sensitive student, staff or District information, including but is not limited to, social security numbers, credit card information, personnel records, or any other uniquely identifiable information.
- **The addition of the SARS•MSG component** will allow students to be notified and updated via text message when scheduling appointments through the SARS system. This platform will send a brief confirmation upon making an online appointment for a workshop Student Services appointment. Additionally, when checking in to an appointment the service will push out a notification when the student is nearing the front of a wait queue; this informs the student to come back to the service office much like similar restaurant and service technologies.
- **Implement an online Board of Governors Fee Waiver (BOGW) application.** The previous online application service, through XAP Corporation, was discontinued and not replaced.
- **Create and implement an online database** that allows students to register themselves for career related workshops.

Electronic Communication

- **Further expand the email storage space.** Storage has been increased over the last five years but still pales in comparison to other colleges and most commercial vendors.
- **Investigate moving employee email to a cloud hosted service** like Google or Microsoft.
- **Eliminate support for the mail.coc.cc.ca.us** legacy email addresses
- **Develop a policy for email accounts for Adjunct faculty and retirees** that addresses the need to maintain the account for continued access.



Equipment Replacements (Labs)

VALENCIA CAMPUS

Room	Department	PC	Thin Clients	Mac	Replacement Year
ALLB-114	MESA	10	0	0	7/2015
ALLB-319	Nursing	15	0	0	7/2015
DSPS (SCOH-103A)	DSPS	15	0	0	5/2015
Technology Center (BONH-106)	Computer Support	23	0	2	11/2014
BYKH-211	Biology	26	0	0	11/2014
HSLH-133	Computer Science	35	0	0	05/2018
HSLH-134	Computer Science	35	0	0	05/2018
HSLH-206	Economics	35	0	0	11/2014
HSLH-233	Business	37	0	0	07/2014
HSLH-234	Business	33	0	0	05/2018
HSLH-302	MISC	35	0	0	05/2018
HSLH-303	CIT	31	0	0	03/2017
HSLH-304	CIT	30	0	0	03/2017
HSLH-305	CIT	33	0	0	05/2018
HSLH-306	MISC	29	0	0	07/2014
LIBR-224	Library	18	0	0	07/2014
LTLC-126	LTLC	0	130	0	04/2017
LTLC-145	LTLC	0	31	0	04/2017
LTLC-156	LTLC	0	18	0	04/2017
LTLC-157	LTLC	0	18	0	02/2016
LTLC-158	LTLC	0	35	0	04/2017
LTLC-159	LTLC	0	35	0	04/2017
LTLC-160	LTLC	0	28	0	04/2017
LTLC-161	LTLC	0	31	0	05/2017
LTLC-168	LTLC	0	40	0	06/2016
MENH-133	Photography	0	0	6	05/2015
MENH-145	Photography	0	0	35	08/2014
MENH-205-207	Graphics	0	0	30	06/2015
MENH-209	Animation	25	0	0	07/2017
MENH-221	Engineering	19	0	0	01/2016
MENH-223	Drafting	22	0	0	05/2017
MENH-329	MEA	0	0	34	04/2015
MENH-334		33	0	0	05/2015
MENH-338		33	0	0	04/2015
PCOH-111	Music	0	0	11	05/2018

Valencia Campus continued		PC	Thin Clients	Mac	Replacement Year
SSC-117	EOPS	9	0	0	03/2018
STCN-124	ASG	36	0	3	11/2014
TWSH-105	Computer Networking	29	0	0	04/2015
TWSH-108	Computer Networking	25	0	0	07/2014
TWSH-109	Computer Networking	30	0	0	12/2015
TWSH-112	Computer Networking	30	0	0	01/2018
X9	Veteran's Department	8	0	0	07/2015

UNIVERSITY CENTER

Room	Department	PC	Thin Clients	Mac	Replacement Year
UCEN-201	University Center	7	0	0	01/2016
UCEN-213	University Center	27	0	0	01/2016
UCEN-309	University Center	29	0	0	04/2015

CANYON COUNTRY CAMPUS

Room	Department	PC	Thin Clients	Mac	Replacement Year
CCC-112	Assessment	8	0	0	07/2014
CCC-113	Admissions	10	0	0	07/2014
CCC-204	ASG Lab	5	0	0	08/2016
CCC-304	Computer Lab #1	35	0	0	05/2018
CCC-305	Computer Lab #2	35	0	0	01/2016
CCC-305A	TLC Testing Center	4	0	0	05/2018
CCC-306	TLC	25	0	0	05/2018
CCC-307	Library	6	0	0	04/2015
CCC-308	Basic Skills	24	0	0	04/2015
CCC-311	Chemistry Laptop Cart	24	0	0	01/2016
CCC-505	Sociology Laptop Cart	30	0	0	05/2018
CCC-703	Computer Lab #3	34	0	0	11/2014
CCC-706	Auto	3	0	0	07/2014
CCC-708	Solar Laptop Cart	24	0	0	01/2016

OFF CAMPUS LAB	Department	PC	Thin Clients	Mac	Replacement Year
Aerospace Dynamics #1	CACT	15	0	0	07/2017
Aerospace Dynamics #2	CACT	23	0	0	07/2017
Aerospace Dynamics #2	CACT	23	0	0	07/2017

Notes: