

Grossmont College Technology Plan 2011 - 2014

G R O S S M O N T
C O L L E G E



Vision: Changing lives through education.

Table of Contents

Introduction.....	3
Grossmont College Mission Statement.....	3
Technology Mission Statement.....	3
Executive Summary.....	4
Purpose.....	4
Annual Evaluation.....	5
Goals in Support of Strategic Plan.....	6
Overarching Themes / Guiding Principles	8
Background, Current Environment, Action Items.....	9
Hardware.....	9
Software.....	13
Accessibility & Assistive Technology.....	15
Distance Learning.....	17
Training Resources.....	19
Learning Resources.....	20
Student Services.....	22
Technical Support.....	24
Facilities.....	26
Back-up and Disaster Recovery.....	27
Key Components for Implementation.....	29
Conclusion.....	30

INTRODUCTION FROM DR. COOKE

The Grossmont College Technology Plan, in conjunction with the District Technology Plan, identifies and defines college-wide priorities for the technologies needed by campus constituencies to support student success. In addition to Instructional areas, it contains reference to plans for the college's other operational units: Administrative Services and Student Services, which are largely supported by District Information Services (IS).

A product of an annual process that solicits the input from representatives of Academic Affairs, Administrative Services, and Student Services, this plan is integral to the annual budgeting process. It is considered a companion document to the Educational Master Plan and to the College Strategic Plan. As such, it is reviewed and revised annually within the overall college planning cycle.

The Grossmont College mission is greatly enhanced by the opportunities and benefits technology brings to the educational community. It is our goal to provide our college with the continuing advantages of technological progress. This plan provides the framework for achieving that goal and supports the College Strategic Goals outlined in the current Strategic Plan.

GROSSMONT COLLEGE MISSION

Grossmont College is committed to providing an exceptional learning environment that enables diverse individuals to pursue their hopes, dreams, and full potential, and to developing enlightened leaders and thoughtful citizens for local and global communities.

Our mission is fulfilled by providing the people of East San Diego County with:

- Transfer degrees and certificates programs
- Career technical education and workforce development
- Basic skills
- Student support services that promote student access and achievement
- Community education

TECHNOLOGY MISSION STATEMENT

To provide and facilitate the wise and ethical use of technology for the enhancement of learning and teaching.

EXECUTIVE SUMMARY

The Tech Plan, developed through a process of collaborative consultation between District IS, Planning and Resources Council, the Technology for Teaching & Learning Committee (TTLC) and Academic Senate is intended to guide the technology planning and implementation process at Grossmont College, which is a shared function of college and district services. This plan focuses on college needs with some overlap with district needs.

TTLC undertook the development of the College's fourth Technology Plan by using the previous technology plans and the College's Strategic Plan as a guide. The committee informally surveyed their constituents; researched Technology Plans developed by other institutions and examined the current state of technology within the College to determine where we would like to be in three years.

Implementing the most reasonable plan in challenging economic times is at best difficult. However, difficult times are when it is critical to plan carefully to implement technology. Specifically, we must embrace innovation, timely implementation, regular evaluation, and continuous improvement.

Given the constant advancement of technology, it is challenging to predict what the College will need in terms of technology over the next three years. In order to help us focus on the various aspects, the Technology Plan has been divided into major sections covering hardware, software, network infrastructure, technical support, facilities, accessibility & assistive technology, distance learning, online services, training, and learning resources. Each section provides a brief history, an explanation of the current environment, and action items for the next three years.

PURPOSE

A Technology Plan provides direction and clear understanding to members of our internal and external learning communities; it indicates where we are now and *imagines* where we want to be. This document will serve as a road map for our technological journey. It will help us explain the various points of interest and destinations to the travelers involved in the process of realizing their dreams. The purpose of technology planning is not just to produce a document, but to produce a framework for continuous action that creates and maintains a technology-rich educational environment.

ANNUAL EVALUATION

Technology is constantly changing. In order for this Plan to maintain currency and effectiveness, it must be evaluated annually. TTLC will schedule an evaluation of the Technology Plan during one meeting each fall. During that meeting the Committee will review current trends in technology and education, evaluate the progress the College has made since the last review, and make recommendations for modifications or additions to any part of this Plan. Once the review is completed, all modifications will be submitted by TTLC to Planning & Resources Council and Academic Senate for review and approval.

Areas of evaluation may include:

1. The Impact on Learners – Is the college effectively using technology to increase the engagement of students in relevant authentic, differentiated learning that emergent research links to improvement of academic achievement and acquisition of 21st Century skills?
2. Effective Practice - Are learning environments characterized by powerful, research-based strategies that effectively use technologies?
3. Educator Proficiency - Are educators proficient in implementing, assessing, and supporting a variety of effective practices for teaching and learning?
4. Robust Access, Anywhere, Anytime - Do students and school staff have robust access to technology-anytime, anywhere-to support effective designs for teaching and learning?
5. Digital Equity - Is the digital divide being addressed through resources and strategies that ensure that all students are engaging in an educational program aligned to the college vision?

GOALS IN SUPPORT OF STRATEGIC COLLEGE PLANNING

Technology is one of many tools that students have at their disposal as they engage in the learning process. Educational technology is the application of technology to the teaching and learning process. Technologically literate students access and acquire knowledge, exchange ideas and opinions, solve problems, and create, innovate, and express themselves through the skillful use of a variety of technologies. As with any other tool, technology should be used by students when its use will increase understanding and enhance learning.

As technology filters out to every aspect of our society, it should be integrated into every content area. By providing access to information, opening pathways to communication, and facilitating personal understanding, technology can support learning in all subjects.

This Technology Plan blends many efforts to provide a level of excellence to our students. The ultimate goal of this plan, therefore, is to develop a comprehensive technology strategy that is in support of the areas of focus in our strategic plan.

Student Access

Ensure that all prospective students have an opportunity to benefit from the programs and services provided.

Learning and Student Access

Provide programs and services that enable students to progress in a timely fashion toward the achievement of their identified educational goals. Promote a culture that values students, fosters academic excellence, and cultivates an environment that is conducive to sustained continuous improvement of learning.

Value and Support of Employees

Value and commit to fostering an inclusive, diverse, and professional environment where employees are encouraged to pursue and reach their potential.

Economic and Community Development

Pursue opportunities and partnerships that enhance college programs, promote a vibrant economy, and benefit the local community.

Fiscal and Physical Resources

Enhance District fiscal and physical resources with strategic and transparent stewardship.

The goals of the Technology Plan are to:

Goal 1: Support student success through the use of technology in the physical and online classroom.

Goal 2: Ensure that College resources are available for all students (regardless of race, ethnicity, income, geographical location, or disability) to become technologically literate and achieve their dreams.

Goal 3: Ensure that the College has the capacity, infrastructure, staffing, and equipment to meet academic and business needs for effective and efficient operations.

Goal 4: Support faculty, staff and administrators in becoming and staying proficient in the use and integration of technology through Professional Development.

Goal 5: Ensure that the College is positively involved in collaborations and partnerships which are supportive of technology use and integration.

Each goal is considered a “continually moving target”, as technology does not remain static. In addition, a technology plan can never be “done” except for a brief moment in time. Funding will always be a challenge with a plan that is constantly emerging and a variety of funding sources will, over time, need to be identified and utilized to execute the plan.

OVERARCHING THEMES / GUIDING PRINCIPLES

We have identified a few overarching themes that have guided the development of this plan and we will strive to keep them in the forefront as we implement and review it.

Universal Design

Typically, designers consider the average user. In contrast, universal design (UD), according to the Center for Universal Design, "is the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design".

Making a product or an environment accessible to people with disabilities often benefits others. For example, automatic door openers benefit individuals using walkers and wheelchairs, but also benefit people carrying groceries and holding babies, as well as elderly citizens. Sidewalk curb cuts, designed to make sidewalks and streets accessible to those using wheelchairs, are often used by kids on skateboards, parents with baby strollers, and delivery staff with carts. When television displays in airports and restaurants are captioned, programming is accessible not only to people who are deaf but also to others who cannot hear the audio in noisy areas.

UD is a goal that puts a high value on both diversity and inclusiveness.

Web-based / Mobility

When researching applications for teaching and learning, we will encourage the implementation of those that are web-based. There are many benefits to using web-based applications, such as information is accessible to wide audiences anywhere in the world, updates can be made quickly and easily, applications can be accessible 24/7 using a browser, which is a familiar interface that encourages use, online availability allows users to access centralized data at their own pace at a time that is best for them.

A Culture of Transparency and Innovation

In the spirit of the public sector and the transparency that should accompany it, we will encourage a culture of sharing our collective experiences and knowledge for the greater good. We will also encourage the benchmarking of similar and dissimilar institutions to identify best practices and emerging ideas. This will require replacing our "not invented here" attitude with a "proudly borrowed from there" orientation. This will require a new or renewed willingness to share and distribute the best of our own course content and experiences.

BACKGROUND, CURRENT ENVIRONMENT AND ACTION ITEMS

There are many aspects involved in planning for technology on a college campus. In order to address aspects that we feel are most critical, we have broken them down into several major sections and provided a brief history, an assessment of the current environment, and action items for future. The action items will be reviewed and prioritized annually by TTLC and referred to the Planning & Resources Council for review and funding.

Hardware

Background:

The College has made great strides towards previous Technology Plans. The College supports a mixed environment of PC and Macintosh computer systems. While the majority of the campus is on the PC platform, the College recognizes the need for multi-media capabilities of the Macintosh system for certain areas. Areas that utilize the capabilities of the Macintosh platform include Creative Services, Photography, Music, and Media Communications. Other areas that have a preference to the Macintosh platform must secure their own funding for the purchase or accept a rejuvenated system that is passed-down from one of the other areas. A breakdown of faculty and staff computers by location, platform and user is included in the appendix of this document. This document is meant to be a snapshot and is current as of the date listed. ICS has the most current list on file and it can be requested as appropriate at any time.

Current Environment:

Desktop Computers

Every employee of the College is provided with a computer system based on the needs of his or her classification and job duties. PC computers are the primary systems provided to employees. Any employee who fills an existing vacancy will be provided with the computer system of their predecessor. An employee who is categorically or externally (grant) funded will be provided a computer system through their categorical or external budget. Adjunct faculty and other part-time employees are provided with access to computer systems in the department assigned adjunct offices.

Laptops

Laptop computers are provided to employees upon request and approval as long as funding is available. Employees who choose a laptop as their primary computer are required to bring the laptop with them when they come to campus as needed for service, specifically to connect to the campus network to obtain patches and virus definition updates. Employees are also required to return the laptop to Instructional Computing Services (Faculty) or District Information Systems (Staff and Administration) at least once a year

for upgrades and other updates. In addition, users of laptops agree to assume financial responsibility for the laptop while in their possession and understand that they are not allowed to install any software on the laptop without the permission of Instructional Computing Services (ICS) or IS. Users who desire a laptop in addition to their primary computer system will be required to demonstrate a compelling need and use special funding for the purchase. That laptop will not be included in the District or College replacement cycle.

Classroom Technology

Most classrooms on campus are equipped with a smart cart, which is a permanently installed podium equipped with a:

- Desktop computer with Internet access and a monitor
- Document camera
- VCR and/or DVD player
- Patch connections for external devices such as a laptop
- A ceiling-mounted LCD projector
- Projection screen
- Security system (most systems have this)

We are currently purchasing 25 new LCD projectors each fiscal year for replacement. The newer projectors are easier to maintain and have a longer operating bulb lifespan. In addition, a separate line item has been established to fund the replacement of bulbs for all classrooms. Instructional Media Services (IMS) is responsible for overseeing the replacement of all classroom projectors and bulbs.

Classroom Response Systems

Currently the college employs the use of several different classroom response systems, also known as clickers. A task force was established in 2010 to explore the possibility of standardizing to one clicker system. Initial research was conducted regarding what system other colleges employ, including San Diego State University, University of San Diego and Cuyamaca College.

Printers

Printers and other peripherals for faculty and staff are purchased on an as-needed basis and have no set replacement cycle. Computer labs are provided with black and white or color printers based on an evaluation of curriculum needs. Toner for printers used in computer labs is the responsibility of the department that oversees the lab.

Scanners

The College currently maintains a limited number of scanners in various computer labs and offices. These scanners are purchased with both College replacement funds when necessary and individual departmental funds. The scanners are replaced as needed depending on their use.

Action Items:

Going forward, the College should:

1. Develop, in conjunctions with ICS and District IS, a set of general equipment standards and guidelines to support the computer hardware needs of the College. These standards should be developed by referencing previous Technology Plans and should reflect current needs and priorities. They will be reviewed annually. It should be noted that deviation from these standards will be taken on case by case basis and shall be reviewed and approved by the Dean of Learning & Technology Resources and/or District IS.
2. Continue to update and implement the rollover plan, the systematic procedure for replacing computer systems on campus. A replacement cycle of five years is recommended. Computer systems can last up to three years when purchased with minimum bid specifications. Computer systems can last up to five years if purchased with appropriate hardware upgrades, such as memory and processors. It is also important that systems be properly maintained. The new technology including processing power and storage capacity coupled with a significant decrease in the price of most systems should enable the College to stretch the useful life of computer systems to the five year mark. Only key areas of the College that deal with high-end software or processing requirements would need to replace their equipment on a more frequent schedule.

The rollover plan is designed to ensure that no College computer is older than 5 years. Computers over 5 years old no longer possess the processing power or memory to run current application programs. In addition, as a computer goes past the 5 year mark, many of the major components deteriorate increasing the downtime of the units and reducing productivity.

The rollover plan includes a tiered structure for equipment replacement, considering the age of the hardware as well as the use of the system. For instance, labs and users who utilize resource intense applications must currently wait just as long as other areas whose computing needs are not as critical. Thus, the rollover plan looks at the needs of the user, 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 appendix of this document.

3. Develop a systematic procedure for updating classroom technology, including Smart Carts, document cameras, projector systems including audio and other emerging technology.
4. Secure ongoing funding to implement the equipment replacement plan. Over the last few years, the College has increased the replacement budget for technology by allocating \$200,000 specifically for this purpose. However, the College may need to consider increasing this amount in order to implement a 5-year replacement cycle. A cost estimate will be provided based on consultation with the VP of Admin Services and the Planning & Resources Council. The College needs to fully fund the replacement budget to ensure that the District's technology equipment is current and can support the instructional and administrative needs of the College.
5. Secure funding to investigate new technologies. In order to stay current with technology, funds must be allocated to allow for the purchase of new technology to be tested by faculty and staff for possible inclusion into our technology infrastructure. The technology must be tested on-site in order to properly assess its value and allow for the greatest number of evaluators, but options for faculty and staff to take equipment off campus should be made available as appropriate and via an existing pre-approved process.
6. In conjunction with District IS, develop a list of approved printer models that will be supported by the College. Exceptions can be made on a case by case basis. In addition, the College should consider expanding the philosophy of clustering faculty offices in order to utilize a centralized high-end black and white printer rather than incur the expense of individual printers for all offices. These centralized printers could be purchased through ICS which could also handle the replacement of the toner when needed. Any person in an office cluster who desires a personal printer will be required to fund that printer out of their department budget.
7. Re-engage the clicker task force to determine whether standardization to one clicker model will support the needs of campus or whether a two-pronged approach may be more viable. This would allow for flexibility to support those who need more complex features in the classroom as well as those who only require basic functionality.

Software

Background:

Software applications are constantly adding new functionality and opening new opportunities that users are eager to adopt. Software is also limited by the hardware and the operating system that it runs on. Continuing developments in the technologies of information storage and retrieval open the door for increased opportunity for improved software development. Software instruction and multimedia applications will continue to be of intense interest to educators and the community. Furthermore, as computing networks evolve so does the ability and need of transmitting data accurately and quickly.

To stay compatible with the newer systems, the College is often forced to upgrade software applications, as well as the operating system software that runs them. Compatibility is one of the main issues that all computer users and the College face. From different hardware platforms to different file/data formats, being able to share reliable/secure information is key to a successful organization, and so are the tools that enable cross platform compatibility. Having a single platform with standardized software reduces compatibility problems.

Current Environment:

The College supports applications that run on Macintosh and Windows systems. These applications encompass activities from word processing to 3-D animation. Present support levels for these applications are as varied as the applications themselves. This is a common occurrence in a distributed computing environment where the user of the application is generally the most knowledgeable about its functionality. At the same time, all new faculty and staff computers and most office computers come equipped with a standard package of Microsoft Office, Microsoft Outlook, Internet Explorer, and an anti-virus software. Currently within the College, there are single-user licenses, multiple-user licenses, site licenses, and server licenses. Monitoring and tracking of campus licensed software is inconsistent. It sometimes occurs through ICS or District IS, but no standard procedure for dealing with copyright violations is currently in place at the College.

The District is responsible for supplying standardized software on College computers. ICS supports approved applications installed in computer labs and on faculty computers. Individual departments may purchase and license any software package they choose provided that ICS has reviewed and approved their request. Specific needs for specialized applications can create a dizzying variety of software. Individual departments and divisions with appropriate expertise may assume responsibility for the specialized software that they utilize; or, if not, they may expect support to come from ICS, which might lead to significant workload issues. Occasionally, the users' current hardware will not support their newly purchased software packages. In addition, software patches and upgrades are continually becoming available and need to be installed College-wide.

Action Items:

Going forward, the College should:

1. Explore server based (network) licensing that would allow ICS to deliver application software on demand to computers throughout the College while maintaining compliance through the use of a license server. This could reduce our software costs by reducing the number of copies purchased but making them available to more areas. Research on the growth in funding for software at the College over the last several years would be helpful.
2. Develop an informational sheet on software copyright violations and distribute to campus.
3. Continue to support the training of ICS and other staff to properly provide support for these applications.
4. Consider alternatives to improving the inventory process for software, including the evaluation of District- and College-provided software lists, which should be updated annually to represent current educational and business trends in software applications. Since ICS is ultimately responsible for the installation and support of all instructional software at the College, the responsibility for inventory and tracking software resides in that department. Funding that is currently allocated to various instructional and support departments for the procurement of software could be consolidated under ICS to assure that all possible discounts are received, software purchased is supported and that the funding is not reallocated to a different purpose.

Accessibility & Assistive Technology

Background:

The District's population of students requiring assistive technology has grown over the last ten years. Disabled Students Programs and Services (DSP&S) has been able to meet the needs of this population in part through its the Assistive Technology Center, which is located in the Learning & Technology Resources Center. It consists of 15 computers, various printers and scanners, and assistive software designed to help people with visual or hearing impairments. The staff of DSP&S provides support services to those students with disabilities to assist them in effectively completing their educational goals. The DSP&S Department has taken great strides to ensure the College is in compliance with Section 508 of the Americans with Disabilities Act, a federal and state law requiring, among other things that all electronic information created, maintained, or deployed by the College to be accessible.

Current Environment:

Special attention needs to be focused now on accessibility requirements, particularly captioning, alternate media and the accessibility of online courses. Currently, the majority of students with disabilities who take classes within the College 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. Assistive Technology is made available as needed in many computer labs on campus to ensure accessibility in terms of computer stations and software.

The staff of the College's Assistive Technology Center is trained on the proper use of assistive technology and provides information when needed to other faculty and staff. Trainings for faculty and staff are held throughout the year and cover a variety of topics including Section 508, Accessible Document Formats, Disability Etiquette, and other topics that increase awareness within the College.

Action Items:

Going forward the College should:

1. Create a comprehensive program that will create a culture of disability awareness and understanding by conducting training workshops that include topics related to section 508 guidelines (Section 508 of the Rehabilitation Act of 1973), student disability issues, ergonomic and accessibility issues for Faculty and Staff. This training will help ensure online courses and materials, including the College's website and social media sites, are accessible and 508 compliant. The process should include a regular review to ensure compliance with accessibility standards. The College should also continue to focus on accessibility and Section 508 compliance in traditional classes.
2. Ensure assistive technology is annually inventoried and updated when necessary.
3. Identify or create a system that will accomplish the daily captioning needs of the College's programs.

Distance Learning

Background:

Distance Learning began in the fall semester of 1999 at Grossmont College with the introduction of a few online classes in the areas of Administration of Justice, Biology, English, Health Sciences and History. The early adopters of online courses experienced little or no institutional training opportunities in the use of online teaching tools and in online teaching pedagogy. The College offered minimal student technical support. Over the years, the number of online course has increased, along with the need for faculty and student training and support.

In 2001, the College/District created an Instructional Design Technology Specialist position. This individual was responsible for providing technical assistance and advice on web design/applications to faculty and staff utilizing web information and online instructional modalities. This position was also responsible for assisting the College with website maintenance. In 2006, the College eliminated the position of Associate Dean of Instruction and Technology Resources, while the Associate Dean of Learning Resources became the Dean of Learning & Technology Resources. This new position became responsible for overseeing the distance learning instruction and support on campus.

The Distance Education Committee was founded in 2009. The DE Committee is a sub-committee of TTLC. Its charge is to make recommendations regarding faculty and student support needs, standards of good practice and quality control, and online faculty training, qualification and evaluations. In doing so it serves as an important venue for the development of distance learning at the College.

In the past, the College offered ED 214 – Developing an Online Course, which offered education on the use of technology in the virtual classroom and in online teaching pedagogy. In the Fall of 2010, it was decided that this class would no longer be offered due to budget constraints.

Current Environment:

Over the years the college has steadily increased its online and hybrid course offering. As Fall 2010, the College offered 141 online courses and 35 hybrid courses. See the chart below for further data. The District, in collaboration with both Grossmont College and Cuyamaca College, created a webpage called GCCCD Online Success that provides information to students and faculty involved in

online courses. In the spring semester of 2009, the District began creating a course container in Blackboard for every class on campus, whether online, hybrid or traditional. This means that any Grossmont faculty wishing to utilize a Blackboard shell now can.

While the Instructional Design Technology Specialist provides technical and some instructional support for nearly 800 faculty members, he is only able to provide limited support to students. Grossmont College has collaborated with Cuyamca College and District IS to develop technical support for students via a phone tree system.

Distance Education Sections Offered

Spring	Summer	Fall
---------------	---------------	-------------

Year	Online	Hybrid	Online	Hybrid	Online	Hybrid
2010	162	43	37	3	141	35
2009	182	46	90	8	183	47
2008	159	14	77	10	141	42
2007	99	14	47	2	130	17
2006	73	17	73	17	87	12
2005	52	21	23	4	63	23
2004	41	12	18	4	45	13
2003	44	0	20	0	46	9
2002	41	0	25	0	43	0
2001	25	0	11	0	34	0
2000	11	0	5	0	13	0
1999	6	0	1	0	6	0
1998	1	0	0	0	1	0

Action Items:

Based on current trends, the demand for online courses will continue to increase. The college needs to ensure the quality of its online courses and programs and ensure that key student support features, as well as faculty support, is in place.

Going forward the College should:

1. Continue to update, implement and evaluate the College's Distance Education Plan.

Training Resources

Background:

Training in technology was almost nonexistent in the eighties and early nineties. 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. Students' currently taking classes have increased technical sophistication over those just a few short years ago. In some cases, students' technological knowledge even exceeds that of their instructors.

Current Environment:

The College, through the Professional Development Coordinator and Professional Development Committee (PDC), provides support for faculty, staff and administrators to receive technology training. The Professional Development Coordinator, working with the PDC, plans events and advertises upcoming workshops on-campus and online. Workshops are offered in the spring, summer and fall semesters to provide employees with on-campus instruction in a variety of software programs. These workshops vary in length and skill levels, from a basic overview of a product's features to a more comprehensive session where certain components of a program are highlighted and explained in greater detail. The Professional Development Coordinator and PDC have traditionally offer Spring Flex sessions and Fall Flex sessions. These workshops are meant to highlight new technology and give faculty an opportunity to view trends in education. All offerings through Professional Development are geared to support a broad audience from the technologically challenged to the true "techie".

Action Items:

Computers, the Internet and technology in general continue to be integrated in all aspects of instruction and administrative support. Technology is constantly changing and it is the College's responsibility to ensure that the faculty and staff are prepared to meet those changes head on.

Going forward the College should:

1. Collaborate with the Professional Development Coordinator to create a faculty/staff Technology Center. This Center would provide a location where employees can receive formalized training, drop-in to "play around" with the equipment and software, or receive one-on-one instruction from a technical staff member or Professional Development trainer. This Center would maintain the latest in technology both in hardware and software. This would allow employees to "test drive" certain application programs, Web sites or computer hardware before implementing new technology in their classrooms or at their work locations.
 - a. Provide ongoing training for faculty, staff and administrators. This requires adequate funding for both on campus and off-campus training. Being able to provide technology is only half the battle. Training people to use it effectively is just as important.
 - b. Provide readily available user assistance and technical support to ensure the successful adoption of new technology. Technological literacy is a survival skill that is needed by students no matter what field they pursue and by faculty members to ensure that the classes offered meet the demand of today's world and by College employees to keep pace with change.
 - c. Set up mentor relationships between master "techie" teachers and those with less developed technology skills.

Learning Resources

Background:

The primary components of Learning Resources are the Library, the various tutoring and learning assistance centers and computer labs. The goal of these components is to support the College curriculum by providing services and materials to assist instruction and enhance student success.

When the Library opened in its new location in 2004, the availability of technology increased significantly, especially from a student perspective. Students access to a number of online databases increased and put a vast amount of information at their fingertips. As new databases were added and print and nonprint collections maintained, the Library continued to expand its bibliographic instruction program to ensure student information competency and literacy. This has been a challenge due to college-wide reduction in funding and staffing. The library has also been impacted, however, the college has invested over the past two years in learning resources despite the current economic crisis.

The demand for tutorial services has increased with student enrollment. In the past, budgetary constraints for tutors and center staff has limited the amount of tutoring that the College can provide. However, the College has committed resources to tutoring via demonstrated need in the annual Activity Proposals. In 2012, the college allocated approximately \$200,000 to the various tutoring centers to address tutoring needs.

Current Environment:

The Library maintains a collection of print, non-print, and electronic resources to meet the information demands of the College. The collection is accessed by the library faculty in conjunction with faculty from the various subject matter areas. Please visit the library's webpage for detailed information on collection development. Besides the online catalog, the Library also provides access to a variety of electronic databases including. These databases are available on all networked computers in the Library. The Library includes over 70 student computers in addition to a dedicated lab of 28 computers for Library Instruction.

There are numerous tutoring centers on campus including the Assistive Technology Center, Biology Lab, Chemistry Lab, English Reading Annex, English Writing Center, ESL Lab, Health Professions Labs, Math Study Center and the Open Computer Lab. These centers and labs provide tutorial services to students enrolled in various subjects, based on availability.

There are other computer labs on campus which are accessible by students who are currently enrolled in specific courses. They include Business Office Technology, Computer Science and Information, Digital Media Arts, Media Communications and Physics.

The Printing Department provides printing services, including digital copying, for the entire College. Printing Services offers an online job submissions program that allows faculty, staff and administrators to submit job requests virtually.

Action Items:

The pervasive use of the technology and the Internet and their positive impact on information retrieval has positioned Learning Resources as an efficient, timely, and cost-effective resource provider.

Going forward the College should:

1. Continue to work with ICS and District IS to ensure that sufficient bandwidth is available for the increasing use of the Internet in all Learning Resources areas.
2. As a part of the rollover plan, replace and upgrade computers and software for student, faculty and staff use in all Learning Resources areas.
3. Continue to work with ICS and District IS to provide technical support in all Learning Resources areas.
4. Continue to work with ICS and District IS to address needs identifies via the college's annual and long term integrated planning, program review and continuous improvement process.

Student Services

District IS provides support for systems utilized in the Students Services side of the college, specifically, Admissions & Records, Counseling and Financial Aid. Support for these areas is addressed in the District Technology Plan; however, some background information is provided here.

Online Services offer key resources for students taking both online and on ground classes. It has been the goal of the Student Services division to automate as many of the services we offer as possible. This allows our students to complete the majority of what is necessary to attend Grossmont College anywhere they have access to the Internet. If students do not have technology available to them, they are provided with access to computers in the Student Educational Technology Lab, the Library and the Student Services building. Trained staff is available in the labs to answer students' questions on how to access the services needed to complete students' educational goals.

All students must use the suite of services located on our website to apply for admission to the college, register for classes, and complete the FAFSA (financial aid), view their financial aid award, pay their fees, and print a receipt. Students continue to use additional services throughout their tenure at the college as the need arises. Some of these services include dropping classes they no longer wish to attend, changing their email address or phone number, viewing a registration appointment for next term, checking on a pending financial award, enrolling in counseling workshops, applying for a scholarship, exploring a new career option, and printing an unofficial transcript.

In addition to online services for students, we have also created new online services for faculty teaching both online and on ground classes. Faculty can now submit their grades online, access their class roster online, which includes student contact information, and submit actual hours of attendance online. The majority of our faculty members are using online technology for these services.

Staff in student services have completed extensive training in all of the new technologies introduced. We have created full training sessions for new staff, and continue to offer training to existing staff when bringing on new technological features. Staff uses the latest versions of technology to complete their work for students. All full-time staff in student services is hired with expertise in MS Office that includes, Word, Excel, Access and Outlook, as these products are used in their daily work. In addition, new systems have been instituted to increase work efficiency and reduce the time to produce students' requests for various services. Communication between student services staff and students and faculty has also changed dramatically. Most communication with students and faculty is now completed using email, instead of snail mail. We have also begun using automated call systems (SARS call) for both registration messages as well as counseling messages.

Technical Support

Background:

District Information Systems (IS) identifies major information systems and technology goals for the entire District including the Cuyamaca College, Grossmont College, and District outreach programs. The District creates its own Staff and Technology Plan that encompasses the development, management, operation, maintenance, and evaluation of the infrastructure, administrative information systems, programming, web management, organization and staffing. This plan represents a consensus that facilitates maximization of institutional benefits in pursuit of common and individual college goals.

Current Environment:

ICS continues to review staffing to address the growing need for technical support within the district and college. There are many technical support services provided by Grossmont College and the District. Some of those services have been listed below.

1. Instructional Computing Services, which consists of four (4) people, provides campus-wide support in the use of instructional technology, specifically desktop and user support for Grossmont faculty, and instructional labs. Several Learning Assistance Center Specialists or other Technicians are employed throughout campus to support the various computer or learning labs, such as Business Office Technology, Biology, Chemistry, English Writing Center, Math Study Center, Photography, and SETL.
2. The District IS Help Desk supports staff and administrators with their technology needs. They also provide support overflow support to faculty and students at both colleges.
3. Instructional Media Services (IMS), which consists of three (3) people, supports the College curriculum by making instructional equipment and other instructional technology available to instructors and support staff. This includes testing new equipment, installing instructional equipment in classrooms, delivering or otherwise making special equipment available to instructors
4. One (1) Instructional Design Technology Specialist is employed by the College. This person supports faculty in the use of the College's supported Learning Management System (LMS), Blackboard. This person also provides support for the College's website maintenance.

Action Items:

Going forward, the College should:

1. Conduct research of other similar colleges to determine staffing recommendations for Technical Support positions based on the current technology (hardware and software) that requires support. Through this research we would learn a reasonable recommendation for basic staffing standards in order to properly support both the current and future technology on campus. Being aware of the technical support required will allow the College to adopt new technology as it becomes available, provide support for faculty and staff in integrating technology into their curriculum, and provide security and stability to the Districts technology infrastructure.
2. Continue to review, and update as needed, the technical support available for both students and faculty on and off-campus.
3. Continue to review, and update as needed, processes for hardware and software inventory management and distribution.
4. Continue to work closely and collaboratively with the District in developing their Technology Plan to support the College's goals.

Facilities

Background:

The physical plant that encompasses all of the structures and equipment owned or leased by the College or District is vital to the success of this Plan. Certain technological considerations must be included to support the future technology growth of the College. Facilities Master Planning is regularly undertaken by GC and GCCCD. As a result of the 2011-2012 Educational Master Plan, the Facilities Master Plan will also be updated. Highlights of the facilities plan related to technology are noted below.

Current Environment:

The current facilities environment includes the following:

- Adequate power supply to smart classrooms, server rooms, and data closets.
- Cabling that meets District and College standards and reflects current trends in the industry.
- Wiring closets 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, ventilation, and air conditioning.
- Connection to generator power and uninterruptable Power Supply (UPS) for critical elements of the data and voice network.
- Security measures such as secured classrooms and keycard control
- Smart classrooms and computer labs built to ensure functionality and mobility.
- Office and workshop space for Technology staff
- Proper accessibility for people with disabilities that either meets or exceeds ADA requirements.

Action Items:

Going forward the College should:

1. Continue to review needs for future technology including the maturation and expansion of technology infrastructure, equipment rooms, and easily accessible spaces.
2. Consider whether sufficient office locations for ICS and IMS exist and whether they provide secure 24-hour access, room for expansion, and other considerations listed in the current environment section.
3. Consider whether there is sufficient storage on campus to house computer equipment and peripherals.
4. Continue to review and update business continuity and disaster recovery requirements which may impact facilities and infrastructure needs.
5. Investigate facility installed technology solutions for building system operation, maintenance, and energy management.
6. Continue to ensure integration of the Technology Plan and the Facilities Master Plan.
7. Continue to review and update security measures such as video surveillance.

Backup Procedures and Disaster Recovery

Background:

District IS is responsible for backing up a variety of data for the College.

Current Environment:

Employee are able to request a “homeshare” that allows back-up of documents on their network homeshares to protect the availability and security of College data.

Action Items:

Going forward the College should:

1. Continue to work with District IS to review and update backup strategies, retention policies and disaster recovery plans.

KEY FACTORS AND COMPONENTS FOR IMPLEMENTATION

1. Thoughtfully consider and seek to implement the action items listed in this plan.
2. This plan is integrated into the College's Strategic Plan, Educational Master Plan, GCCCD Technology Plan, Grossmont College Distance Education Plan and Grossmont College and GCCCD Facilities Plans.
3. Robust Professional Development designed to support employee familiarity, comfort, and expertise with current and emerging technologies in support of the Technology Plan
4. In keeping with Grossmont College's culture of collaborative and collegial governance, continue to solicit and support committee involvement. The following committees are actively engaged in this process:
 - a. Academic Senate
 - b. Administrative Technology Advisory Council
 - c. Distance Education Sub-Committee
 - d. Instructional Technology Advisory Council
 - e. Planning & Resources Council
 - f. Professional Development Coordinator and Professional Development Committee
 - g. Technology for Teaching and Learning Committee

We have many things to work on as we move forward:

- Continue to focus on integration of technology to improve student success.
- Professional development that includes opportunities for faculty, staff and administrators.
- Foster a culture where current technology is crucial as opposed to a luxury.
- Funding for support, replacement, upgrade and repair of technology is essential to keep it working; we must consider total cost of ownership.
- Faculty must be empowered to use meaningful technology with students.
- Need a strong link to curriculum standards.
- Mentoring/coaching models that build teachers capacity to integrate technology.
- Address pressing issues and remove barriers for online and hybrid courses.

CONCLUSION

The College's Technology Plan developed through a collegial process between the College and District IS, is intended to focus on the technology needs of Grossmont College over the next three years. This document will assist in the planning and sculpting of the information technology efforts to an end that is both beneficial and functional for the College. The Tech Plan is a comprehensive view of technology within the College and how technology supports our mission. The Tech Plan breaks down several important issues and lists action items for future enhancements and changes. While some of these action items are already in practice, others require serious planning, preparation, and budget. Overall, the College's technology infrastructure is well positioned for the next three years.

In support of this Tech Plan, the College should continue to make funding for the purchase and replacement of technology a priority. Funding should be based on a percentage of the College's capital outlay, maintenance, and operational budget. A minimum of three percent of the total operation budget should be set aside for technology, maintenance, upgrades, and changes. The College must acknowledge that computer technology has a built-in obsolescence period and must be upgraded regularly. The simple analogy is that computers are like chalk, only more expensive.

It is also important to remember that this Tech Plan should be viewed as a living document. Annual reviews of the plan and progress towards meeting goals and necessary changes are imperative to the success of this Plan and the technological health of the College. This Plan, if properly executed, should provide a dynamic, structured view of technology as it pertains to education and the business services of the College. The College should continue to rely on and support TTLC and the Division of Learning & Technology Resources as they monitor the success of this Plan, continue to investigate emerging trends, and update the Plan accordingly.

With continued collegial planning, assessment and allocation of appropriate resources, Grossmont College should be will poised to support its academic and administrative mission to serve the community, students, staff, faculty and administration.

References:

College of the Canyons Technology Master Plan

Grossmont College Strategic Plan

GCCCD Strategic Plan

Kingsborough Community College IT Strategic Plan

Southwestern Community College District Technology Plan

Washington State Community and Technical Colleges Strategic Technology Plan

<http://www.gcccd.edu/research-planning/educational-master-plan.html>

<http://www.washington.edu/doit/Brochures/Programs/ud.html>

<http://www.opensource.org/docs/osd>

http://www.design.ncsu.edu/cud/about_ud/about_ud.htm