Technology Plan: 2009/10 to 2012/13

Technology Planning Committee
April 16, 2010 (Resubmitted)

Part I: Narrative

I. Introduction:

The CSM Technology Planning Committee was charged with developing a six-year Technology Plan for the College of San Mateo. The committee's investigations revealed that technology is ubiquitous and involved to some degree in almost every aspect of the College's teaching, learning and business operations.

II. Technology Planning Committee

Committee Mission:
The mission of the Technology Committee is to ensure that the college provides and maintains adequate technological resources to support student learning in accordance with the College's Strategic Plan, Strategic Priorities, and annual College Goals.

The Technology Committee accomplishes its mission by:

- Developing a long-term technology plan that is aligned with the long-term goals of the college and the district.
- Developing an annual assessment of the college's future technological needs in light of advances in technological capabilities, and technological needs created by new pedagogical approaches.
- Working with the Budget Planning Committee to create and to finance a Total Cost of Ownership model, which includes identifying funding sources for the replacement of outdated technology.
- Working with ITS staff to set and maintain minimum technological standards.
- Working with the Human Resources Committee to determine professional development needs with respect to the use of technology.
- Working with Distance Education Committee to ensure that adequate technological resources exist to support the college's distance education and other technology-mediated efforts.
- Ensuring that both long-term and short-term technology planning is integrated into institutional planning at all levels.
- Participating in the creation of policies concerning appropriate use of technological resources at both a college and district level.
- Making recommendations to the Institutional Planning Committee with respect to technological needs.

Members:

Kevin Henson (Chair), Administrator, Creative Arts and Social Science Dean
Michele Alaniz, Library Faculty
Michelle Brown (Recorder), Broadcast & Electronic Media Faculty
Lorrita Ford (Ex Officio), Library Director
Patrick Hop, Student
Charles La Mere, ITS

Rene Renard, Classified Staff
Chandra Vanajakshi, Astronomy Faculty
Brad Witham, District ITS (Ex Officio)

III. Planning Narrative

During the planning process, the CSM Technology Committee's first priorities were to determine their information needs and to locate relevant documents and resources related to technology planning. The committee reviewed multiple technology plans from community colleges and four-year colleges and universities as well as technology planning and policy documents at the campus, district, state, national, and international levels. Information from these research efforts laid the foundation for development of the current plan. The Summer 2008 Technology Planning Workgroup, which is a predecessor to the CSM Technology Committee, gathered many of the documents used in this technology plan.

Exploratory interviews with a cross section of CSM and District key leaders and decision makers were conducted to discover the degree to which technology planning is integrated with institutional planning and the degree to which the institution systematically assesses the effective use of technology resources and uses the results of evaluation as the basis for improvement.

Technology workgroup team leaders also had discussions with members of District ITS, Budget Planning Committee, Human Resources Committee, and Facilities Leaders to help determine how and where technology planning might be integrated with the systems they were creating.

Considerable discussion and consideration were spent in the development of the committee's guiding assumptions and recommendations (see Appendix B). Because technology has a place in almost all aspects of the institution the committee was deliberate in casting a broad net hoping that by doing so it would stimulate and engage all members of the community to consider how the use of technology is evolving in their areas, and how it can be used to better aid in the efforts of the CSM community.

Our workplan goals and objectives were based on information from the multiple technology planning documents, the CSM Institutional self-study from 2007, and online resources the committee consulted.

While the college should be proud of the progress it has made in implementing technology to enhance teaching, learning and institutional effectiveness, the committee's investigations revealed that the college does not have in place adequate integrated, systematic, evidence-based decision or funding mechanisms to drive continuous improvement and sustainability of its technology resources. The College's 2007 Self Study Report response to Standard III C included two significant plans for improvement:

- Explore ways to assure adequate funding for technology and related needs
- Establish a budgetary commitment to ongoing funding for the continued replacement of older technology.

The committee wrote this report with the assumption that it is necessary to focus on the needs of current technologies on campus, but also knowing that it is crucial to plan for future and burgeoning technologies.

S.W.O.T Analysis

Strengths	• College of San Mateo is a diverse California community college offering students a wide array of courses and subject matters • Current large enrollment exists at CSM • The College and District have cultivated a culture of early technological innovation and adoption • Extensive campus revitalization, supported by bond monies, has upgraded classroom technologies (SMART classrooms), learning laboratory technologies (SIM people, planetarium projector), and other facilities (Smart Boards in meeting/conference rooms)
Weaknesses	• CSM is facing extensive budget cuts (in the millions) precipitated by the State and National economic crisis. • Recovery of the state of the budget is predicted to take years • The Centers for Teaching and Learning (CTL) has been eliminated due to budget cuts. The center provided workshops on and support for teaching and workplace technologies for faculty and staff • Due to budget difficulties, District ITS is below the recommended support personnel staffing levels • The absence of an approved systematic College or District budgeting mechanism to maintain or replace the wealth of newly acquired technology (e.g., computer technology in the earliest of the revitalized buildings is already becoming outdated and needs refreshing)
Opportunities	• Budget recovery is expected over the next several years • Community support of the College and District remains strong • Increased attention to the Community College sector of higher education from National policy makers and Foundations • Growth of “cloud computing,” “virtualization software” and other technologies may allow economies of scale and savings on software and hardware needs • Student demand is increasing, particularly from middle class students displaced from the UC and CSU systems—increasing community support for community college funding
Threats	• The State of California has made cuts to education, especially community colleges • Community Colleges remain underfunded in comparison to the UC and CSU systems • Traditional sources of Instructional Equipment (often technology-related) funds under College Control are decreasing or disappearing • Increasing pressures on remaining resources to cover

	basic operational expenses • Increasing pressures to extend the life cycle of software and hardware, depriving community college students of "cutting edge" educational opportunities • Increasing financial pressures to delay adoption of newest technologies

IV. Guiding Assumptions

We reviewed multiple technology plans from community colleges and four year colleges and universities as well as technology planning and policy documents at the campus, district, state, national, and international levels. Information from these research efforts laid the foundation for the development of our guiding assumptions.

Including:

1. Students and faculty will expect many if not most institutional information and services to be mediated by technology and, thus, available 24/7: registration, transcripts, counseling, communications, instructional materials, library services, business services, student services and others.
2. While some students and faculty will arrive on campus with high levels of technological competence, others will need ongoing training, support and encouragement.
3. Technological innovation will continue to excite and challenge the campus community. While wireless, mobile devices, and cloud computing are the current leading edge, the campus will need to continue scanning and planning for new technological trends.

V. Technology Planning Culture

The College has invested significant resources in technology. Several large-scale construction and remodeling projects have provided opportunities to purchase new equipment with one-time bond monies. Generally speaking, however, no systematic, institutional planning or budgeting related to maintaining or replacing this wealth of newly acquired technology has occurred. In the current CSM technology planning culture, most technology is acquired and replaced on an "as the opportunity arises" or an "as needed" basis. The College recognizes the need for the creation of a systematic planning mechanism for acquiring, maintaining, and replacing technology.

VI. Current Inventory and Information Technology Services Support

CSM has a total of approximately 2,000 computers, 430 printers and 108 smart classrooms (see "Equipment Replacement and Support Presentation, Board Retreat February 2009). District ITS also maintains spreadsheet inventories of computers, printers and ceiling mounted projectors. While these inventories provide a fairly comprehensive view of current computer resources, the Technology Committee proposes to work with District ITS to create a "real time" comprehensive technology database for improved accuracy and scheduled replacement.

Currently, the District estimates the average cost of computer replacement on a 5-year cycle at $766,140 per year between 2009-2014. This assumes zero or negative growth of existing technology resources. Indeed, for the first time the college may need to explore ways of

reducing its technology resources (e.g., consolidation of computer labs, purchase of less expensive hardware, and stretching the length of the replacement cycles).

ITS provided the Total Cost of Ownership Model Standards, based upon recommendations in the California Community Colleges Technology II Plan, as listed below.

Provide computers for:

- Students- 1 computer for each 20 FTES;
- Full-time faculty- 1 computer for each;
- Part-time faculty- 1 computer for each 4 FTEF;
- Administrators and classified staff- 1 computer for each.
- Provide access to students with disabilities for ten percent of all workstations.
- Provide sufficient printers for students, faculty and staff.

Staffing:

- One network and systems administrative (NT, Win2K, etc. including wiring personnel) support staff person for every 300 PCs
- One technical management support staff for every 500 PCs
- One Web administration support staff for every 12,000 FTEs
- One administrative systems support (web, user development applications) staff per 12,000 FTEs
- One level support staff for every 150 PCs
- One application development staff for every 6,000 FTES
- One network staff person for every 12,000 FTES

Currently, these support personnel expenses are externally budgeted at the District rather than the College level.

District ITS provides each of the campuses with web services, productivity software, database software and support, including Microsoft Office (See Table 1 and SMCCD Strategic Plan for Information Technology Services 2008-2012, (Draft) for additional details).

Table 1. Administrative Systems

Banner 8	Update to Banner 8 launched spring 2010. SunGard Banner is the ERP system utilized at San Mateo CCD. It was initially installed in 1991-92 and has undergone significant major upgrades over the years. Banner is used extensively by all faculty, staff and students and includes major modules for: student registration, faculty grading, transcript production, student accounts payable, financial accounting, budget development, purchasing, student financial aid, payroll and human resources. Banner, now version 8, currently uses Oracle Release 10g as its database and is hosted at the District office on IBM AIX servers. Software upgrades, patches and the development new services are the responsibility of the programming team. Mandated state and federal reporting is largely based on information residing in the Banner database.

WebSMART	The Banner web interface, locally called WebSMART, is accessed by students and staff to conduct a variety of self-service tasks – such as class registration, payment of fees, financial aid information, request for formal transcripts, faculty grading, emailing students, payroll information, employee time off balances, employee tax information, etc.
Email (faculty and staff)	ITS maintains a comprehensive unified messaging service for the staff of the Colleges and District Office which includes voicemail, email and fax messaging. The system is based on Microsoft Exchange Server 2003 and Siemens Xpressions products. The Exchange environment consists of 2 clustered back-end servers as well as 2 load-balanced front-end servers for high availability. Storage of messages is maintained on an EMC Clarion Storage Area Network (SAN) utilizing RAID technology and redundant hot spare disks for fault tolerance. Data is backed up to high capacity, high-speed tape drives and is stored offsite for disaster recovery. In addition, to reduce and control email spam, we are using Pure Message Spam filter.
Email (students)	The San Mateo Community College District, through an agreement with Google, provides college email accounts to all students (@my.smccd.edu accounts). These accounts are used to contact students with important information about their classes and activities on campus. In addition, students receive access to additional Google Tools, including Google Calendar and Google Docs.
Ad Astra	Ad Astra is an interactive scheduling system that helps coordinate assignment of classrooms, schedule resources and events throughout the District. Class schedule information is synchronized with Banner on a real-time basis while events are created by authorized users throughout each College. Ad Astra runs on a Windows XP server and is accessed through a PC client application.
Argos	Argos is a web based reporting tool used to provide users with a variety of reports and data extracts of data from the Banner transactional or data warehouse Oracle databases. It is a product licensed from Evisions, Inc., a company based in southern California. The application is also intended to provide end-users with the ability to more easily create ad-hoc reports.
Hyperion	Hyperion - Extensive enrollment statistics are available from the web-based Hyperion dashboards. These academic term-based dashboards compare enrollment statistics against the same period in the semester to the previous year's registration cycle. The historical dashboard takes a snapshot of the enrollment statistics at various key points in time throughout the term. Decision makers throughout the institution access these reports for timely and accurate information throughout the term. The

	dashboards are built on top of the local data warehouse using the Hyperion Developer Tool.
SARS	SARS - SARS Software Products are used at all 3 Colleges to enhance student services for counseling appointments and record keeping. Currently supported products include: SARS-GRID, SARS-CALL, SARS-TRAK and eSARS. The SARS servers utilize a MS SQL Server database and are maintained and backed up in the data center. Interfaces between SARS and Banner are supported by ITS.
SharePoint	SharePoint (Web based collaboration tool) – SharePoint Services is included in the Microsoft Office Product Suite and allows users to post and interact with documents via the web. Over 115 Districtwide committees, departments and organizations currently use SharePoint for agendas, minutes, calendars, forms, surveys, forums, picture libraries and more. See: http://sharepoint.smccd.edu/SITEDIRECTORY
iTunes University	iTunes University@SMCCD – The District is a participant in Apple Computer's iTunes University program. iTunes University is a free, hosted service for colleges to post digital information in the form of podcasts. There are currently over 560 podcasts posted on the District site. See: **http://www.smccd.edu/itunesu**
OmniUpdate	OmniUpdate is a Content Management System for web sites. ITS recently deployed OmniUpdate as a tool for selected end users to maintain their web sites that are hosted on the District's servers. There are currently 100 active licenses throughout the District.
WebAccess	WebAccess is a Course Management System that is the District's implementation of Moodle. WebAccess is hosted offsite by Moodlerooms. Every faculty member that has a class assignment in Banner automatically has a WebAccess course(s) shell created for them. Faculty use of WebAccess ranges from supplemental course information to providing a course completely online. 24X7 support for students is provided by a third party, Presidium, at no cost to the District. Support for faculty is provided by ITS. See: **http://www.smccd.edu/webaccess**
CurricUNET (in implementation)	CurricUNET uses Web forms to assist in the creation and management of college curriculum, including course outlines and other program information. All information is entered into a relational database.
TracDat (in implementation)	TracDat uses Web forms to manage Student Learning Outcomes and Assessment data. All information is entered into a relational database

VII. Goals and Workplan

The Technology Committee developed six major goals for the planning horizon covered by this plan. These goals, and detailed objectives and action steps, are outlined in the attached workplanning grid. A major challenge confronting the committee and college in accomplishing these goals is the fiscal crisis at the State and Local levels and the corresponding decrease in essential resources.

Goal #1: Develop a stable, long-term plan and funding source(s) to meet the ongoing need for renewing and upgrading technology resources in campus computer laboratories as well as for faculty, staff, and administrative functions.

Goal #2: Ensure that faculty, staff, and administrators possess information technology competencies that effectively support teaching, learning, and college administrative functions

Goal #3: Improve access to information competency instruction (including web 2.0) for both on-campus and distance education students.

Goal #4: Use technology to facilitate effective communications with students, faculty, staff, alumni and the general public.

Goal #5: Develop an annual assessment of the college's future technological needs in light of advances in hardware and software and pedagogy.

Goal #6: Ensure that both long-term and short-term technology planning is integrated into institutional planning at all levels.

Technology Plan: 2009/10 to 2012/13

Goal #1: Develop a stable, long-term plan and funding source(s) to meet the ongoing need for renewing and upgrading technology resources in campus computer laboratories as well as for faculty, staff, and administrative functions.

Institutional Priorities Addressed by Goal: ("X" Relevant Priorities)

- **X** **Priority 1:** Student Success
- **Priority 2:** Academic Excellence
- **Priority 3:** Relevant, High-Quality Programs and Services
- **X** **Priority 4:** Integrated Planning, Fiscal Stability, and the Efficient Use of Resources
- **Priority 5:** Institutional Dialog

Evaluation or Assessment of Goal:

Complete and accurate computer inventories with estimated renewal needs for all programs/units on campus
Complete and accurate other technology inventories with estimated renewal needs for all programs/units on campus
Planning and approval process for technological expansion and, possibly, contraction at a college level
District and/or college level budget lines to cover technology maintenance and replacement

College Indicators Influenced by Goals: (Refer to College Index and/or Comprehensive Listing of Indicators and Measures)

4.1: Fund 1 Ending Balance
4.2 Fund 1 Budget Stability: Ratio of Actual Expenditures to Total Budget

Relationship to Other Key Planning Documents or Mandates:

Ed Master Plan	SMCCCD Strategic Plan	Other [e.g. SMCCCD Tech Plan]	Other	Other
Operating deficit (p. 20) Increasingly entrepreneurial (p.20) Budget linked to Strategic Plan and EMP (p. 20)	4.1 Fiscal Environment 4.4 Changing Technology 4.4.c. Replacement of obsolete equipment	District Technology Plan Skyline Technology Plan		Maintenance and Replacement Expenses (see "Equipment Replacement and Support Presentation, Board Retreat February 2009)

Objective #1: Collaborate with District ITS to update and maintain CSM technology inventories				
Action Steps	**Resources Estimated (Human, Fiscal, and Capital)**	**Outcomes/Deliverables**	**Proposed Lead**	**Timeline**
1.1 Review current computer and smart classroom inventories		Estimate of $750,000 has been identified.	Chair, TAC; Deans	Fall 2009
1.2 Collaborate with District ITS to create an improved "real time" tech inventory database (computers, smart classrooms/conference rooms)		College-level accessible "real time" database	Chair; Director District ITS	Fall 2010/Spring 2011
1.3 Collaborate with Academic Senate and District to explore program review mechanisms to collect and collate non-computer technology inventory and database (e.g., SIM people, planetarium projector, etc.)		College-level accessible "real time" database	Chair; Director District ITS, Academic Senate President	Fall 2010/Spring 2011
Objective #2: Recommend creation of technology set-aside fund of $750,000 per year over next five years--1st choice District-level fund; 2nd choice College-level fund				
Action Steps	**Resources Estimated (Human, Fiscal, and Capital)**	**Outcomes/Deliverables**	**Proposed Lead**	**Timeline**
2.1 Recommend creation of technology set-aside fund to Distict Budget Planning Committee		District-Level Technology Budget Line in FY 2010-11	Executive Leadership; Chair, TAC	Spring 2010
2.2 Recommend creation of technology set-aside fund to CSM Budget Planning Committee		College-Level Technology Budget Line in FY 2010-11	Executive Leadership; Chair, TAC	Spring 2010
2.3 Recommend creation of bond-money set-aside fund to CSM Budget Planning Committee		College-Level Technology Budget Line in FY 2010-11	Executive Leadership; Chair, TAC	Spring 2010

Objective #3: Explore opportunities to control costs, reduce duplication and redundancies, and maximize use of computers and peripherals on campus				
Action Steps	**Resources Estimated (Human, Fiscal, and Capital)**	**Outcomes/Deliverables**	**Proposed Lead**	**Timeline**
3.1 Explore reducing total number of computer labs on campus (e.g., adopting VMI)			TAC; Director District ITS	Spring 2011
3.2 Review computer and peripheral assignment policies for full-time and adjunct faculty			TAC; Director District ITS	Fall 2009
3.3 Recommend use of netbooks and other less-expensive laptops for faculty loaner program			TAC; Director District ITS	Fall 2009
3.4 Explore laptop rental program for adjunct faculty in collaboration with bookstore			TAC; Director District ITS; Director of Auxiliary Services	Fall 2010
3.5 Recommend fewer sole-assigned printers for full-time faculty			TAC	Fall 2009
3.6 Recommend networked printers for adjunct use			TAC	Fall 2009
3.7 Phase out fax machines/fax lines			TAC	Spring 2011
3.8 Recommend creation of institutional-level review process for adoption of new technology			TAC	Fall 2010
Objective #4: As Technology is renewed ensure the provision of universal access to technology across the campus environment by				

ensuring that assistive technology hardware and software for individuals with disabilities is integrated in the planning process.				
Action Steps	**Resources Estimated (Human, Fiscal, and Capital)**	**Outcomes/Deliverables**	**Proposed Lead**	**Timeline**
4.1 Establish guidelines which will enable campus technology procurement and renewal to meet state and federal compliance with ADA and Section 508.		Universal access to technology across the campus environment, including labs, SMART classrooms, and other learning environments.	Chair, TAC/District ITS	Spring 2011

Technology Plan: 2009/10 to 2012/13
Goal #2: Ensure that faculty, staff, and administrators possess information technology competencies that effectively support teaching, learning, and college administrative functions.
Institutional Priorities Addressed by Goal: ("X" Relevant Priorities) **Priority 1:** Student Success **Priority 2:** Academic Excellence X **Priority 3:** Relevant, High-Quality Programs and Services X **Priority 4:** Integrated Planning, Fiscal Stability, and the Efficient Use of Resources **Priority 5:** Institutional Dialog
Evaluation or Assessment of Goal: Technology skills workshop that measures baseline technology competencies Survey students regarding faculty technology skills in the classroom Comparison of faculty technology competencies with student competencies
College Indicators Influenced by Goals: (Refer to College Index and/or Comprehensive Listing of Indicators and Measures) 6.9 Faculty satisfaction with their technical preparedness and ability to improve student success and retention in distance ed 6.8 Faculty satisfaction with quality of professional development provided 6.6 Rate of participation in professional development among the various constituencies 6.5 Numbers of professional development activities offered. 3.2 Student Satisfaction and Perception: Overall Ratings

Relationship to Other Key Planning Documents or Mandates:				
Ed Master Plan	**SMCCCD Strategic Plan**	**Other [e.g. SMCCCD Tech Plan]**	**Other [e.g. Skyline Tech Plan]**	**Other**
Changing Technology, p. 13; **Professional Development Program**, p. 19; **Flexibility in instructional delivery**, p. 14; **Multiple modalities for info tech and tech skills**, p. 173; **Baseline tech competencies**, p. 183.	p. A9-11: 4.3a: Allocate capital improvement funds in accord with College educational and facilities master plans, which respond to the teaching and learning needs of each College.; 4.4a Implement College and District technology plans that support teaching and learning; 4.5a Strengthen professional and academic development opportunities for faculty and staff.	(p.15) Maintain and improve the performance of the District's telecommunication system Maintain the performance and enhance the feature set of the district telecommunication system - Ongoing --Regularly apply Siemens software upgrades to telephone and voicemail systems. Major upgrades to the HiPath 4000 operating system, the Xpressions voicemail system are planned for this summer – July 2008 Apply new firmware upgrades for IP telephone hand sets - Ongoing; Provide telephone/voicemail refresher training for District Office and College faculty/staff Spring 2009	(p.13) 1, 17 Require that all courses have an up-to-date instructional support website. The minimum course website will include course outline and grading criteria. Fall 2010 1, 17 Encourage and support faculty to use technology as a means to provide alternate delivery of instruction and enhance instruction. Ongoing 1, 17 Increase Skyline's presence in the SMCCD iTunes U site. http://smccd.edu/itunesu/ Ongoing 13, Through TAC, develop a set of recommended minimum technology qualifications for new full-time faculty hires. These minimum technology qualifications will be recommended for inclusion in all job announcements.	
Action Steps, p. 22-25: 2)		(p.16) Social		

Implement and/or assess innovative instructional programs; 7) Continue to expand the use of technology-mediated instruction throughout the curriculum as appropriate; 24) Expand the use of technology-mediated instruction as appropriate.		Networking Sites ITS is currently exploring the potential of implementing social networking tools. These tools might include portals, community sites and blogs for student to engage and interact with each other outside of their courses. Fall 2009		

Objective #1: Determine baseline technology competencies for current and new faculty, staff, and administration.

Action Steps	Resources Estimated (Human, Fiscal, and Capital)	Outcomes/Deliverables	Proposed Lead	Timeline
1.1 Review other college's technology competency requirements.		1.1 Compilation of common tech competencies	Tech Committee	Fall 2010
1.2 Develop a survey for constituent groups to measure gaps in their technology skills.		1.2 Survey	PRIE	Fall 2010
1.3 Administer the survey.		1.3 Method to administer survey	PRIE	Fall 2010
1.4 Compile data from review surveys.		1.4 Data	PRIE	Fall 2010
1.5 1.5 Produce comprehensive list of required tech skills for each constituent group.		1.5 List of skills	Tech Committee	Spring 2011

Objective #2: Gather feedback from students, via generic student surveys, regarding their instructor's technology skills.				
Action Steps	**Resources Estimated (Human, Fiscal, and Capital)**	**Outcomes/Deliverables**	**Proposed Lead**	**Timeline**
2.1 Develop survey		2.1 Survey	PRIE	Fall 2010
2.2 Administer survey		2.2 Method	PRIE	Spring 2011
2.3 Compile data from survey		2.3 Data	PRIE	Spring 2011
2.4 Analyze data and create action plan		2.4 Data analysis and recommendations	PRIE & TAC	Fall 2011
Objective #3: Explore establishment of college CTL to coordinate and conduct technology training workshops.				
Action Steps	**Resources Estimated (Human, Fiscal, and Capital)**	**Outcomes/Deliverables**	**Proposed Lead**	**Timeline**
3.1 Develop workshops geared towards various levels and applications of technology.		3.1 Workshop lesson plans	College CTL	Fall 2011
3.2 Implement WebAccess training for all faculty.		3.2 Training/Workshop schedule for all faculty	College CTL	Fall 2011
3.3 Identify dept/personnel to support tech training.	Identify existing staff or re-establish a College CTL (Centers for Teaching and Learning); $75,000	3.3 Name of personnel or department	Administrator	Fall 2011
3.4 Develop web space with online tutorials or identify existing online training.		3.4 Website/Links	College CTL	Spring 2012

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Goal #3: Improve access to information competency instruction (including web 2.0) for both on-campus and distance education students.

Institutional Priorities Addressed by Goal: ("X" Relevant Priorities)

X	**Priority 1:**	Student Success
X	**Priority 2:**	Academic Excellence
	Priority 3:	Relevant, High-Quality Programs and Services
	Priority 4:	Integrated Planning, Fiscal Stability, and the Efficient Use of Resources
	Priority 5:	Institutional Dialog

Evaluation or Assessment of Goal:

Pre and post assessment testing of faculty and students
Survey
Web Statistics
Web 2.0 workshops scheduled and conducted

College Indicators Influenced by Goals: (Refer to College Index and/or Comprehensive Listing of Indicators and Measures)

1.21 Faculty and Student satisfaction with Distance Education in the areas of services available to students, readiness assessments, readiness remediation
3.17 Student satisfaction with Distance Education program: e.g. Ability to complete distance education degree, enrollment choices, overall academic programs, accessibility
1.1 Retention Rates
1.3 Successful Course Completion Rates
2.1 Transfer Rate

Relationship to Other Key Planning Documents or Mandates:

Ed Master Plan	SMCCCD Strategic Plan	Other [e.g. SMCCCD Tech Plan]	Other: Skyline Technology Plan	Other: 2009 Horizon Report
Multiple modalities for info tech and tech skills, EMP p. 173;		(p.11) Maintain and enhance the use of instructional technology; track technology trends. Ongoing Participate in campus based Technology Advisory Committees -	**(p.10)**: 2, 12, 5, 1 Create multiple access points for students in pursuit of their educational goals and for staff/faculty to enhance effectiveness; Continue to deploy wireless access on campus with the goal	(p. 6) growing need for formal instruction in key new skills, including information literacy, visual literacy, and technological literacy...■ Students are different, but a lot of educational material is not. ... Institutions need to adapt to current

		Ongoing Continuously review campus utilization / effectiveness of Smart Classrooms -Ongoing Enhance Distance Education - Ongoing Attend relevant conferences and organizational meetings - Ongoing	of providing ubiquitous 802.11n access for students and staff; Continue to provide students with 24/7 efficient and intuitive online self-service business services; Expand the number of computers for students in nonproprietary areas such as the Internet Café; Utilize web technologies to place as much instruction online as practical.	student needs and identify new learning models that are engaging to younger generations. Assessment, likewise, has not kept pace with new modes of working, and must change along with teaching methods, tools, and materials.. ■ Higher education is facing a growing expectation to make use of and to deliver services, content, and media to mobile devices.... As new devices continue to make content almost as easy to access and view on a mobile as on a computer, and as ever more engaging applications take advantage of new interface technologies like accelerometers and multi-touch screens, the applications for mobiles continue to grow.... this is an opportunity for higher education to reach its constituents in new and compelling ways, in addition to the obvious anytime, anywhere benefits of these ubiquitous devices.
Baseline tech competencies, EMP p. 183.		(p.16) Social Networking Sites ITS is currently exploring the potential of implementing social		(p.8) Over the past few years, mobiles have undergone a continual transformation, becoming ever more capable and flexible with each

		networking tools. These tools might include portals, community sites and blogs for student to engage and interact with each other outside of their courses. Fall 2009		new release. The ability to record audio and video turned them into portable multimedia devices; as storage capacity increased, they became keepers of our family photos, phone books, and calendars; and now, geolocation, web browsing, and email have brought much of the functionality of a laptop to the pocket-sized devices. ... A new generation of mobiles appeared on the market featuring multi-touch displays, the ability to access the Internet over increasingly higher-speed 3G networks or by using wifi, and the capability for sensing motion and orientation and reacting accordingly using builtin accelerometers. ... Third-party applications are very easy to acquire and install; commonly priced at just under a U.S. dollar, they add games, reference materials, tools for measuring and calculating, checklists, reading material, productivity applications, social networking tools, and more to a single device that slips into a pocket. In mid-2008, Apple launched the App Store for the Apple iPhone, and less than six

				months later, more than 10,000 such applications were offered. Other mobile platforms are encouraging similar development, such as the Android platform developed by Google and the Open Handset Alliance. The first Android phone was released to market in October 2008, and the number of applications in the still-beta Android Market is growing by the day.

Objective #1: Create technology information competency instructional materials in a variety of Web 2.0 formats (i.e. screencasts, podcasts, videos, wikis, etc.)

Action Steps	Resources Estimated (Human, Fiscal, and Capital)	Outcomes/Deliverables	Proposed Lead	Timeline
1.1 Assess needs of faculty, staff and students through survey		Data that establishes needs of faculty, staff, and students	PRIE and Tech Committee	Fall 2010
1.2 Offer workshops on producing podcasts, screencasts, and/or instructional videos	Identify existing staff or re-establish a College CTL (Centers for Teaching and Learning); $75,000	Faculty knowledgeable about providing instruction in different formats	Tech Committee	Fall 2010-Spring 2013
1.3 Promote the creation and use of information competency materials in a variety of formats	Emails and Print promotional materials; $500 through PR Department	Faculty, staff and students informed about various modes of information competency instruction materials	Tech Committee	Spring 2010-Spring 2013

1.4 Find a means of support for faculty to continue to produce these materials on a year to year basis		Production of Info competency instructional materials in a variety of formats, and support for creators of content	Tech Committee and/or VPI	Fall 2010-Spring 2013
Objective #2: Provide accress points to technology information competency materials in WebAccess and othe Faculty online instruction sites				
Action Steps	**Resources Estimated (Human, Fiscal, and Capital)**	**Outcomes/Deliverables**	**Proposed Lead**	**Timeline**
2.1 Compile a list of information competency materials in a variety of mediums created at CSM as well as those found at other institutions		Rich source of materials for Faculty and Students	Library faculty and/or Faculty committee	Spring 2010
2.2 Develop workshop geared towards faculty on use of WebAccess		Faculty gain better knowledge of how to use and better explain use to their students.	Tech Committee or ITS department	Spring 2010
2.3 Promote list of information competency materials to users of WebAccess (i.e. faculty, staff and students)		Faculty made aware of Information Competency materials available in WebAccess	Tech Committee or Library	Fall 2010
Objective #3: Offer Web 2.0 or higher learning sessions to faculty, students and staff				
Action Steps	**Resources Estimated (Human, Fiscal, and Capital)**	**Outcomes/Deliverables**	**Proposed Lead**	**Timeline**
3.1 Expand current opportunities to offer Web 2.0 sessions to faculty	Identify existing staff or re-establish a College CTL (Centers for Teaching and Learning); $75,000	Faculty knowledgeable about offering many access points to Information Competency through	Library	Spring 2010

		Web 2.0		
3.2 Develop program for students to learn about Web 2.0 technologies focused on learning and information competency skills	Identify existing staff or re-establish a College CTL (Centers for Teaching and Learning); $75,000	Students knowledgeable about access points to Information Competency through Web 2.0, and knowledgeable about evaluating information they find on Web 2.0 and social networking sites	Library	Fall 2009-Spring 2010
3.3 Offer ongoing support to Web 2.0 learners	Identify existing staff or re-establish a College CTL (Centers for Teaching and Learning); $75,000	Faculty, staff and students have the means and a place to ask questions and/or continue their learning process	Library	Spring 2010-Spring 2013
Objective #4: Provide mechanisms for students to access technology information competency materials via mobile devices				
Action Steps	**Resources Estimated (Human, Fiscal, and Capital)**	**Outcomes/Deliverables**	**Proposed Lead**	**Timeline**
4.1 Develop mobile version of current CSM websites		Mobile device accessible sites for CSM faculty, staff and students	CSM Webmasters	Spring 2011-Spring 2013
4.2 Offer mobile Reference or question service in Library or in other CSM facilities/programs		Easy access point for queries	Library	Spring 2010
4.3 Develop mobile applications that make it easy to access information competency material via mobile devices		Easy access to materials via mobile devices	Tech Committee	Fall 2012-Spring 2013

4.4 Evaluate and promote the use of current instructional or reference applications that are available outside of CSM (i.e. iTunes)		Faculty, students and staff knowledgeable about current learning tools already offered through Itunes and/or third party developers for all types of mobile devices	Tech Committee	Fall 2011-Spring 2013
Objective #5: Provide opportunities for faculty to acquire knowledge about the ethical use of information including copyright for on-campus and distance education courses				
Action Steps	**Resources Estimated (Human, Fiscal, and Capital)**	**Outcomes/Deliverables**	**Proposed Lead**	**Timeline**
5.1 Provide a campus-wide workshop with an expert on copyright and intellectual property rights for higher education	Speaker fees $10,000	Faculty informed on the ethical use of information, including copyright	Library Advisory Committee	Spring 2010-Spring 2013
5.2 Develop online tutorials for faculty	Identify existing staff or re-establish a College CTL (Centers for Teaching and Learning); $75,000	Faculty provided with various modes of learning about ethical use of information and copyright law	Library	Spring 2010-Spring 2013

Technology Plan 2009/10 to 2012/13

Goal #4: Use technology to facilitate effective communications with students, faculty, staff, alumni, and the general public.

Institutional Priorities Addressed by Goal: ("X" Relevant Priorities)

	Priority 1:	Student Success
	Priority 2:	Academic Excellence
	Priority 3:	Relevant, High-Quality Programs and Services
	Priority 4:	Integrated Planning, Fiscal Stability, and the Efficient Use of Resources
X	**Priority 5:**	Institutional Dialog

Evaluation or Assessment of Goal:
Survey to constituent groups that asks them to rate CSM's performance in communications

College Indicators Influenced by Goals: (Refer to College Index and/or Comprehensive Listing of Indicators and Measures)
3.3 Student Satisfaction and Perception: Campus Climate
3.5 External Community Satisfaction and Perception: Overall Ratings
5.2 Employee Satisfaction and Perception: Campus Climate
5.6 Employee Satisfaction and Perception: Campus Communications (no equivalent indicator for Student Satisfaction with campus communications.)

Relationship to Other Key Planning Documents or Mandates:

Ed Master Plan	SMCCCD Strategic Plan	Other [e.g. SMCCCD Tech Plan]	Other	Other: 2009 Horizon Report
Changing Technology, EMP p. 13, Need for expanding WiFI network, EMP p.19-20, Utilize variety of technology, EMP p. 99	p. A9-11: 4.4b Review various College and District business processes to make the registration, scheduling, information sharing and other operational activities more efficient. 5.1b Include in all plans definitions and demonstration of student success to ensure that			(p.9) Relevance for Teaching, Learning, Research, or Creative Expression Mobiles are already in use as tools for education on many campuses. New interfaces, the ability to connect to wifi and GPS in addition to a variety of cellular networks, and the availability of third-party applications have created a device with nearly infinite possibilities for education, networking, and personal

	communication strategies at the District and College levels prominently showcase student success.			productivity on the go; almost every student carries a mobile device, making it a natural choice for content delivery and even field work and data capture. Third-party educational applications are readily available for the newest mobiles, and educational content is easy to find for almost every discipline. More sophisticated tools that tap into the unique capabilities of mobile devices like the touch screen, the camera, the microphone, and the accelerometer are quickly emerging. ... The variety and quality of educational content is growing at a fantastic pace.
From "Suggested Action Steps for Student Services," EMP p. 22: 1. Expand online services for students, including e-advising, online help centers, and web-based appointments with student services personnel.				

3. Increase and utilize a variety of technologies to deliver student support services (text messaging to cell phones, instant online help systems, increased online services, use of MySpace and Facebook for outreach to students).				

Objective #1: Conduct a survey that assesses effectiveness of technology in facilitating campus communications to students, faculty, staff, alumni, and the public.

Action Steps	Resources Estimated (Human, Fiscal, and Capital)	Outcomes/Deliverables	Proposed Lead	Timeline
1.1 Develop a survey that allows constituent groups to rate the effectiveness of CSM communications to them.		1.1 Develop survey	Tech Comm and PRIE	Spring 2011
1.2 Administer survey.		1.2 Online survey and mailed survey (include w/ catalog?)	PRIE	Spring 2011
1.3 Analyze survey results.		1.3 Data	PRIE	Fall 2011
1.4 Develop plan based on analysis of results.		1.4 Action plan	PIO	Fall 2011

Objective #2: Create a campus-wide electronic board system for announcements.				
Action Steps	**Resources Estimated (Human, Fiscal, and Capital)**	**Outcomes/Deliverables**	**Proposed Lead**	**Timeline**
2.1 Identify appropriate system, purchase, install.	Consultants, Engineers	2.1 List of options for elec bulletin boards	PIO; Cabinet	Fall 2010
2.2 Determine process for inputting announcements and identify depts and personnel who will maintain and update announcements.(create a schedule and deadlines for all submissions).		2.2 Process for submitting announcements and responsible parties	PIO; Cabinet	Fall 2010
2.3 Widely announce and promote use of system	Printing, promotional materials; $500 through PR Department	2.3 Promotional materials	PIO	Spring 2011 or when system is ready
Objective #3: Create companion webpages that include all of the same announcements that rotate on the electronic bulletin board.				
Action Steps	**Resources Estimated (Human, Fiscal, and Capital)**	**Outcomes/Deliverables**	**Proposed Lead**	**Timeline**
3.1 Determine how same information that appears on the electronic bulletin boards can be uploaded to the CSM website.		3.1 Process document	PIO	Fall 2010
3.2 Identify personnel/dept that will be responsible for updates.		3.2 Names	PIO	Fall 2010
3.3 Determine how bulletin board and website can both access new submissions.		3.3 Process document	PIO	Fall 2010

Goal #5: Develop an annual assessment of the college's future technological needs in light of advances in hardware and software and pedagogy.

Institutional Priorities Addressed by Goal: ("X" Relevant Priorities)

X	**Priority 1:**	Student Success
X	**Priority 2:**	Academic Excellence
X	**Priority 3:**	Relevant, High-Quality Programs and Services
X	**Priority 4:**	Integrated Planning, Fiscal Stability, and the Efficient Use of Resources
	Priority 5:	Institutional Dialog

Evaluation or Assessment of Goal:
Determine progress towards goals in the EMP and Technology Plan.
Planning and approval process for technological expansion and, possibly, contraction at a college level

College Indicators Influenced by Goals: (Refer to College Index and/or Comprehensive Listing of Indicators and Measures)
1.6 Student progress and achievement rate
2.12-2.14 SLO cycle

Relationship to Other Key Planning Documents or Mandates:

Ed Master Plan	SMCCCD Strategic Plan	Other [e.g. SMCCCD Tech Plan]	Other	Other
Action Steps for Student Svcs & Instruction: 7) Develop a plan for improved and coordinated communications with local industry and business.				

Changing Technology, EMP p 13: maintain tech competencies; reliable tech infrastructure and support, p 14: Flexibility in instructional methods; p 19-20: flexible facilities for emerging tech; p 23: technology-mediated instruction; p 99: variety of technologies; p 134: tech and service industries are key in CSM's region; p 201: state-of-the-art				

Objective #1: Develop an annual assessment process and assessment cycle.

Action Steps	Resources Estimated (Human, Fiscal, and Capital)	Outcomes/Deliverables	Proposed Lead	Timeline
1.1 Determine an assessment schedule/cycle		Timeline	Tech Comm	Spring 2010
1.2 Measure progress on CSM Technology Plan, EMP technology goals, and related recommendations		Report of assessment	Tech Comm	Spring 2011
1.3 Compare CSM's technology plan and goals with those of other California colleges		Report of Comparison	PRIE, Tech Comm	Fall 2011
1.4 Analyze findings and write recommendations		Analysis and recommendations	Tech Comm	Fall 2011

Objective #2: Investigate, research, and test new software and technoligies for possible adoption. (Read annual Horizon Report, available on www.educause.edu.)

Action Steps	Resources Estimated (Human, Fiscal, and Capital)	Outcomes/Deliverables	Proposed Lead	Timeline
2.2 Review educational technology trend studies (ie: the annual Horizon Report) and determine which emerging technologies would most enhance learning at CSM		Technologies for possible adoption and justification for each	Tech Comm	Fall 2010
2.3 Test technologies		Test results	Tech Comm	Spring 2011
2.4 Write a report of findings and recommendations		Report	Tech Comm	Spring 2011

Objective #2: Investiage the use of e-portfolios for all students and explore their use for SLO assessment documentation by faculty.

Action Steps	Resources Estimated (Human, Fiscal, and Capital)	Outcomes/Deliverables	Proposed Lead	Timeline
3.1 Create an e-portfolio subcommittee		Committee members signed on	Tech Comm	Fall 2010
3.2 Research e-portfolio applications and the feasibility of their implementation at CSM		Recommended applications and technical solutions	Tech Comm	Fall 2010
3.3 Determine how (and where) training will take place		Courses that will require the creation of an e-portfolio	sub-comm	Spring 2011
3.4 Require an e-portfolio in specific courses or as part of a first year experience course		Guidelines for class assignment	sub-comm	Spring 2011
3.5 Use e-portfolios as documentation for SLO assessment		Online documentation of SLO assessment that can be archived.	SLO committee	Fall 2011

Objective #3: Solicit input from industry advisers regarding emerging technologies for various discipline/professions.				
Action Steps	**Resources Estimated (Human, Fiscal, and Capital)**	**Outcomes/Deliverables**	**Proposed Lead**	**Timeline**
4.1 Identify i& invite industry professionals to participate in advising CSM on technology training		List of advisers	Deans in each division	Spring 2010
4.2 Develop questions for advisers that probe emerging technologies in their field/discipline		List of questions for advisors	Faculty	Spring 2010
4.3 Host an event, such as a round table discussion or sessions with advisers, or specific disciplinary groups of advisers (help foster partnerships with business)	hospitality/meals for volunteer advisers; Ongoing as Part of Program Advisory Committees	Guidance on the most practical technologies to teach, partnerships with local business	Tech Comm	Fall 2010
4.4 Analyze findings and write a report		Report and analysis	Tech Comm	Fall 2010
4.5 Develop implementation plan for purchase and training.				

Goal #6: Ensure that both long-term and short-term technology planning is integrated into institutional planning at all levels.

Institutional Priorities Addressed by Goal: ("X" Relevant Priorities)

	Priority 1:	Student Success
	Priority 2:	Academic Excellence
	Priority 3:	Relevant, High-Quality Programs and Services
X	**Priority 4:**	Integrated Planning, Fiscal Stability, and the Efficient Use of Resources
X	**Priority 5:**	Institutional Dialog

Evaluation or Assessment of Goal:

Survey Division Deans, Library Director, ITS Director and KCSM General Manager to evaluate the integration of technology into institutional planning.

Planning and approval process for technological expansion and, possibly, contraction at a college level

College Indicators Influenced by Goals: (Refer to College Index and/or Comprehensive Listing of Indicators and Measures)

Index 3.2 Student Satisfaction and Perception: Overall Ratings
Index 3.4 External Community Satisfaction and Perception: Overall Ratings: Chamber of Commerce
Index 3.9 Program & Service Enhancements: Percent of Distance Education Courses Offered
Index 3.5 External Community Satisfaction and Perception: Overall Ratings: Advisory Group Members
Index 3.10 Program & Service Enhancements: Percent of Online Courses Offered
Index 3.11 Program & Service Enhancements: Percent of Telecourses Offered
Index 4.1 Fund 1 Ending Balance
Index 4.2 Fund 1 Budget Stability: Ratio of Actual Expenditures to Total Budget
Index 5.1 Employee Satisfaction and Perception: Overall Rating

Relationship to Other Key Planning Documents or Mandates:			
Ed Master Plan	**SMCCCD Strategic Plan**	**SMCCCD Tech Plan**	**Other (Skyline Tech Plan)**
Changing Technology (P. 13) Flexibility in how instructional and student services programs are designed and delivered (P. 14) The College must develop a comprehensive professional development program for faculty, staff, and administrators (P.19) Expand the use of technology-mediated instruction throughout the curriculum as appropriate (P. 23,25,124,127) Increase and utilize a variety of technology to deliver student support services (P.99) The high dependence on technology to deliver instructional and student services requires that a comprehensive inventory for replacement of equipment be developed and funded. (P. 213) Once benchmarks are established, the Budget Planning Committee identifies the longterm funding needs associated with the College's long-term goals and objectives. In addition, total costs of ownership factors such as the cost of technology, facilities needs, and equipment replacement are considered. (P. 160)	p. A9-11: 4.3a: Allocate capital improvement funds in accord with College educational and facilities master plans, which respond to the teaching and learning needs of each College.; 4.4a Implement College and District technology plans that support teaching and learning	(P.11) Maintain and enhance the use of instructional technology in the District ITS will continue to monitor educational trends and related research, evaluate emerging hardware and software tools, continue to assess faculty needs, and track student technology trends.	(P.13) Goals 1, 17 Require that all courses have an up-to-date instructional support website. The minimum course website will include course outline and grading criteria. Fall 2010 1, 17 Encourage and support faculty to use technology as a means to provide alternate delivery of instruction and enhance instruction. Ongoing 1, 17 Increase Skyline's presence in the SMCCD iTunes U site. http://smccd.edu/itunesu/ Ongoing 13 Through TAC, develop a set of recommended minimum technology qualifications for new full-time faculty hires. These minimum technology qualifications will be recommended for inclusion in all job announcements. June 2009 2,7 Work with the District planning /construction processes to ensure that the present and future instructional technology needs of the faculty, staff, and students are addressed in any new construction or facility remodeling projects. Ongoing

Objective #1: Invite Chairperson of Budget Planning Committee to attend at least two Technology Committee meetings per year				
Action Steps	**Resources Estimated (Human, Fiscal, and Capital)**	**Outcomes/Deliverables**	**Proposed Lead**	**Timeline**
1.1 Contact Budget Planning Committee Chair		1.1 Attend Meetings	PRIE	Spring 2010-Spring 2013
Objective #2: Appoint Technology Committee chair Ex officio member of the Budget Planning Committee				
Action Steps	**Resources Estimated (Human, Fiscal, and Capital)**	**Outcomes/Deliverables**	**Proposed Lead**	**Timeline**
2.1 Contact Tech Committee Chair		2.1 Attend, monitor and advise at Budget Planning Committee Meetings	Tech Committee	Spring 2010
2.2 Contact Budget Planning Committee Chair and advise of appointment.		1.1 Technology Committee Chair is incuded in all Budget Planning Committee meetings and communications	PRIE	Spring 2010
Objective #3: Develop mechanism to exchange feedback concerning technology needs between library, college divisions and Budget Planning Committee				
Action Steps	**Resources Estimated (Human, Fiscal, and Capital)**	**Outcomes/Deliverables**	**Proposed Lead**	**Timeline**
3.1 Conduct forum including Division Deans, Library Director, ITS Director and KCSM General Manager to evaluate present state of technology integration and planning and develop feedback plan.		3.1.1 Open communication lines between forum members 3.1.2 Develop feed-back process with data gained during forum	PRIE	Fall 2010

3.2 Develop Survey of Division Deans, Library Director, ITS Director and KCSM General Manager to evaluate the technology integration and planning process		3.2 Develop survey that can be administered on a yearly basis	PRIE	Fall 2010
3.3 Suggest revision of program review to include technology planning and tracking at the program level			PRIE	Fall 2010

Appendix A.

1. EDUCAUSE Top Ten Issues Facing Higher Education 2008
2. The Horizon Report, 2008 Edition
3. The Horizon Report, 2009 Edition
4. California Community Colleges Technology III Plan 2007-2017
5. SMCCD Strategic Plan for Information Technology Services 2008-2012, (Draft)
6. San Mateo County Community College District Distance Education Plan
7. ACRL Information Literacy Standards for Higher Education, American Library Association
8. UNESCO ICT Standards for Competency for Teachers
9. Strategic Technology Plan for the Peninsula Library System
10. Accrediting Commission for Community and Junior Colleges Western Association of Schools and Colleges Standards
11. Home Broadband Adoption 2008, Pew Internet and American Life Project
13. The E-Expectations of High School Students Considering Community College
14. EDUCAUSE Current Issues Survey Report 2007
15. American Association of Community Colleges (AACC) Position Statement on Information Literacy
16. Hudson Valley Community College Online Learning International Student Information
17. Penn State Online Education for International Students
18. CSM and the Community It Serves: Demographic Profile
19. CSM Accreditation Survey – Business Leaders -What Students Should Learn at CSM
20. Copyright fight Looms Over College Textbooks
21. Georgia State Library Sued Over E-Reserves
22. College of San Mateo Institutional Self-Study 2007

Appendix B

Assumptions about Institutional Culture

4. Students and faculty will expect that most communication will take place via some type of technology based process.
5. Faculty will find it increasingly challenging to keep up with the pace of technological changes and will resist incorporating newer technologies into their curriculum and teaching methods.
6. The college will begin to experience a shift toward more workplace development with an increasing demand for software and hardware technologies used in the classroom to match current industry standards.
7. Adjunct faculty will continue to be an important segment of the college's teaching talent and will need to become more integrated into the college's communication and planning processes.
8. Students' technology abilities will continue to evolve faster than those of most faculty and staff.
9. The sense of a common college community will continue to diminish unless the college successfully uses social networking technologies to effectively link and engage students, faculty, and staff.
10. The college campus will need more efficient and effective communication systems
11. Everyone at CSM, some members of the community, and appropriate collaborating organizations need easy access to online information
12. Students expect to find updated and comprehensive information about the college on the college website
13. The campus community will expect to do all administrative work online, such as tasks related to employment, reporting hours, pay, announcements, workshop registration, etc.
14. The campus community will expect their campus newspaper to be online rather than in print.
15. The campus community will expect to use less paper.
16. Information literacy will be a necessity.
17. Technology will continue to change the way we teach and learn. We will expect faster responses

B. Assumptions about Students

1. Most students will own multiple portable personal digital devices and they will expect to use them to interact with the colleges web-based systems.
2. Most students will communicate with each other, faculty, and staff via some type of technology.
3. Students will expect a very short turnaround for questions or issues.
4. Students will expect technology to be ubiquitously available
5. Students will bring more technology devices to campus to use for learning and they will want a seamless interface with their technology and those technologies used on campus
6. Student expectations about the use and capabilities of technology will rise over time
7. More and more students will exhibit proficiency using common productivity software
8. Returning students will vary in their technology mastery, comfort level and engagement
9. Students will expect to able to access instructional materials with other devices aside from traditional computers
10. Students will expect to have central storage available on the college's network
11. Students expect to find the updated and comprehensive information about the college on the college website

12. Young students will adopt new communications technologies quickly and will expect their school to use these new tools.
13. Students will increase their use of cell phones and other hand held mobile devices.
14. Students will expect free Wi-Fi throughout campus.
15. Students will expect a reliable, navigable, high-value CSM website.
16. Students will expect computer labs to be functional, openly available, equipped with printers, and updated software and hardware.
17. Students will expect to do more on the CSM website than just register for classes. The will expect a self-serve experience that allows them to make counseling appointments, find a tutor, join a student club, and communicate with other students (selling books, promoting events, sharing rides).
18. Students will expect electronic communications from the institution and their instructors.
19. Student will be attracted to colleges that offer technologies of value.
20. Students will continue using online social networking sites like MySpace and FaceBook.
21. Students will expect to turn in assignments via electronic means.
22. Students who plan to transfer to University will expect to create an electronic portfolio.
23. Students will expect their college newspaper to be online

C. Assumptions about Faculty

1. Faculty will be heavily challenged to keep pace with new technologies and will require high levels of interactive, personal support from software and hardware experts.
2. Most faculty will incorporate some type of online process in their curriculum.
3. Most faculty will primarily interact with their students through some type of technology based device
4. Many faculty will feel overwhelmed by the volume of online student interaction that will result from the prevalence of technology based communication.
5. Faculty will expect more technology support
6. More faculty will be using technology in the classroom
7. Students will expect to be able to access instructional materials with other devices aside from traditional computers
8. Faculty will need to have access to alternate computing resources (smart phones, UMPCs, tablet PCs)
9. Faculty will continue to need training for using an course management system
10. Frustrated faculty will rebel rather than deal with multiple locations for campus info/events/announcements on our websites and via email.
11. Some faculty will be slow to adopt new technologies, but will use them once value is proven.
12. Faculty are exasperated dealing with communications from a variety of sources, rather than one contact point.
13. Faculty will expect electronic communication.

D. Assumptions about Classified Staff

1. Staff will expect to have easy access to integrated District information resources
2. Staff will use, and will be expected to use technology.
3. Staff will need to have more efficient and effective communication with adjunct faculty.

E. Assumptions about Equity & Access

1. The college will continue to admit many students who are underprepared for college and have limited financial resources.

2. While most students will have a home computer, software and hardware on home computers will continue to lag behind technologies offered in the classroom.
3. Students will expect to be able access academic support services and computer labs during the evenings and on weekends.
4. Socio-Economic factors will continue to affect technology adoption, Internet access, and development of computer skills.

F. Assumptions about Hardware/Software and Network Infrastructure

1. Demand for more bandwidth will increase as faculty implement more interactive and multimedia learning objects
2. Expect abuse of fast broadband access (file sharing, video viewing)
3. Expect use of high bandwidth instructional media
4. Students will expect to have central storage available on the college's network
5. CSM will continue to offer free WiFi throughout campus.
6. We must make sure that our websites are secure.
7. We must be sure that IT knows how to maintain & troubleshoot our servers.
8. CSM's distance learning efforts include tele-courses on KCSM and online classes via the Internet.
9. We will come to expect that we can connect to the Internet anywhere, anytime.
10. CSM needs a singular unified central communications system.

G. Assumptions about Student Support Services

1. Counseling services will be available via interactive technology at times that are most convenient to working students.
2. Students will expect that financial aid services will be interactive and accessible 24/7.
3. Students expect to find the updated and comprehensive information about the college on the college website
4. Students will expect support services to have more than a presence online, but will expect real value and function.
5. CSM is expected to have appropriate assistive technologies for students with disabilities.

H. Assumptions about Library Services

1. Library resources will be available via web based technologies 24/7
2. Library research support will be available 24/7
3. Course Reserves will be largely digital and accessible 24/7
4. Information Competency/Literacy skills will be expected of all academic and vocational students.
5. There will be pressure from publishers to limit educational fair use of copyrighted materials.
6. Publishers will increase efforts to directly sell access to students and faculty and limit the ability of libraries to loan and share digital products.
7. Students will expect more information resources and classroom resources to be available online and accessible through the library
8. Everyone at CSM, some members of the community, and appropriate collaborating organizations need easy access to online information
9. Students will expect all library functions to be available online.
10. Students will expect the library to be a repository of information, more than a repository of books.

I. Assumptions about Admissions & Records Services

1. Security of personal information and academic records will continue to be of utmost concern
2. There will be a need for A&R to stay abreast of and readily adopt new technologies to help the campus remain competitive in attracting and retaining students.
3. A&R staff will require continuous professional development to incorporate new technologies into their skill sets.
4. Students will select institutions where ease of access to registration and related services is easiest
5. Students will want to handle all transaction related to registration, transcripts, online.
6. Students will expect interactive 24 hour services
7. Faculty will expect A&R to be proactive in helping them manage their A&R responsibilities utilizing interactive web-based technical support 24/7.
8. Students will expect assistive technology to support ease of use of A&R processes.
9. CSM will continue being an open enrollment institution, ensuring a diverse community of students.

J. **Assumptions about Facilities**

1. Facilities will be increasingly monitored by technological systems.
2. Maintain support for both Windows and Mac computer systems
3. There will be other centers or locations where we deliver instruction other than those that currently exist
4. The campus will still need distributed computer labs
5. All campus buildings should provide data and power access for individual student computing devices
6. Demand for more bandwidth will increase as faculty implement more interactive and multimedia learning objects
7. CSM is a mix of brand new buildings alongside old aging facilities

K. Assumptions about Distance Education

1. The District goals include increasing enrollment of distance education students.
2. Community Colleges will continue to be competitive players in delivering distance education for both domestic and international students.

L. Assumptions about Workforce Development

1. The business community will expect students to acquire information literacy and technology competencies are part of their training.

M. Assumptions about Resources **and Funding**

1. Technology that has been made available via new building and renovation projects will become obsolete.
2. The costs of technology will consume larger portions of the institution's budget.
3. Funding for technology will shift to less dependence on state funding and more external funding will be needed to support technology.
4. There will be less funding for hardware upgrades as bandwidth costs expand
5. Hardware prices will continue to fall or stabilize

N. Assumptions about Lifelong Learning and Community Education

1. The college's community education and lifelong learning courses will provide an important venue for retired baby boomers to maintain currency with information and technology competencies.

O. Assumptions about Marketing, Promotion, and Development

1. Electronic Communication methods including the email, instant messaging, blogs, and other web 2.0 technologies, electronic bulletin boards, e-commerce, alumni relations, and fund development among others are fast becoming standard and expected communication venues in higher education institutions.

P. Assumptions about Security and Emergency Preparedness

1. Technology-based surveillance systems and emergency broadcasting systems are becoming part of the norm on college campuses.

Q. Assumptions about What Activities High School Students Would Like to Be Able to Do on a Community College Website

1. Complete a financial aid estimator to learn about how much money you might receive in aid or scholarships (88%)
2. Complete a tuition cost calculator to learn more about how much a school might cost (85%)
3. Request a campus visit by completing a form (80%)
4. Complete an admissions application online (79%)
5. Instant message an admissions counselor or student worker (74%)
6. Complete a form to RSVP for a campus event (71%)
7. Submit a form online to receive more information in the mail or by e-mail (70%)
8. View a virtual tour (67%)
9. E-mail a faculty member (65%)
10. Read profiles of faculty (64%)
11. Read a blog written by a member of the faculty (64%)
12. Fill out a form to get a personalized viewbook PDF (62%)
13. Enter information about your interests to see a personalized Web page (61%)
14. Read profiles of current students (61%)
15. Read a blog written by a current student (61%)