



Technology Assessment and Three-year Plan

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DRAFT

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EXECUTIVE SUMMARY

Information Technology/Media Services Mission Statement and Goals

Information Technology, Media Services, and Campus Lab Technicians support the constantly changing high-technology environment of MPC by offering the needed technology services to advance instruction, college services, and business processes for students, faculty and staff. IT staff are committed to providing students, faculty, and staff with stable, effective technology through a comprehensive process of planning, resource allocation, implementation, support, and evaluation. In addition, campus technology staff works with the college community by assisting with technology initiatives, planning, securing resources, exploring new technology applications, and implementing and maintaining technology projects. The Information Technology/Media Services Department must continually assess the quality and level of service to the campus, anticipate future campus technology needs, participate in campus physical planning efforts, implement long-range infrastructure improvement, introduce innovative new technologies, and collaborate with faculty to continuously improve and reinvent technical support for the changing academic environment.

Purpose of the Technology Plan

Strategic planning within Information Technology and Media Services evolved from and is guided by the College's Mission and Component Goals. This plan describes the present state of campus technology and defines the strategic and operational direction, goals, and objectives for technology applications over the next three years. It provides a common vision for the future deployment of technology at Monterey Peninsula College, which is focused on enriching the learning experience for students and improving the college's business processes. The Plan will be used for budgeting and allocation of funds, for support and training initiatives, to set strategic directions for the use and support of technology, to align the work of technology staff with the priorities and needs of the Campus Community, and to provide standards, guidelines, and procedures needed to effectively implement and support campus technology.

The planning process is framed by critical questions:

- Is MPC delivering the appropriate technology services?
- Which changes in technology services, if any, are essential to the success of student learning and college business?
- How can technology personnel best facilitate, deliver, and manage these opportunities and challenges?

Planning was augmented with information from the "Top Ten IT Issues of 2009" by the EDUCAUSE Current Issues Committee, <http://net.educause.edu/ir/library/pdf/erm0943.pdf> which is addressed in this plan. The ten issues listed in order are:

- Funding IT
- Administrative/ERP Information Systems
- Security
- Infrastructure/Cyberinfrastructure

- Teaching and Learning with Technology
- Identity/Access Management
- Governance, Organization, and Leadership
- Disaster Recovery/Business Continuity
- Agility, Adaptability, and Responsiveness
- Learning Management Systems

Alignment of Technology Goals with Institutional Goals, Program Reviews and Action Plans

Various planning documents were reviewed during the writing of this document. These include:

- MPC institutional goals,
- Program Review documents, including updates, for Departments and Divisions,
- The Education Master Plan of 2003, Goal IV “Acquire and maintain state-of-the-art technology and equipment to provide maximal support to our students, faculty, and staff,”
- The Facilities Master Plan of 2005 and updates to the Plan,
- Action Plans,
- Along with recent information and requests related to technology needs.

Responsibilities of Technical Staff

Technology resources at Monterey Peninsula College are maintained by Information Technology (IT) personnel, Media Services (MS) personnel, and Campus Laboratory Technicians (Lab Techs).

Information Technology is responsible for:

- network services: LAN (local area network), WAN (wide area network), SAN (storage area network), WLAN (wireless area network),
- administrative systems,
- custom programming,
- server clusters in the Data Center,
- desktop computing,
- SharePoint website services (design, development, servers),
- telephony services: VOIP (digital phone system) , analog phones & faxes, campus wide cell phones and all FCC radio licenses,
- videoconferencing,
- Student Records System,
- Data storage and back-up,
- Faculty, staff and student technology training,
- help desk.

Media Services is responsible for:

- maintenance and support of classroom technology,
- Instructional Technology Lab and services,
- audio-visual services,
- faculty, staff and student technology training,
- iLearn@MPC (Moodle online course management system) support and training.

Campus Laboratory Technicians are responsible for:

- maintenance and support of the technology and laboratory resources in their academic area,
- training students, faculty and staff in the use of the technology resources in their area;

Many of these services and their support personnel overlap and their efforts are coordinated during weekly meetings.

MPC Institutional Technology Committee

The MPC Technology Committee meets every semester as needed, often monthly, and is comprised of management, faculty, staff, and students, each appointed by their various constituency groups. The purpose of the Committee is to assess campus technology resources and to develop, and annually update, a comprehensive Technology Assessment and Three-Year Plan for the coordination of campus technology resources. The Technology Committee reports directly to the College Council but may also make recommendations to the college's Academic Affairs Advisory Group, Student Services Advisory Group, and Administrative Services Advisory Group regarding technology related issues that may pertain to those specific areas. The committee may also be tasked with evaluation and review of specific equipment, software and/or training which the college requires in order to fulfill its mission as an instructional institution.

The duties and responsibilities include:

- Create, and annually update, the College's Technology Assessment and Three-Year Plan;
- Act as recommending resource to the College Council regarding technology issues;
- Act as resource to the college's Staff Development Committee regarding technical training;
- Recommend specifications and standards for campus technology purchases (e.g., PCs, printers, data projectors, etc.);
- Make recommendations regarding priorities for the acquisition of technology, hardware and software, design and use of facilities and other related resources during budget review and development processes. Such recommendations could include priorities for support staff, training, and access to computer resources and laboratories;
- Recommend procedures for the placement, operation, repair and replacement of technology resources as a part of the Component Goals and Action Plan process;
- Develop and recommend campus policy regarding use and control of technical property.

Membership of the College Technology Committee consists of the following:

- Dean, Information Technology & Media Services
- VP or Dean of Student Services
- VP or Dean of Academic Affairs
- VP, Dean, or Director in Administrative Services
- Faculty as assigned by Academic Senate (4-8 representing different Divisions)
- Classified personnel (1 from IT, 1 from Media Services, 2-4 from other areas)
- Student representative from ASMP

Meetings are open to any interested member of the College Community. The present list of Committee members is on page 2 of this document.

Summary of Major Technology Planning Based on the Educause List

Funding is a major issue for updating equipment. The process can be improved with listing the calculated technology refreshment yearly amount (\$300,000) as a budget line item and working to pare down the amount of student computers to essential numbers. This can be accomplished by

sharing resources, removing little used computers, and increasing campus wireless to encourage students to bring their own laptops or netbooks.

Administrative Information Systems will be upgraded with the replacement of the HP e3000 and its software with a Windows-based system during late 2010. The Fiscal accounting system may need to be upgraded sometime in the near future.

Security of the network is an ongoing issue but has not been a major problem. A major loophole has been closed with the new wireless system that has security controls built into the system.

Infrastructure of the network is newly installed fiber which can handle Optiman network needs.

Teaching and Learning with Technology has been greatly enhanced with the installation of the SharePoint website and the iLearn course management system. SharePoint will be upgraded to 2010 during summer of 2010. The Library and Technology Center is home to over 350 student computers.

Identity/Access management of the network is controlled through Active Directory. Forefront Identity Manager 2010 will be installing during 2010 which will integrate with Exchange 2010 to allow our users to reset their passwords via a web interface.

Governance, Organization, and Leadership of the College is clearly defined and works well.

Disaster Recovery/Business Continuity is managed by various redundant servers, tape back-up stored off site, along with the natural gas generator. MPC IT developed a Pandemic Response Plan [Appendix H.] to allow administrators to conduct College business at home.

Agility, Adaptability, and Responsiveness of personnel is based on being cross-trained so they can cover for each other during emergencies. Documentation is often the only means of sharing information on the various systems. MPC does not have the luxury of redundancy in personnel given the financial climate so cross-training is seldom an option therefore exposing us to extended wait times in order to resolve a problem.

Learning Management Systems

iLearn (Moodle) was upgraded in 2009 and serves our needs with support from CSUMB and at a low cost (\$10,400/year).

Overall assessment of technology services in general

Technology support at MPC meets the needs of learning, teaching, college-wide communications, data research, and operational systems.

In a 2008 campus staff survey, of those responding with an opinion, 84-85% agreed or somewhat agreed that software and network connections used to support student learning are adequate, 88% agreed or somewhat agreed that the technology at MPC enhances teaching and achievement of

student learning, and 78% agreed or somewhat agreed that we have adequate technology to meet our work needs. (<http://www.mpc.edu/institutionalresearch/Pages/default.aspx>)

The Noel-Levitz Student Satisfaction Survey was given to MPC students Spring semester 2009 with a scale of 1 to 7 with 7 being the highest. Two questions applied to technology: 15. *I am able to register for classes I need with few conflicts.* (rating of 6.39); 34. *Computer labs are adequate and accessible.* (rating of 6.07) Both scores were higher than the average of California Community Colleges in 2008. (W:\Student surveys\Noel-Levitz\SSI-Spring2009\Monterey Peninsula College - SSI - Spring 2009\Monterey Peninsula College vs California Comparison - 5-2009.html)

Anecdotal evidence, primarily from Program Review documents, includes:

- IT provides the support we need when our computers become dysfunctional (or non-functional!). We are pleased with their support. Speech (Humanities Program Review 2009)
- The Instructional Technology Department provides valuable support to our Department by dealing with instructor computer related problems as they occur. Members of the IT Department are always available to us and often go beyond what is required to help us incorporate technology into our curriculum. We look forward to working closely with the IT Department as we turn all of our rooms into “smart” classrooms. (Math Program Review)
- We rely heavily on the resources of the instructional technology and audio-visual staff in keeping our lecture presentations and computer usage running smoothly. (Astronomy Program Review)
- Several of us have participated in a number of Staff Development Workshops offered by other areas of the college. We make substantial use of the services of ... Information Services/Network Support, and the Audio/Visual department. (Chemistry Program Review)
- The Instructional Technology department, in collaboration with Bob Otter, provides valuable support to Earth Sciences by keeping our computers and smart classrooms running. (Earth Sciences Program Review)
- We obtain excellent IT support as do all our programs from an IT department that rarely receives the recognition it deserves in keeping services running in spite of spam proliferation, viruses, and aging computers. (Engineering Program Review)
- Instruction Technology helps our online instruction program as requested. The support is adequate. (Library Program Review)
- 85% of the faculty and staff are fairly or very satisfied with the technology available. (Humanities Program Review 2009)
- 91% are fairly or very satisfied with technology support. (Humanities Program Review 2009)
- Instructional Technology (IT): IT responds quickly to requests made by the division office. We appreciate the work that IT accomplishes. (Humanities Program Review 2009)
- Instructional Technology (IT) We receive excellent technical support both in the ESL Computer Lab and in the smart classrooms we use. ESL (Humanities Program Review 2009)
- Management of Information Services (MIS) IT has been responsive to individual instructor needs in the area of technology. They are always available to faculty in their offices to upgrade software and install programs that are specific to our program. ESL (Humanities Program Review 2009)
- Instructional Technology (IT): Personnel from IT are unfailingly supportive. ESL (Humanities Program Review 2009)
- Instructional Technology has provided invaluable training, and recommended, installed, and maintained multimedia equipment in the classrooms and faculty offices. World Languages (Humanities Program Review 2009)

- The Network Support Team has installed, repaired, and upgraded equipment. Since installing the computer lab, there has been an increased need to coordinate with this program. They provide much-needed support when there is a major crisis that cannot be remedied by the part-time Instructional Technology Specialist. World Languages (Humanities Program Review 2009)

CHAPTER 1

College Technology Goals and Processes

OVERVIEW:

College Mission Statement, Goals, and Support for Technology

“Monterey Peninsula College is committed to fostering student learning and success by providing excellence in instructional programs, facilities, and services to support the goals of students pursuing transfer, career, basic skills, and life-long learning opportunities. Through these efforts MPC seeks to enhance the intellectual, cultural, and economic vitality of our diverse community.”

(MPC Mission Statement)

Monterey Peninsula College Institutional Goal 7.2: *Provide a stable and secure technical environment for the entire institution [Appendix G].*

Information Technology and Media Services support student learning by providing a robust and secure network for data and voice communications. The College supports numerous student computer labs as well as multimedia-capable (smart) classrooms.

Overall Technology Goals to Support the College Mission and Goals

The following overall goals have been developed to support the College Mission and achieve College goals. More in-depth information on each of these objectives is included in later chapters.

MPC Goals	Information Technology & Media Services Goals
▶ Promote academic excellence and critical thinking across all areas and disciplines.	<ul style="list-style-type: none"> • Provide students with up-to-date computer technology for learning. • Maintain adequate campus-wide software licenses. • Participate in campus committees to insure that academic considerations related to technology are addressed. • Support distance learning technologies such as online and videoconferencing.
▶ Foster a climate that promotes diversity throughout the institution.	<ul style="list-style-type: none"> • Provide students with disabilities with access to computer labs and equipment in accordance with state guidelines and ADA requirements that support the students’ disabilities and positively enhance their learning experiences at MPC.
▶ Grow enrollment and build MPC into an economic driving force for the Monterey area by supporting and developing programs that teach employable skills.	<ul style="list-style-type: none"> • Exploit the capability of the MPC website for workflow processes, the storage or sharing of documents, placement of information for students, staff and the public, tutorials, surveys, committee processes, and emergency announcements. • Participate in state or federal technology initiatives and grant opportunities as appropriate.
	<ul style="list-style-type: none"> • Provide up-to-date technology infrastructure to classrooms as needed.

<p>► Create pathways to success that address the diverse, holistic needs of all MPC students.</p>	<ul style="list-style-type: none"> • Maintain both instructional and open computer labs as appropriate for instructional needs. • Provide for user friendly and efficient Web Application, Web Registration, and Student Records' System.
<p>► Provide educational programs and services in Seaside and Marina that meet community needs.</p>	<ul style="list-style-type: none"> • Provide comparable access to technology and technology support at all teaching sites. • Maintain a wide area network (WAN) with high-speed bandwidth and servers with adequate capacity and capability to meet demand. • Maintain a data mining capability to access aggregate student data and develop new capability as necessary.
<p>► Ensure adequate levels of personnel to support current programs and establish priorities for future growth.</p>	<ul style="list-style-type: none"> • Provide faculty with acceptable office computer and classroom technology for quality teaching. • Provide staff with the appropriate computer technology for their job responsibilities. • Provide quality technical staff to support campus technology. • Communicate with faculty and staff and provide technology training as needed or requested. • Maintain an Instructional Technology Lab for use by faculty and staff.
<p>► Maintain and improve district facilities.</p>	<ul style="list-style-type: none"> • Maintain the campus Voice Over IP telephone system and upgrade as needed. • Maintain spare parts inventories. • Maintain audio-visual and instructional technology services. • Use best practices for technology deployment. • Adhere to MPC standards and Policies of technology use. • Ensure the safety and security of critical systems, to include the network, servers in the Data Center, and critical data. • Deploy “green” processes in order to cut down on energy, purchases, and paper. <i>Examples include shut-down or sleep-mode of computers when not in use, creating multiple virtual servers on a single piece of hardware, posting of documents on the website, rather than printing, and e-mail the link.</i> • Review and update the Technology Plan annually. • Focus on quality of service.

Program Review and Action Plan stated needs include the following:

- Additional computer lab space (Astronomy)
- Replacement of ageing technology (Astronomy)
- Better utilize PS-205, computer-tutorial lab, and update equipment (Astronomy)
- Installation of wireless technology in the Lecture Forum classrooms (Astronomy)
- Move Astronomy 10 to an online format (Astronomy)
- Add computers to each laboratory station in our labs (Chemistry)
- Periodically provide instructors with up-to-date computers and software (Chemistry)
- Additional laptops (Earth Science)
- Update hardware and software (Engineering)
- Convert remainder of PS classrooms (and IC) to “smart” classrooms (Math)

- Expand Math Learning Center with more computers (Math)
- Room for computer-aided instruction (Math)
- Testing Center for online and other students - with computers (Math)
- Upgrade staff computers (Math)
- Method of recording student speeches easily and placing on website – VHS to DVD migration (Speech)
- Replacement and upgrading of technology (Library Program Review Update 2009)
- Maintaining and updating the web page is an ongoing challenge. (Family and Consumer Science PR Update)
- CAD Lab computer upgrades (Life Science PR Update)
- LS 206 upgraded to “smart” classroom. (Life Science PR Update)
- Laptops for LS 101 and 104 (Life Science PR Update)
- Install surveillance cameras and call boxes for increased safety. (Security Program Review)
- Acquire current computers. ESSC (Humanities Program Review 2009)
- On-line version of Phil 8 (World Religions) will require support from Instructional Technology. Philosophy (Humanities Program Review 2009)
- Replace copy machine in the main office. (Nursing Program Review 2009)

Process for Identifying and Prioritizing Technology Needs

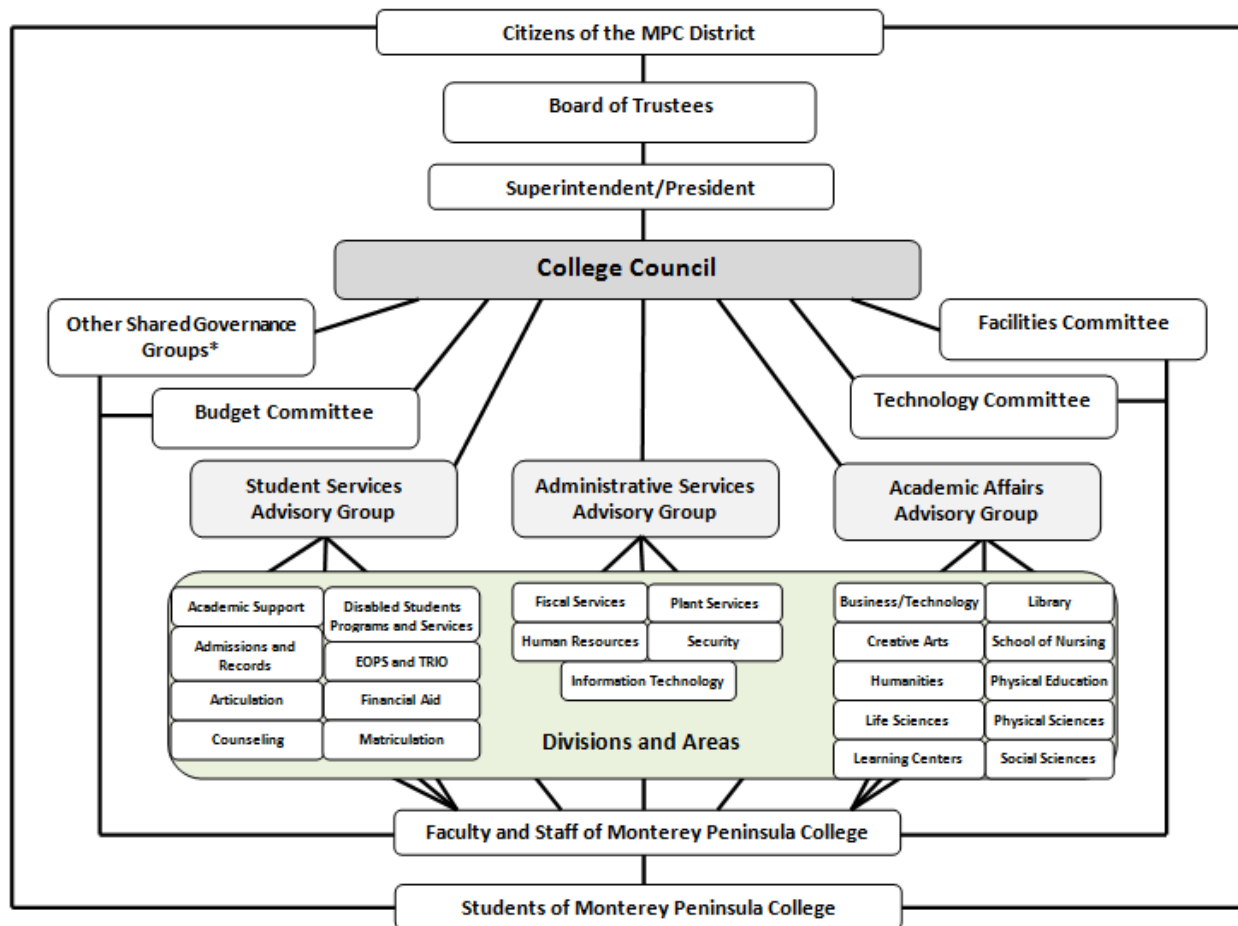
Because the integration of technology planning with campus planning is critical to achieving campus technology goals, major technology initiatives are typically initiated within various campus shared governance constituencies, as well as through the Technology Committee, the weekly Lab Tech meetings, Media Services and IT meetings, and processed through the Planning and Resource Allocation Process. Technology needs are further identified through Program Review, Action Plan process, Technology Plan process, Distance Education Taskforce, Computer Proliferation Taskforce, weekly campus technician meetings, as well as through help desk and other communications.

During fall semester a preliminary list of technology needs is consolidated, the list is refined and prioritized through discussions at various meetings of the shared governance groups including Academic Affairs Advisory Group (AAAG), Administrative Services Advisory Group (ASAG), Student Services Advisory Group (SSAG), Associated Students of Monterey Peninsula College (ASMPC), campus tech meetings, Technology Committee meetings, and informal discussions. This process takes place yearly and as funding is available.

A good example of the result of this process is the Classroom Equipment Refreshment Guidelines [Appendix F] and Technology Refreshment Plan for 2008/2009 [Appendix J] Funds are allocated most years by the Budget Committee to update the technology in the classrooms and student labs. The computers that are removed are then refurbished and cascaded to faculty and staff. All constituencies on campus have input into the plan through the Action Plan process and through committee discussions, in order to place new technology where it is most needed to support learning. This ensures that students have access to the highest level of technology, as funding is available.

The flow of recommendations/ideas for planning and resource allocation purposes is diagrammed below (from the Accreditation Self Study of 2009).

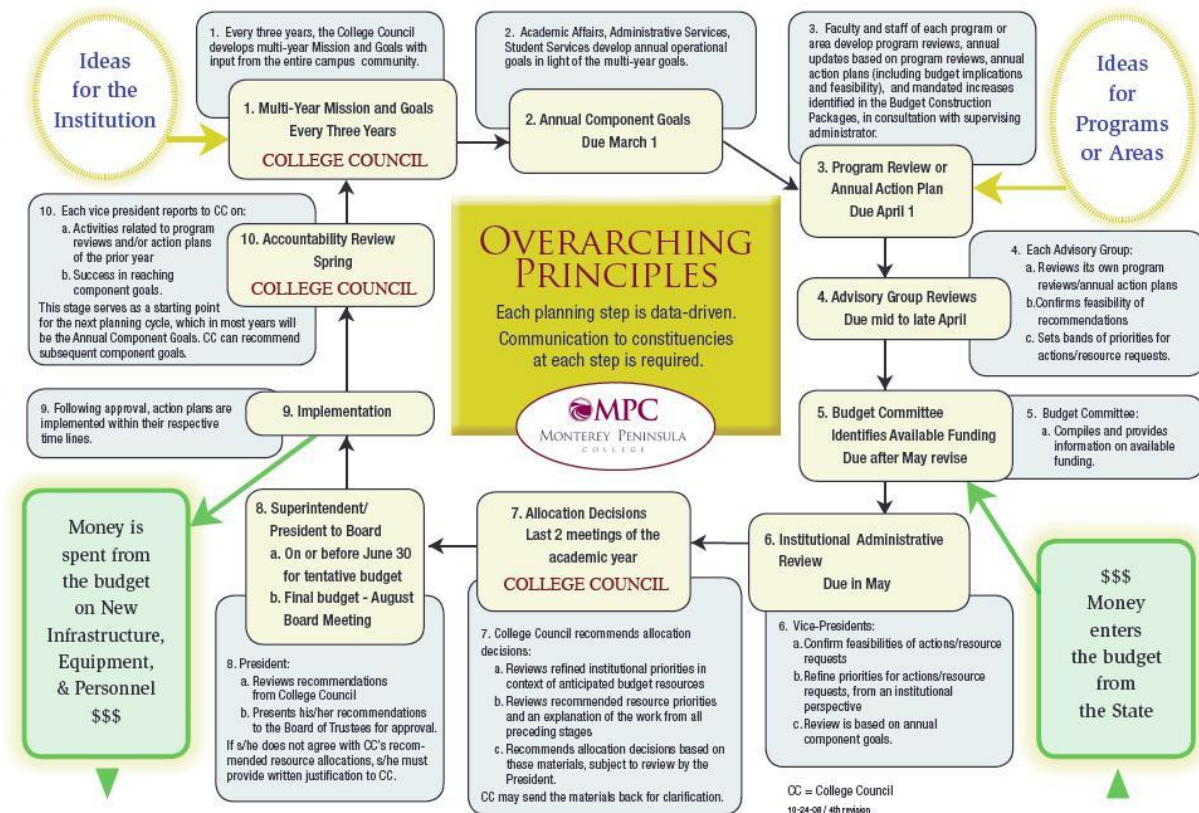
Figure 4A.2 Flow of Recommendations/Ideas for Planning and Resource Allocation Purposes



*Refers to other shared governance groups that may make recommendations to the College Council about institutional goals and objectives, board policy, or other topics of institutional interest. Please see the Illustration of Dialogue.

The MPC process for decision-making and allocation of resources is as diagramed below (from the Accreditation Self Study of 2009).

MONTEREY PENINSULA COLLEGE PLANNING AND RESOURCE ALLOCATION PROCESS



Overview of Institutional Funding for Technology

The institution, over the past couple of years, has increasingly supported and funded the upgrading of technology resources. Technology needs are addressed in the Institutional goals, the Education Master Plan which recognizes the role of technology in teaching, Program Review and annual updates, and the Facilities Master Plan by addressing the need for an updated wiring infrastructure and Data Center. The Technology Assessment and Three-Year Plan along with Program Review and annual updates bring the various initiatives together. Bond funds have been used to build a state-of-the-art technology infrastructure and almost all of the classrooms have appropriate technology resources for teaching. MPC is a CENIC (Corporation for Education Network Initiatives in California) network node and takes advantage of other select state-wide technology initiatives and funding, when appropriate, that are offered by the Chancellor's Technology Office and described in the California Community Colleges Technology III Plan of 2007-2010. The Educause Top Ten IT Issues lists "Funding IT" as the number one issue.

Funding Sources for Support of Technology:

- MPC general fund budgets
- MPC categorical funds such as Instructional Block Grant funds

- One-time MPC Action Plan funding
- MPC Technology Refreshment funds
- Local bond and state funds for new construction and renovations
- Governmental grants as available (Title III, Closed Captioning, California Teleconnect Fund, Last Mile, Federal Stimulus)
- Other grants (Instructional Technology private grant)
- Other funds (Microsoft-California Government Entities Settlement, PG&E energy savings rebate program)

General Fund budgets:

General fund budgets include ongoing funding for Information Technology (IT Network Support and IT Systems Support) and Media Services.

<u>Budget Year</u>	<u>IT - Networks</u>	<u>IT - Systems</u>	<u>Media Services</u>
2007-08 (actual)	\$796,894	\$528,597	\$ N/A*
2008-09 (budget)	\$766,631	\$543,707	\$ N/A*
2009-10 (budget)	\$734,711	\$550,242	\$213,064

* During the 2008-09 budget year, the Office of Instructional Technology and Audio/Visual Services merged into one unit, Media Services, and their budgets were combined with the exception of one line item related to Living Room classes that was placed into the budget of the Dean of Economic Development.

Categorical and CCCCCO special funding:

Some categorical state funds are available for technology acquisition or services. This may include at various times, TTIP, Instructional Block Grant, Last Mile/Middle Mile network infrastructure, hardware such as videoconferencing, software discounts or grants, and utility discounts from vendors. Also, MPC Matriculation, Financial Aid, and other MPC categorical funds have been allotted for specific technology improvements to the services the funds represent. During the last few years MPC has received funding from TTIP, Instructional Block Grant, Matriculation, Financial Aid, and received discounts on Microsoft software and AT&T services. TTIP funds specifically for IT have diminished in recent years:

2006/2007	\$41,578.35
2007/2008	\$16,539.77
2008/2009	\$8,820.00
2009/2010	\$0 presently allocated

General Fund one-time funds:

General fund one-time funds are offered to IT and Media Services as they are available and needed for acquisition of equipment upgrades, software, professional services, adding projection equipment to classrooms, or for other related purposes. The allocation is an outcome of the Action Plan process and the amounts awarded vary with the need and the available resources. Little if any one-time general funds funding is expected for 2010-2011 because of the state-wide budget crisis.

Technology Refreshment funding:

Technology refreshment funding is available most years and last year was allocated at \$250,000. It is primarily used to replace student lab computers, after which the used computers are cascaded to staff offices after some refurbishment. It is also used to replace equipment, including computers, in

the multimedia-capable (Smart) classrooms, and institutional technology such as servers and switches. Refer to the Technology Refreshment Plan [Appendix J] and the Classroom Equipment Refreshment Guidelines [Appendix F] for specific information.

<u>Year</u>	<u>Technology Refreshment Allocation</u>
2005	\$250,000
2006	\$250,000
2007	\$250,000
2008	\$250,000
2009	\$250,000
TOTAL	\$1,250,000

Local Bond Construction funding:

In November 2002, the college’s bond measure, Measure I, was approved by the voters to fund \$145 million for facility improvements. The campus Physical Master Plan was then developed and later updated to provide a framework for implementing construction. As buildings are built or renovated, the technology infrastructure is an integral part of the planning and implementation process. To date, \$10,040,266 has been allocated for technology improvements because of the passing of Measure I. The new Data Center, completed in April 2009, was a recipient of that funding along with the new campus-wide underground data fiber network, and new multimedia-capable classrooms at the Education Center at Marina and the Public Safety Training Center in Seaside.

Bond expenditures through 6/30/2009: Does not include management services, design services, or inspections.

<u>Year</u>	<u>Voice over IP*</u>	<u>Classrooms</u>	<u>Infrastructure</u>
2004	\$585,725	\$0	\$ 0
2005	\$13,689	\$81,010	\$ 98,772
2006	\$0	\$11,900	\$927
2007	\$12,594	\$294,488	\$7,217,020
2008	\$6,650	\$160,602	\$957,219
2009 (2Q)	\$50,214	\$43,618	\$505,898
TOTAL	\$668,772	\$591,618	\$8,779,836

*digital telephone system

Grants:

California Community College Chancellor’s Office grants have diminished because of the budget crisis, however limited funding is still available for technology. During the 2007-2009 academic years, the College has been awarded the following:

- Closed Captioned Grants (2) totaling \$20,394
- Instructional Technology Staff Training Grant (3) totaling \$3,000

Other sources of funding

IT applied for and received a rebate from Microsoft, the Microsoft-California Government Entities Settlement for \$24,000. IT also applied for two Federal Stimulus Grants through Monterey County, one for wireless implementation and the other for voice alert systems in classrooms and hallways. Neither was funded because Monterey County chose not to pursue this funding option. IT also participated in the PG&E Energy Savings Rebate Program by implementing two energy saving initiatives: virtualization of servers and installing software to control and shut down networked computers each evening.

Educause Issue #1: Funding IT: <http://net.educause.edu/ir/library/pdf/erm0943.pdf>

While recognizing that IT funding in these difficult financial times will be reduced, Educause makes the case that IT, with good planning and implementation, can reduce institutional costs “by being able to create and/or enhance organizational effectiveness and efficiencies while realizing cost savings.” (p. 48) Of the numerous examples given by Educause, the following MPC IT initiatives are in place and can be expanded for additional cost savings:

- Virtualization of servers to use fewer pieces of hardware;
- Software as a service via the Internet (CurricUNET, Class Climate);
- Online collaborations - shared workspaces and documents via SharePoint technology;
- Online conferencing;
- Grant applications;
- Reduce utility costs through network management of resources;
- Moodle consortium to share course management system support;
- Santa Rosa Student Records System consortium to share programming and support;
- Careful management of life-cycle funding for technology refreshment.

IT funding is determined yearly by the MPC Budget Committee with input from the Action Plan/Component Goals process and Program Review, then approved by College Council and the Board of Trustees. Initial requests reflect internal IT needs, student, faculty, and staff feedback.

Evaluation of Technology Needs

Technology initiatives are continuously evaluated through program review, discussion in weekly technology meetings and discussion and feed back in shared governance group meetings (AAAG, SSAG, ASAG, ASMPC, Academic Senate, Technology Committee, and College Council). Feedback from students, faculty, staff, and the public is generated by e-mail to *network support team*, *website support*, *telephone support*, *job control*, *iLearn help*, *A/V Support* and telephone calls. Occasionally, focus groups are used for in-depth evaluation [Appendix K].

The process for decision-making related to technology deployment and the feedback as to the effectiveness of technology planning and deployment takes place at the Technology Committee meetings, ASAG, AAAG, SSAG, ASMPC, College Council, the weekly Campus Technicians meeting, and to some extent, various Facilities and Bond meetings as well as e-mail and phone calls from faculty, staff, and students. This cumulative information is used as the basis for improvement for the Monterey Campus, Public Safety Training Center in Seaside, and the MPC Education Center in Marina.

Replacement of old equipment is handled through the Technology Refreshment process. For new or changed services and/or equipment, small issues such as replacing a part or re-installing software are handled quickly and routinely and new major requests are discussed and evaluated during face-to-face meetings of requestors and technical support personnel, then processed through the Action Plan system for funding. Surveys are conducted for major planning and evaluating processes such as Program Review and the Technology Plan.

Given variable funding for technology, not all needs can be met in any given year so the preliminary technology purchase and deployment plan, Technology Refreshment, is brought to and discussed in the various shared governance groups and revised as necessary before requesting approval from College Council.

Extensive planning for technology is part of the facilities renovation and new construction planning process. Faculty groups meet with the construction team and IT to design smart classrooms and student computer labs to meet academic program needs.

Institutional Policies Related to Technology

In 1999, two technology-related Board Policies for staff were approved, Internet/Network Use Policy [Appendix A] and Electronic Mail Policy [Appendix B]. In 2009, these policies were combined in draft form and students were included in the policy text since they now have MPC email and network accounts. The newly revised draft policy, Monterey Peninsula College, Computer Network Use Policy (2009) [Appendix C] is presently going through the approval process.

Best Practices for Users of Campus Technology

The College has instituted an energy-savings plan that limits the deployment of excessive technology, particularly printers and computers, in order to save energy and hardware costs. Staff is encouraged to share networked printers rather than adding multiple single-person printers to the inventory. The College has deployed an automatic evening shut-down process to save additional energy. Also, some of the servers in the Data Center are being virtualized, allowing for multiple virtual servers on one physical server, to save energy and the purchase cost of hardware.

There are numerous practices whereby students, faculty, and staff can conserve energy and the cost of replacement equipment, thereby conserving College funding for other purposes. These include:

Energy Conservation Measures for All Staff:

- Turn off electronic equipment when not being used for many hours. This includes computers, printers, DVDs, etc. Projectors should be turned off when not being used by the next class as the lamps (bulbs) are expensive to replace. The College automatically turns off most computers at 10:15 each night however, an active user can override the shut down for four hours.
- Increase the use of online meetings by using CCCConfer (<http://www.CCCConfer.org>), a free service to California community colleges.
- Increase the use of video conferencing for meetings or guest speakers. MPC has a video conferencing system that can be set up for use by Media Services and connected to a distant site by Network Support.

- Ensure that 100% of all printers, computers, and servers are Energy Star compliant or meet recognized energy efficiency standards.

Hardware and Resources Conservation Measures:

- Eliminate all ink jet printers except those needed for photographic images, reducing the overall number of printers and FAXes by using shared networked multifunction printers and FAXes.
- Reduce the number of servers by virtualizing numerous “virtual servers” on two redundant or mirrored pieces of hardware.
- Reduce paper and toner use by setting the default printer setting to duplex (double-sided) and black and white.
- Delete no longer needed e-mail and documents.
- Reduce paper usage by placing documents to share on the MPC website or Class Sites using SharePoint technology.

Data security best practices are listed in Appendix E.

ASSESSMENT:

Because of adequate funding over the last few years, most major technology needs for academic and student services programs are met to the satisfaction of faculty and staff, but not during any one year. Computers are first deployed in student labs as defined by the Classroom Equipment Refreshment Plan [Appendix F]. Most student computers are not more than 4 years old, most projectors and other smart classroom equipment are reasonably new and in good condition. [Appendix L] Since student lab computers are cascaded down to staff and faculty desktops, there has been a steady supply to be able to make most but not all replacements as needed.

With the California budget problems, TTIP funding has been eliminated and IT budgets at MPC have been cut to some extent. During the next few years, it is problematic if technology refreshment will be funded to the same level as before. If this is the case, then we will be dealing with ageing equipment, particularly computers and servers, over the next few years.

MPC has extensive technology resources distributed evenly across the Monterey Campus and the satellite classrooms in Marina and Seaside. The approximately 900 student computers and 450 staff computers, 92 smart classrooms which include 31 computer classroom/labs, and other instructional technology resources [Appendix L] are evenly distributed across the campuses with smart classrooms and computer labs also located at the Marina and Seaside sites. The new fiber network is deployed only on the Monterey Campus at present, but as permanent buildings are added to the Marina and Seaside sites, those sites will eventually be connected to the AT&T D-3 network as well.

In a 2008 campus survey, of those responding with an opinion 78% agreed that technology planning is part of the campus planning process, and 73% agreed that MPC has adequate technology resources. Also in the 2008 campus survey, of those responding with an opinion, 82% agreed or

somewhat agreed that faculty are sufficiently involved in the selection of educational equipment.
(<http://www.mpc.edu/institutionalresearch/Pages/default.aspx>)

VISION AND FUTURE PLANS:

- Continue to update technology resources with funding to come through the technology refreshment and action plan processes.
- Review IT staffing needs through Program Review (presently in process) and the Technology Plan.
- The College design of the resources allocation process works well and there are no plans for change at this time.

CHAPTER 2

Institutional Technology

OVERVIEW:

Operational systems have been greatly improved with the building of the new Data Center, April 2009, and the replacement of the underground fiber network to a D-3 high speed backbone, along with the expansion of the Voice over IP (digital) telephone system, and the upgrading of various audio-visual and multimedia development services. POE (Power Over Ethernet) is campus-wide. [The Telephone Policy is in Appendix O.]

Data Center

The new Data Center has two failsafe air conditioning (A/C) units, a fire-suppression gas system, a new uninterruptible power supply unit (UPS), a natural gas generator, new virtual switches, a new alarm system, and houses over 100 servers.

The two A/C units operate with one being active at any one time. The two units are set to switch active operations every other week.

Fire protection is via a FM200 gas dispersion system to suppress any fire. The overall system is environmentally controlled and monitored.

The UPS has the capacity to power the Data Center for approximately 15 minutes, during which time the gas generator activates to supply emergency power. The generator is installed and is being tested.

Network

The network architecture is a collapsed core design. Core electronics are tiered and redundant load balancing core using Cisco VSS (Virtual Switching Services). Internet Services are delivered via OC-3 (Optical Carrier), but currently only one DS-3 (Digital Signal) is in service and is behind a Cisco ASA Firewall Cluster. Fiber Ethernet backbone, speeds from 1GB to 4GB Etherchannel bundles, connecting each building IDF (Intermediate Distribution Frame), segmented via multiple VLANS (Virtual Local Area Network Services) using RFC 1918 (private address space). All inter VLAN routing happens at the VSS (Virtual Switching Services) core.

WAN (wide area network) sites, such as Marina and Seaside, are connected via traditional T-1 technologies. Data distribution at all sites (to host) is via 10/100 Mbs (Mega bits/second).

Wireless segments are currently traditional autonomous mode radio operating at 10/100 MPS. Wireless is in the process of being upgraded and expanded. Coverage will soon include most buildings on the main campus as well as all buildings at the Marina Education Center and the Public Safety Training Center.

Access Management (Identity) is managed through Active Directory for student, staff, and faculty access to MPC network services, each person with their own login, password and defined access. Guest access is available for internet services through both the wired and wireless networks. We will be installing Forefront Identity Manager 2010. This product will integrate with Exchange 2010 to allow our users to reset their passwords via a web interface.

Communications

Communications are enhanced for all students and staff with universal MPC e-mail, webmail, and digital (Voice over IP) telephones. Emergency communications include the Berbee InformaCast mass notification system for inside buildings, the VisiPlex emergency speaker system for outside, and the website emergency announcement for off-campus notification. General announcements, event notification, calendars, committee meeting sites, and documentation are located on the website for general campus communications for students and staff. Students can also access the website for information on available technology resources and services.

Telecommunications

Telephony services are provided via Cisco Unified Communications Manager – Voice Over Internet Protocol (VOIP). Power over Ethernet (PoE 802.3af) is provided by Cisco Switches, rather than PoE (Power over Ethernet) Patch Panels or Wall Warts which are more susceptible to brown outs and surges. The need for analog is provided via analog converters. Multiple T-1 PRIs provide connectivity to the outside. There are a few analog telephones on campus located in elevators and phone booths, and for security systems.

Voicemail currently is Microsoft Unified Messaging and with Microsoft Exchange as the repository. 911 calls are augmented using location-based dynamic tracking via Cisco Emergency Responder.

Server Clusters

The primary server clusters are: Exchange (mailbox servers), SharePoint (web front end and database servers), SQL database servers, and DNS (Domain Name System) is provided by a clustered appliance-based system running bind. The Data Center also houses additional servers used for administrative or instructional purposes.

Website

The Monterey Peninsula College website consists of multiple site collections that provide SharePoint portals for students, staff and faculty members, Class Sites, and public websites. The servers include:

- a. Two load balanced Web Front End servers – WebNode 1 and WebNode 2
With the exception of the Central Administration website, a copy of all the MPC SharePoint websites are hosted on these WFEs running Microsoft Office SharePoint Server 2007 SP2.

b. Central Administration / Indexing Server - Discovery

This server is a SharePoint Central Administration/Indexing server. It also hosts Excel Calculation Services, MOSS Search and WSS Search services.

c. SQL Server running Microsoft SQL Server 2005 – Intrepid

The Microsoft SQL Server (2005) houses the databases and stored procedures used by MOSS, the HSC processes, diagnostic logging for the MyClasses web part, and the Financial Aid Orientation Application. The system processes data from the HP 3000 database on a daily cycle and displays the information in Microsoft Office SharePoint Server sites. The HSC-Repository database contains data of all the events that were processed by the Biz Talk server. This database is also the source of data for the Class List web parts on the My Sites and the rosters on the Class Sites.

d. Microsoft BizTalk Server 2004 - Endeavour

An NT Scheduled Task runs the MessageQueuePump.exe which extracts the events from the Message_Queue table on the Intrepid server. The processed events are moved from Message_Queue table to Message_Queue_Archive table. The events that are sent to the processing pipeline from MessageQueuePump.exe go through BizTalk orchestration and processed by the web services creating active directory class security groups and user accounts for new faculty and students, adding and removing them from class groups as necessary. At the completion of the processing, the tables on HSC-Repository database are updated.

Public site – <http://www.mpc.edu>

The MPC anonymous public web site is a MOSS 2007 (Microsoft Office SharePoint Services) publishing site allowing content owners to create, update and publish their information in a timely manner while reducing the workload on the IT department. All content is viewable by the public once it has been approved by the designated individual (s) for the specific content area. A variety of document formats can be placed in the document libraries and are editable in place. The available lists and web parts include but are not limited to document libraries, event calendars, announcements, image libraries, web forms, blogs and content editor web parts. The entire public site, including the alternative <http://mpc.faculty.net> site, is indexed and searchable including content within documents. Portal areas are only accessible by login and password.

Multiple online forms were developed for the Student Job Center for use on their public MPC website. Online forms now allow employers to submit jobs for posting on the website, request space at the annual Job Fair, and submit requests for information to the staff. Students can now use forms to electronically submit their resume for posting, browse the available on and off campus jobs, and request information about specific jobs. The public can submit information about available student housing. The data goes directly to the staff via email. An online recruitment application for the Basketball program has been developed so that students no longer need to print and mail a form but submit it directly to the coach.

Intranet: <http://mympc.mpc.edu>

MyMPC is an audience based intranet where students, faculty, and staff only see those areas and links to which they have been given password access. The intranet is made up of a variety of sites including sites for campus committees, departments, discussion forums and student clubs. Two wikis, the Techapedia and the Class Site Techapedia, contain short tutorials on a variety of help topics relating to the web sites, network, MPC email and phones.

Class Sites

Every class section has an automatically generated Class Site that serves as a communication center for that class. The Class Sites include assignment calendars, document libraries, discussion forums, announcements, and can include a homework drop-folder to encourage a paperless environment. The Class Sites are integrated with the Student Records System to allow for current rosters. Students will automatically gain or lose access to an active site within 24 hours of registering or dropping the class. The Class Sites are accessed via a link on the individual's MySite.

MySite

Students, faculty and staff members have a MySite where they can keep personal documents and pictures as well as share items with other MPC users. The MySite also contains a list of all the individual's classes with links to the published Class Sites.

MPCFaculty.net

MPCfaculty.net holds a group of WSS 3.0 public subsites that are maintained by a variety of individual faculty members and departments. The majority of these sites predate the creation of the current MOSS 2007 MPC websites. Many departments and individuals have chosen to move their content to the newer public, intranet and class sites.

Campus Technology

The TCO (Total Cost of Ownership) model from the Chancellor's Office [Appendix M] provides a baseline standard for assessing to what extent MPC meets state technology standards. For example, the minimum standard for student computers used for instructional purposes is one computer for every 20 FTES (fulltime equivalent students). For MPC the baseline then is 424 student computers and our present count is 878 student computers. The standard also includes replacement of computers after three years although most of our student computers (high-end computers) are replaced after 4-5 years. One networked printer should be provided for every 30 student computers and for every 25 faculty/staff computers. The standard then would be 29 student printers and 18 faculty/staff printers. Presently we have 28 student use printers and 200 faculty/staff printers.

Technology Standards

Campus office standards include: A computer capable of using the present operating system, CD/DVD with speakers, the Microsoft Office suite of software, and additional software as needed.

Campus classroom standards include: A computer of no more than three years old, one or two ceiling-mounted projectors, document camera, CD/DVD/VCR with speakers, a (Pixie or other) controller, a podium, and one or two screens.

As Divisions or Departments make plans to purchase and install new software, it is imperative that they work with Information Technology for the evaluation of the software, assessment of training and support needs, and its installation. [Appendix R]

Donated Technology

Any technology donated to the College must first be evaluated by IT personnel based on present technology standards. If the donation is not useful, it will be recorded as a donated asset, then, sent to e-waste. If the item is deemed useful, it will be recorded in inventory and managed and handled by IT. It will be held by IT as a potential replacement for older technology. If there is a need to use the item(s), thereby increasing the inventory and eventually adding to the technology refreshment list, the respective Division must apply to increase their inventory by going through the Program Review or Action Plan process.

System Reliability, Back-Up, Disaster Preparedness, and Disaster Recovery

The new Data Center has state-of-the art equipment such as fire suppression gas, paired air cooling system, and clustered servers for redundancy of database systems. Virtual servers for some systems add additional reliability. The UPS and generator system provide limited but extended services during a power outage. The Data Center serves the Monterey Campus as well as the Education Center at Marina and the Public Safety Training Center in Seaside, both located in the old Ft. Ord location. The two Ft. Ord sites are presently served by AT&T-T1 lines that are not always reliable although AT&T plans to upgrade data services once more construction takes place in the area.

Microsoft Volume Shadow copy provides short term recovery for user files. Microsoft Data Protection Manager provides weekly recovery from backup to disk, and monthly recovery from tape. All systems and applications are backed up by Data Protection Manager. The MyDocuments folder or Documents folder on staff PCs are stored via Folder Redirection on a network server and backed-up nightly. The CCCSC Student Records System, housed on a legacy HPe3000 minicomputer, has a full backup nightly to tape except for Sunday. The backup tapes are taken offsite daily and older tapes are stored in a vault in IT. In the event of a disaster MPC has a vendor located in Livermore, CA who can replicate the HPe3000 system and restore our student data for access using the backup tapes. Staff can then access this remote system over the internet via a secure remote desktop connection.

System Security

Cisco MARS (Monitoring, Analysis, and Reporting System) provides monitoring for threat detection, identification, mitigation, and compliance.

Videoconferencing

Videoconferencing services (two-way video and audio) are provided via older IP-based videoconferencing CODECS. MPC's current vendor is Polycom. System multiplexing and control is provided via CENIC CALREN-2 video services. Current gateway and gatekeepers and CODECS are behind the firewall cluster in a DMZ configuration.

Disposal of Computers and Other Equipment

Computers and other equipment that are no longer needed are removed from inventory. If the equipment is still somewhat usable, it is donated to classroom computer instruction, either at MPC or at the Watsonville Center. Equipment that is totally unusable is sent to e-waste where it is recycled or disposed of appropriately.

ASSESSMENT:

The new Data Center with its upgraded systems for redundancy and security of systems, along with on-campus and remote back-up of data, provides a stable working environment for students and staff. In addition, all infrastructure equipment in the Data Center is current as well as the Monterey Campus fiber cabling.

The video-conferencing equipment needs updating or MPC can make better use of web-based conferencing as an alternative. Typically funding comes from the Chancellor's Office for the replacement of video-conferencing equipment although there has been no announcement that this funding will be available soon.

Current network services are stable and reliable but the need for growth is pressing. We are presently at capacity with our D-3 (45 MB) network and an Optiman or Gigaman upgrade will greatly increase our bandwidth. The AT&T internet connection to the Marina and Seaside campuses needs upgrading to the campus standard. Wireless needs to be extended to all parts of the three campuses, along with NAP (Network Authentication Protocols).

The VOIP telephone system works well. Some analog lines are still in place primarily for alarms, elevators, and telephone booths. It should be noted that AT&T has "asked the FCC to eliminate regulatory requirements that it support a landline network and to provide a deadline for phasing it out" (S. Higgenbotham, Gigaom, December 30, 2009). This has future implications for the industry as well as MPC's long range plans.

In November 2009, the California Chief Information Systems Officers conducted an informal survey on the age of computer and network equipment. The information gained from the survey shows that MPC has more up-to-date equipment on average. The comparison is as follows:

<u>Question</u>	<u>State Responders</u>	<u>MPC</u>
Average age of production servers:	5 years	3-4 years

Average age of desktop computers:	6 years	5-staff & 4-student
Average age of edge switch technology:	8 years	3-5 years
Average age of backbone:	10 years	few months
Power over Ethernet capability:	just new buildings	all campus locations

The assessment of student computers and all campus printers is as follows: We have more than double the number of student computers required by baseline state TCO standards. Presently we are not able to refresh student computers on a 3-year cycle due to the large number of computers and limited funding. MPC is actively reviewing computer needs and placement in order to reduce the inventory without impacting programs. We appear to have an adequate but not over abundant number of student printers but far too many faculty/staff printers. As funds are available, MPC is actively replacing high cost/page ink jet personal printers with lower cost/page shared printers.

VISION AND FUTURE PLANS:

As of this writing, funding for technology upgrades for 2009-2010 is available but given the state of the California and national economy, it may not be available in the near future. MPC, however, presently has generally up-to-date equipment and is in a good position to manage with somewhat less funding for the next few years. However the following equipment or services is needed:

- Upgrade equipment as needed in order to keep maintenance costs down, including switches and other infrastructure equipment.
- Connect the Monterey Campus network to an Optiman (up to 1 Gig) or Gigaman (1 Gig or higher) network.
- Work with AT&T or other providers to upgrade network services to the Education Center at Marina and the Public Safety Training Center at Seaside.
- Install electronic monitors, including remote monitoring, to cut down on staff travel time and related expenses;
- Implement 10 GB to each IDF (Intermediate Distribution Frame);
- Complete the conversion of present wireless to a secure, controlled system and implement LWAP (lightweight Wireless Access Protocol) with coverage expanded across the Monterey campus and all remote sites.
- Implement Network Admission Control (NAC) and Remote Access Protection (NAP) in conjunction with 802.1x.
- Migrate to Cisco Unity Connections which will provide a more robust system with load balancing as opposed to the current active/passive cluster.
- Provide for electronic processes instead of paper processes in order to move toward a more paperless institution.
- Justify the awarding of Technology Refreshment funds based on instructional use of the equipment.
- Update the SharePoint website to version 2010 and implement single sign-on.
- Devise a method to remove/hibernate student e-mail accounts that have not or are no longer being used.

- Investigate the feasibility of moving all mpcfaculty.net content to the mpc.edu site in order to streamline support and provide for a consistent, professional interface for public view.
- Install Berbee alert technology in all classrooms and hallways either through existing speakers, digital clocks with speakers, or telephones.
- Reduce where possible the number of student computers without impacting programs so that we can afford to upgrade student computers on a 3-year cycle.
- Reduce the number of high cost/page staff printers by installing shared printing services.
- Complete an RFP for networked printing services.
- Revise the Board Policy and Administrative Procedures for Network and Electronic Mail Use.
- Conduct an annual evaluation of technology resources and services each Fall.
- Conduct an annual update of the Technology Plan by March every year.

CHAPTER 3

Instructional Technology for Student Learning & Services

OVERVIEW:

MPC supports classroom technology for teaching, computer laboratories and open computer stations for student learning, as well as instructional software, a Microsoft SharePoint website, student e-mail, and an online course management system. The iLearn (Moodle) online course management system supports distance learning and replaced WebCT in 2007. The institution also supports electronic student services such as CCCApply, WebRegistration (which replaced telephone registration), online advising, online course catalog and schedule of classes, online Student Financial Aid Orientation, portal to the Financial Aid Management System, and installation of appropriate technology to support those students who qualify under the Americans with Disabilities Act (ADA). The new Microsoft SharePoint-based website is used for student learning, student services, communications, and for college business efficiencies such as meeting sites, forums, work-flow (InfoPath) processes, and surveys. Campus servers and networks to support the above services are routinely upgraded and backed-up.

Technology resources supporting teaching and student learning

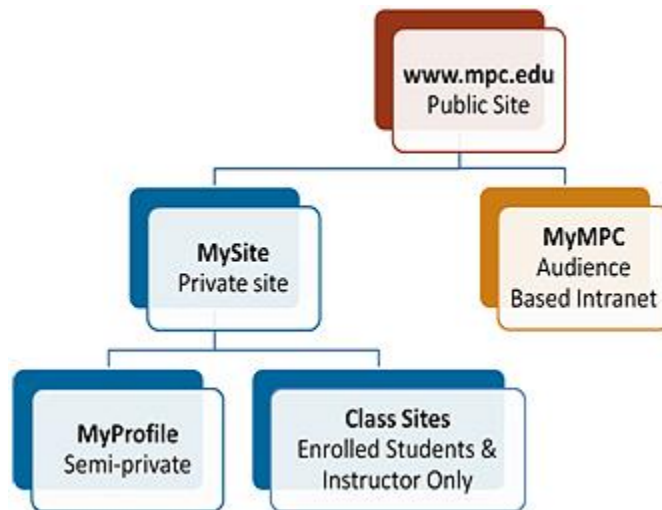
MPC has supported academic technology needs by funding 89 multimedia capable “smart” classrooms that include 58 lecture rooms and 31 computer lab/classrooms. Most classrooms on campus are multimedia capable. [See Appendix L for the inventory.] Smart classroom equipment includes a podium, one or more projectors and screens, a computer, document camera, VHS and DVD players, network connection, speakers and sometimes a microphone. The College also supports a large number of Library computers and testing computers giving a total of 914 student/classroom computers. [Student printers are listed in Appendix I. Computers for student use are listed in Appendix N. A list of smart classrooms/labs are listed in Appendix Q.]

All new classrooms, since bond funds became available, are being equipped with electronic equipment appropriate to the teaching needs at the Monterey Campus as well as at the Education Center at Marina and the Safety Training Center in Seaside. The Lecture Forum has had all of its projection and audio systems upgraded in each of the three large venue lecture halls in 2007/2008.

Instructional software is installed by formal request by the instructors to the lab tech or IT staff responsible for installation. A copy of the request form is located in Appendix R.

MPC website for communications and learning

Instructor-student communications have been enhanced by providing all students with MPC e-mail (January 2008) and also website enhancements (MyMPC student portal, MySites, and Class Sites) that promote interaction between students and their instructors. Every class section has an automatically generated Class Site that serves as a communication center for that class. The Class Sites include assignment calendars, document libraries, discussion forums, announcements, and can include a homework drop-folder to encourage a paperless environment. Microsoft Corporation in 2008 highlighted the new MPC website in their national advertising that featured California Schools.



For Students: The student MPC website portal opens to the MyMPC site which can be viewed by all students. This area contains announcements, discussion forums (blogs), a calendar, e-tools for help with technology, campus news, links to the Bookstore, Financial Aid, Associated Students of Monterey Peninsula College (ASMPC), other resources as requested, and emergency alerts if necessary. The MySite is the students' personal space. It contains a list of courses for which the student is enrolled, access to their unofficial transcript, any blogs or wikis they wish to post and share with others, their MPC e-mail, and any personal documents or media they wish to have stored at that site (password protected) and have accessible anywhere via the Web. The MyProfile is a student's semi-public site in that it can be viewed by any student, faculty, or staff member who is logged into the MPC network. Each of the students' classes may have a Class Site attached as a place to look at the class calendar, find class documents, drop homework into a folder for the instructor, take quizzes, and participate in discussions or surveys.

For Faculty: The faculty MPC website portal opens to the MyMPC site which can be viewed by all faculty. This area contains announcements, discussion forums (blogs), a calendar, e-tools for help with technology, campus news, links to the MPC benefits, Autobahn Look-Up for enrollment information, the Faculty Union, Directory of Student Services and Learning Resources, other resources as requested, and emergency alerts if necessary. The MySite is the faculty members' personal space. It contains a list of courses the instructor is teaching, any blogs or wikis they wish to post and share with others, their MPC e-mail, and any personal documents or media (password protected) they wish to have stored at that site and have accessible anywhere via the Web. The MyProfile is a faculty member's semi-public site in that it can be viewed by any student, faculty, or staff member who is logged into the MPC network. Each of the instructor's classes can have a Class Site activated, as a place to post the class calendar, post course documents, access students' homework in a folder to correct and re-place in the folder for the student to view, post quizzes, surveys, and post and participate in discussions.

For Staff: The staff MPC website portal opens to the MyMPC site which can be viewed by all staff. This area contains announcements, discussion forums (blogs), a calendar, e-tools for help with technology, campus news, links to internal job announcements, Directory of Student Services and

Learning Resources, Autobahn Look-Up for enrollment information, Network and E-Mail Account Request form, other resources as requested, and emergency alerts if necessary. The MySite is the staff member's personal space. It contains any blogs or wikis they wish to post and share with others, their MPC e-mail, and any personal documents or media (password protected) they wish to have stored at that site and have accessible anywhere via the Web. The MyProfile is a staff person's semi-public site in that it can be viewed by any student, faculty, or staff member who is logged into the MPC network.

The college also presently maintains an anonymous website, www.mpsfaculty.net which is used by some faculty and staff.

The public part of the www.mpc.edu website has an area dedicated to faculty and staff public pages for contact information, course information, public documents, or other professional uses. <http://www.mpc.edu/FacultyStaff/Pages/FacultyStaffListing.aspx>

Student E-Mail

MPC student e-mail was initiated in January 2007 and was upgraded to larger 50MB mailboxes in 2008. Students have the option of redirecting their MPC e-mail to their personal e-mail account. Student e-mail accounts are automatically generated during enrollment and remain available to students for an unspecified time thereafter. To activate an account, students must initially login on campus or contact IT for the initial login remotely then the student can access MPC student e-mail from any browser. Presently there are over 45,000 student accounts with approximately 10% active.

iLearn (Moodle) also has an internal e-mail option for students and faculty.

Classroom Technology for Teaching

The Instructional Technology Lab serves faculty and staff for training, instructional design services, and for immediate help with instructional technology development or trouble-shooting. The Lab is supervised on a daily basis by an instructional technologist. One or more trained work study students may also be available to help with instructional technology needs. Help and training is available for design, image editing, video and audio editing, CD and DVD production, presentation design, and distance learning course design and materials editing.

The Audio/Visual (A/V) department of Media Services offers equipment that can be set up in the classroom or on the campus mall or public rooms for events. Media Services and IT personnel are on call to provide help and solutions, should technical problems arise, throughout the campus.

iLearn, an Online Course Management System for Distance Learning

In 2006, Monterey Peninsula College entered into a formal agreement with California State University Monterey Bay (CSUMB) and Gavilan College as part of the Higher Education Learning Partnership (H.E.L.P.) Consortium to cooperate on distance learning technology, training, and support. The partnership also established an informal collaboration with De Anza College, San

Francisco State University and Humboldt State University. Other colleges and universities have since participated with this group. CSUMB hosts the iLearn online course management server (Moodle is the generic term for iLearn) and Gavilan and MPC each pay \$10,870 each year to cover the cost, including technical support and training sessions for faculty and technical staff. Updates to Moodle software versions are coordinated among the participating colleges and universities and standardized for ease of support.

CSUMB provides the same strict measures for back-up and disaster recovery that they apply to all of their servers. Security and privacy for iLearn is as strict as for MPC network access and uses the same method of authentication. Students have the same login for iLearn as for their MPC e-mail and their MySite and Class Sites. Students and faculty have access to iLearnHelp for all support questions which can then be answered by MPC or CSUMB support staff. MPC has relayed information on Moodle technology to the Chancellor's Technology Office in order to foster state-wide support and training. Since our contract with CSUMB does not have a cap on enrollment, MPC is able to offer any faculty unlimited access to iLearn for course enrichment, hybrid courses, and fully online courses.

The equipment used for the online portion of the distance learning program is managed by CSUMB with eventual replacement funded by the local iLearn (Moodle) consortium. The decision to use CSUMB as the host was based on their more extensive resources to manage the Linux-based server and to provide local technical support for the system. MPC can add an unlimited number of online courses as well as hybrid courses to the system with only the addition of appropriate storage space. Use of this course management service has increased each year, particularly for faculty teaching hybrid courses.

One-on-one training and support is offered through the Instructional Technology Lab in the Library. Additional training is offered in cooperation with CSUMB, as well as through @One online training and workshops at Moodle "Moots" (conferences).

MPC has participated in the Captioning Grant from the California Community Colleges Chancellor's Office (CCCCO) in order to ensure that online videos are captioned and audio files are translated into text.

It should be noted that instructors have the option, particularly when teaching hybrid classes, of using Class Sites on the www.mpc.edu website that offer many of the same services as iLearn and will continue to be enhanced with additional features.

Student Technology Support Resources

Disabled Student Programs and Services (DSPS). DSPS, referred to as Supportive Services & Instruction (<http://www.mpc.edu/studentservices/dsps>) at MPC, provides access to enrolled students identified as having a physical, communication, psychological, developmental and/or learning disability or an acquired brain injury. Support services are available to students with disabilities in addition to the regular services provided to all students. These services enable students to participate in regular activities, programs, computer programs, and classes offered by MPC. Services and accommodations include:

- specialized counseling
- college orientation
- adaptive equipment
- assistive listening devices
- special testing
- on-campus transportation
- priority registration
- readers, interpreters, and/or note takers

Supportive Services and Instruction has also developed over twenty different learning skills courses. The purpose of these courses is to enhance the education of persons with disabilities by affording students the opportunity to participate fully in all aspects of the College through appropriate and reasonable accommodations including access to technology resources.

Library Technology Resources

The library moved into a new 67,500 GSF Library & Technology Center (LTC) in June of 2003. In addition to the library, the LTC building houses the following learning centers and computer labs on the first floor: the Academic Support Center (Tutoring), the English as a Second Language (ESL) lab, the English & Study Skills Center (ESSC), and the Reading Center. There is also a Student Media Development room to assist students with their course and technology needs.

The library occupies the second and third floors of the Library & Technology Center and there are two open computer labs on these floors. There are 60 PCs on the second floor and 40 PCs on the third floor. In addition, there are 15 study rooms with PCs and audiovisual equipment, 4 standalone TVs with DVD and VHS equipment, 8 standalone catalog instruction PCs, 6 individual instruction workstations at the information desks, 5 PCs for circulation access control, 3 PCs in the College Lounge for use by MPC staff and faculty, and 18 staff workstation PCs. Computers in the library provide access to the online catalog, 29 electronic databases, links to other libraries, Internet sources, class-specific software and the complete Microsoft Office suite. The English & Study Skills Center has a total of 139 computers in the open lab and 35 in the classroom. The ESL lab has 58 computers in their area, the Reading Center has 3 computers, and Academic Support (Tutoring) has 3 computers. Assistance for all computers and equipment in the Library Technology Center is provided by trained technicians.

The library portion of the building includes three classrooms with overhead projectors. One classroom includes eighteen student workstations and one interactive instructor workstation; the other classrooms (which can be used as one large classroom or divided into two separate rooms) have thirty-five student workstations and two instructor stations, and include assistive listening equipment. Each of the three teaching stations includes touch-screen control of AV and computer equipment. One of the teaching stations is adjustable to provide modifications for instructors with special needs. All of the PCs in the classrooms were updated in summer of 2008.

All users have access to Library resources on and off campus with a current library card. The library is a member of the California Community College Library Consortium, a joint endeavor of the Council of Chief Librarians and the Community College League of California. As a member the library is able to subscribe to online full-text periodical databases and electronic reference sources at greatly reduced prices. As a result, the library has been able to cancel some of their print periodical subscriptions.

Information competency was made a graduation requirement at Monterey Peninsula College effective fall of 2006 with Library Services 50 (LIBR 50): Introduction to Information Competency & Literacy as the primary way to achieve this requirement. Another course that satisfies this requirement is Library Services 80 (LIBR 80): Internet Literacy, which is a more technology intensive course.

Library and learning support services are accessible to all students and staff/faculty on campus from the library, the academic support center, learning centers, computer laboratories, and learning technology development and training. These services are accessible off campus through the internet, email or telephone. The library provides access to the online catalog and 29 full-text databases and electronic reference sources 24 hours a day 7 days a week through their web page. The library web page provides access to all library collections, services and policies for all students, staff and faculty on- and off-campus. All users have access to our resources on and off campus with a current library card. Electronic books (e-books) and online databases support student learning on the main campus, for students at the Education Center at Marina, and for distance education students. In addition to e-books and online databases, the library also provides IM and telephone reference services, the ability to apply for a library card online, the ability to make requests for materials, and the ability for students to check their records in the online catalog. Wireless internet access is available throughout the library and technology building. All computers in the library and learning support service areas are ADA compliant.

Assistance for all computers and equipment in the Library Technology Center is provided by trained technicians. Maintenance of equipment is coordinated by technology staff. In the library, this includes the Systems Technology Coordinator, Instructional Technology Specialist, and part-time help as available. In the English and Study Skills Center, English as a Second Language Lab, World Languages Lab and Math Learning Center, and other classroom computer labs, equipment maintenance is handled by the technology staff assigned to those areas.

Learning Centers and Computer Labs: *English as a Second Language (ESL) Center*

The English as a Second Language (ESL) Center tutors students in using technology, from keyboarding to word processing and database research. ESL Center classes, such as Conversation and Book Club, have online components with an evaluation tool. In the ESL Center, Information Literacy is either part of course curriculum or is done on an individual basis by instructors and staff. Students are required to learn keyboarding and be proficient in a number of Microsoft Office applications, as well as to access and use internet-based material such as faculty-created web pages and library databases.

With the advent of the new MPC website, the ESL Center was able to design a new interactive web page. The web page provides numerous useful links: faculty web pages with assignments, grammar exercises, self-tests, supplemental material; research and writing tools such as databases and multilingual dictionaries; audiophiles for improving listening comprehension, and a current events web site especially designed for ESL students.

Learning Centers and Computer Labs: *English and Study Skills Center (ESSC)*

The English and Study Skills Center (ESSC) provides reading, writing, and study skills support to MPC students from a broad range of educational backgrounds and across all academic disciplines. In addition to professional faculty and staff and a comprehensive library of instructional materials, the ESSC provides students access to computers, printers, copiers, and document scanners. The ESSC's physical space contains an open lab area with over 50 computers, a media room for the production of group projects, and a workshop space which contains 30 student workstations as well as instructional projection equipment and a SMART board. The ESSC shares open lab space with the ESL Center, Reading Center, and Academic Support Center on the first floor of the Library Technology Center.

Learning Centers and Computer Labs: *Learning Center at the Education Center at Marina*

The Learning Center at the Education Center at Marina opened in the fall of 2007. Learning Center hours were implemented to provide students the opportunity to access individualized instructional assistance at the Education Center in Marina. A materials reserve process has also been established and is being reviewed by library staff to assess needed improvements including the addition of online document cataloging and tracking. There are 32 computers in the center and the services provided are currently provided in shared spaces (the current facility includes four modular classrooms and one modular office building); as student need and demand for such services increases, hours will be expanded as much as possible. Plans are underway for the permanent structure (to be completed in fall 2010) and include discussion of dedicated library and learning support services space.

Since 2007 part-time help from the Media Services and Information Technology (IT) department was provided to support the equipment and provide technical support to faculty. Library and learning support technology is supported and maintained by the Library Technicians with back-up support from the Information Technology Department (IT). The IT Department provides and supports the technology for the main campus, the Education Center at Marina, and the Safety Training Center in Seaside, all of which support student learning. Technology resources are made available by the IT Department to support the library and learning support services which meet the needs of student learning, teaching, and college-wide communication. IT provides technical support for faculty, staff and students. They provide training to assist faculty integrate technology into their courses as well as training and support for online classes. They also provide technical support and training for students taking online classes.

Learning Centers and Computer Labs: *Math Learning Center*

The Math Learning Center tutors students in all math classes in addition to any mathematics required for any class at MPC. The Math Learning Center currently sees between 350-400 students per semester. The Math Learning Center provides computers that have online math classes loaded onto them for students enrolled in these classes.

Learning Centers and Computer Labs: *Nursing Learning Resource Center*

The Nursing Learning Resource Center includes a computer lab that contains 21 computer stations for nursing student use for class preparation and enhancement of learning. The full-time Instructional Technician ensures that the equipment is functioning and assists students to access learning materials. Evaluation of the computer lab is done by requesting input from students and faculty and is included as a part of the annual nursing evaluation meeting in May of each year. Faculty determined at the May 2008 Nursing Program Systematic Evaluation meeting that the computer lab is well equipped and meets the needs of students.

The computer lab and the other LRC materials and equipment are kept up to date. New computers are obtained approximately every five years to ensure they are up to date. The School of Nursing maintains a Multimedia Resource Committee that is chaired by a nursing faculty member and includes student representatives from both first and second year. This committee receives and processes requests from students and faculty for multimedia and print materials that will enhance student learning. The vast majority of requests are approved for purchase.

Learning Centers and Computer Labs: *Reading Center*

The Reading Center at Monterey Peninsula College is a one-on-one or small group tutoring program. Based on current linguistic principles and speech therapy methodologies, the Reading Center meets the needs of those who need to strengthen their reading, spelling or pronunciation skills to be more successful at the college level.

Learning Centers and Computer Labs: *TRIO*

The TRIO Learning Center and computer lab is designed to assist TRIO participants develop the academic skills and techniques necessary to succeed in college level courses. TRIO represents the first three programs funded by the U.S. Department of Education. TRIO programs at Monterey Peninsula College include Student Support Services, Upward Bound, and Math/Science Upward Bound. TRIO is a federally funded program through a cooperative effort between the college's TRIO programs and the Extended Opportunity Program and Services program. The services are provided to eligible students to assist them in attaining the skills needed to succeed at MPC. The TRIO computer labs have 46 computers.

Learning Centers and Computer Labs: *Business Skills Center*

The Business Skills Center offers computer applications instruction in a self-paced lab, with courses constructed with specific learning objectives. Business Skills course material and applications selections are reviewed and revised continually to maintain currency with both established business practices and emerging technology. Typically both the most current software revision is offered concurrently with the legacy established version. Hardware is maintained to accommodate software and special student needs. For business technology expertise, the Business Skills Center consults with local industry representative on a number of Advisory Boards. The Business Skills Center 121 class, "Assessing Business Information via the World Wide Web" also teaches information competency skills to assess and interpret business information.

The Business Skills Center evaluates student satisfaction annually using a survey eliciting questions covering achievement of course objectives, performance of staff, adequacy of instructional material, and individual class satisfaction. Letters are mailed to area businesses soliciting their input on critical skills for technology preparation.

Learning Centers and Computer Labs: *Graphic Arts Lab*

The MPC Graphic Arts lab was established to support the graphic arts instructional program by providing students with access to specific digital tools and resources. These resources—software and hardware—mirror the resources in the graphic arts classroom and as such, allow students to complete coursework outside of class time. The lab contains eleven Apple computers, two scanners, one black and white laser printer and one eight-color, large format output device.

Access is provided on a daily basis, as the Graphic Arts Technician oversees the facility and provides instructional support as needed. The offices of the Technician and the Program Director are contiguous to the Graphic Arts lab and lab hours are posted next to the lab door.

In addition to the presence of the Technician, program instructors are present throughout the week. They schedule regular hours for assistance and advisement, as well as individual student appointments as requested. The Graphic Arts lab is different than other campus lab resources in that that the Graphic Arts program utilizes Apple computers and industry standard Adobe software. These atypical resources are available for use by the graphic arts students but may be used by students outside of the program on a first-come first-served basis. The Graphic Arts lab is current in terms of the software available on each student machine. Web access is available throughout the lab.

Our Graphic Arts Technician is a specialist, yet he is part of the institution's complement of technical staff. He is the liaison between campus IT and program curriculum needs. As such, lab resources align with campus directives and policies. The Graphic Arts lab reflects campus standards for student technical resources while providing access to specific resources required for the Graphic Arts course of study. The Graphic Arts lab meets the requirement for the maintenance of educational equipment and materials.

Learning Centers and Computer Labs: *Music Lab*

The music lab has 24 Apple computers and music editing software for students to compose, arrange, and edit music.

Learning Centers and Computer Labs: *World Languages Lab*

The World Languages lab provides appropriate training to students through a computerized lab orientation as well as hands-on direction by the language lab coordinators. The computerized lab orientation, developed and implemented during the last academic year, has worked well, allowing students to learn how to log in and access lab materials. The coordinators provide assistance to students who have questions or difficulties with various materials or equipment. The World Languages lab has one Lab Technician (11 month, part-time). Attempts are made to ensure that there is faculty oversight during all open hours. The lab has 49 computers for student use.

Learning Centers and Computer Labs: *Other Instructional Computer Labs*

Many other Departments have instructional computer labs: LTC has three, Business and Technology has four, Physical Science has two, Life Science has six including Drafting and AutoCAD, Auto Technology has one, Supportive Services has two instructional computer labs.

ASSESSMENT:

IT and Media Services provides technical support for faculty, staff and students. They provide training to assist faculty integrate technology into their courses as well as training and support for online classes. They also provide technical support and training for students taking online classes. Tutoring, the learning centers, the computer labs, and learning technology development and training are sufficient to facilitate student learning on the main campus. As the Education Center at Marina grows, these learning support services will need to expand to facilitate the educational offerings at the center.

Technology strengths include the SharePoint technologies that have improved communication between departments; a commitment to energy savings and consolidation of server resources; support for distance learning platforms through the consortium with CSUMB, Galivan College, Humboldt State and others; and an emphasis in the last two years on backing up data via reliable electronic systems off campus.

The technology in the library and learning support services are on a technology replacement schedule using technology refreshment funds. Nearly 70% of the computers in the library labs (78), the ESL classroom and open lab (52), the ESSC classroom and open lab (86) were upgraded during the 2008-09 academic year. All of the computers in the library classrooms have been replaced with new equipment. As computer use by students continues to increase and the demand for electronic databases changes the way students conduct research, the need for new equipment is critical for effective research and information competency skills.

There is a technology refreshment process in place [Appendix F], funded recently at \$250,000/year [Appendix J]. Due to budget restrictions that amount has not been increased so not all computers and peripheral equipment have been refreshed lately. Presently there are 936 student computers that according to Chancellor's Office TCO (total cost of ownership) guidelines [Appendix M] should be refreshed every three years. The same TCO guidelines call for a minimum of 1 computer for every 20 FTES (fulltime equivalent students). Given our 2009-09 FTES of approximately 8700, the minimum number of student computers would be 435 and we have double that number. An effort has been made to consolidate labs or share labs and eliminate excess computers as feasible [Appendix N]. This has resulted in 20-30 computers being phased out and no additional computer labs being built except for the expansion to Marina. Assuming 900 student computers must be refreshed every three years, the bulk-rate cost would be \$240,000. Given that servers, projectors and switches must also be refreshed out of the technology refreshment budget, at an amount of \$50,000 to \$100,000/year, there is not enough funding to accomplish both purposes.

VISION AND FUTURE PLANS:

MPC Library:

- The library receives requests for additional databases that would benefit student learning. Librarians continue to evaluate new databases twice a year to ensure that MPC is providing research tools that support student learning.
- Within two years, the library will need to upgrade both hardware and software, as CSU has indicated the wish to move to another system. Participation in evaluation of available options will allow the smoothest possible migration. They will need funding for training, conversion, software licenses, and hardware for this move.

Instructional Technology:

- Review training methods and options in order to provide additional training for staff and students.
- Work with the Staff Development Committee to plan training programs.
- Investigate the need for mobile computing and implement processes as needed.
- Assess the effectiveness of classroom and lab technology in providing an improved learning environment.
- Review options for a streaming media server in order to eliminate the need for DVDs in Living Room distance learning courses.
- Develop a plan for the technology and training support needed at the Education Center at Marina and the Safety Training Center in Seaside.
- Investigate the feasibility, through constituency groups, of shutting down the mpcfaculty.net website and moving relevant content to mpc.edu.
- Increase efforts to reduce the number of student computers, consolidate labs, and share computer lab space without impacting instructional or student services programs.
- Propose increasing the Technology Refreshment budget to \$300,000 annually.

CHAPTER 4

Administrative Technology

OVERVIEW:

IT along with Lab Technicians supports a wide variety of software and hardware in support of institutional services. The primary software is the *California Community College Software Consortium (CCCSC)*, sometimes referred to as the *Santa Rosa Student Records System* of which MPC is an active member. IT personnel provide custom programming in CCCSC to meet institutional research and reporting needs and support the software and hardware.

The systems and programming team at MPC supports the maintenance of the student records and web registration systems. Two Programmer/Analysts and one Information Systems Specialist, who report to the Systems and Programming Manager, provide support for the current mini-computer environment.

Telephone registration, designed by MPC and programmed by a third party vendor, was implemented in Spring 1999 and Web enabled registration began in Summer 2005. Telephone registration was discontinued after Summer 2007 when usage by students dropped to a low point in favor of web registration and the cost of maintaining it was too high to justify keeping the telephone option.

During 2009-2010 the *Santa Rosa Student Records System* will be upgraded to a Windows environment and to-date, much of the programming has been completed and tested. Data collection has been improved with additional CCCSC reports now available and the new website surveys system.

Related software includes *CCCApply*, *Web Reg*, and *ICVerify*. Other supported software includes *Class Climate* for surveys, *Voyager* library services software, and *CurricUNET* for course outlines.

The financial records of the district are maintained on the Monterey County's Financial Management System.

Other administrative software includes DARS (Degree Audit Reporting System), SARS (Scheduling and Reporting System), FAMS (Financial Aid Management System), and CAPP (Computerized Assessment and Placement Programs).

Basic productivity software includes, Office 2007 (Outlook, Word, Excel, PowerPoint, Access, InfoPath, Publisher, SharePoint Designer, Internet Explorer), and SharePoint 2007.

California Community College Software Consortium (CCCSC)

MPC joined the California Community College Software Consortium (CCCSC) in 1994 and

converted to the system in fall of 1995. The CCCSC is a group of California Community Colleges who use the student records software that was originally developed in the 1980's at Santa Rosa Junior College (SRJC) and then shared with other colleges. The CCCSC group works together on joint development but most of the software is still written by SRJC.

In April 2002 MPC upgraded its existing HP3000 967RX system purchased in 1994 to a newer HPe3000 N4000 mini-computer. The system runs the legacy software written in COBOL and a 4GL language SpeedWare. In addition another product called Autobahn is used for the Web enabled registration system. Hewlett-Packard, the maker of the HPe3000, had announced that it was going to discontinue making the HPe3000 hardware and would begin phasing it out at the end of 2006 but later extended this to the end of 2008. Currently MPC uses a third party vendor instead of H-P to support maintenance of the system hardware and software.

SRJC began to develop a plan to replace the software written for the HPe3000 platform with a Microsoft Windows.Net version written in the Visual Basic language. A Community Education system was written first as a pilot project to see how the software performed. After this proved successful development of a student records system based on this initial project was begun. In November of 2008 SRJC implemented the first version of the system at their college when it was about 80% complete. MPC programming staff was a major contributor to this effort by providing several modules used in the system.

The CCCSC membership has been dwindling as colleges left the group and purchased multi-million dollar integrated packages from software vendors i.e. Banner and Datatel. The current members are SRJC, MPC, Pasadena City College (PCC) and Mendocino Community College (MCC). MCC is currently converting to Datatel and will leave the CCCSC at the end of the 2009. At the direction of its new president the IT department of PCC is in the process of reviewing various integrated packages and may leave the CCCSC after a decision is made this year. This may leave MPC and SRJC as the two remaining members of the CCCSC.

MPC systems and programming staff are planning to move to the new version of the CCCSC system in November 2010. The new system will run on the existing Microsoft Windows based network. New application servers will be purchased to run the new student systems applications and the current SANS storage system will be upgraded to hold the data currently stored on the HPe3000. The new system uses applications written in Visual Basic.Net using a SQL server database.

At SRJC a third party software program was purchased at a cost of \$100,000 to connect the HPe3000 to new SQL student records database in order to keep them in sync. This was used to test applications as they were written and still be able to use the legacy applications running on the HPe3000. After the new applications are in place, this software will no longer be of any use. In order to save conversion costs MPC programming staff are currently writing conversion

programs to move the data from the HPe3000 to the new SQL database in a batch mode. This will save the cost of purchasing the vendor syncing software that SRJC is using. The syncing software is not needed at MPC because the applications are already developed at SRJC and ready to use.

In addition to the CCCSC software MPC programming staff will also be working with a third party vendor to replace the existing interface from the student records system to the SharePoint based MPC web site. When students apply and register for classes the information is transferred by an automated batch process from the current HPe3000 to a system that creates the network and email accounts of the students and class sites for faculty. Because the source of the data is changing from the HPe3000 to a SQL database the system will need to be modified.

The new CCCSC software will include a student portal which will replace the current Autobahn based WebReg system at MPC. A faculty portal will also be available that will allow faculty to manage rosters, do online grading, view course outlines, enrollment information, class schedules and instructor load information.

Software related to the Student Records System

Financial Aid Management System - Financial aid data is maintained on a vendor supported system called FAMS. There are interfaces to the student records system to/from FAMS that are maintained by MPC programming staff.

The MPC SharePoint website integrates data from the student records system into the MySites for faculty and students to view the list of their classes, and into the ClassSites to display the list of enrolled students in each class section.

CCCApply – CCCApply, the statewide online application center for California Community Colleges, combines individual college identity and processing with system-wide consistency, compliance, and support. The suite of application forms at CCCApply.org—a common Standard Application, a Spanish Application, an International Application, and a BOG Fee Waiver Application—streamline the application process for students and colleges alike. Since its introduction in the fall of 2001, CCCApply has become the choice of over 90 of the California Community Colleges. Colleges using CCCApply typically receive 80% to 100% of their applications online.

WebReg (Web Registration) - Autobahn is used for the Web enabled registration system.

Other systems that have interfaces with the student records systems are: DARS - a degree audit records system used by the counseling staff; A.S.A.P., developed by CAPP Associates - a system used to administer and record placement tests; Academic Timekeeper - a standalone system for recording time and attendance; Moodle - an online teaching web site. MPC programming staff maintain small Microsoft Access databases for Fiscal Services used for Payroll and other accounting functions dealing with student financial aid.

Other Administrative Software

CurricUNET - Award winning CurricUNET has been developed to automate the entire process of submitting course and program proposals via a Web browser. It is especially effective for multi-campus institutions that want a paperless solution for this cumbersome process.

CurricUNET offers the following features:

- It uses Web forms for all input required for course and program proposals.
- All input fields are entered into a relational database, thus facilitating searches, flexible report production, and interfaces to related systems (such as catalog production and schedule build).
- All necessary notifications are automated, and all steps in the process are tracked with an automated workflow module. As a result, a real-time view of the workflow for each proposal can be displayed at any time showing the exact current location of the proposal in question.
- Historical tracking of all Courses and Programs.
- In addition, all articulation agreements are maintained in an articulation database by institution.
- The system is designed to facilitate automated interface to various statewide processes, where required.

CurricUNET is the 2002 Recipient of the Technology Focus Award from the California Community Colleges Chancellor's Office.

Class Climate - In addition to fast and accurate processing of paper questionnaires, Class Climate, a Scantron product, automates the processing of online surveys. Functions include reports on study courses, departments, training seminars and programs to fit your need.

- To conduct paper and online surveys.
- Scanning, not typing, means a drastic cost reduction in collecting data while minimizing errors.
- Scanning can be distributed to multiple stations and the data is automatically sorted to the correct course and ready for review.
- Instant feedback can be sent to instructors or trainers allowing them to make changes while still involved in an ongoing course or you can start a batch process to send or print reports when needed.
- Data from Class Climate can be exported in SPSS or Excel formats for further data analysis, if needed.
- Using Class Climate for ongoing course evaluations helps identify potential areas for improvement and helps shape future curriculum, courses and seminars.

Timekeeper - Timekeeper software is for tracking student attendance for positive-attendance reporting. It can be used as a stand-alone software product on a PC or as a web-based solution.

ICVerify - ICVERIFY software enables the College to accept all major credit and debit cards through a PC or PC-based POS (point of sale) system.

Voyager - Voyager is an integrated library system used by more than 1,300 libraries around the world. The biggest user is the Library of Congress and many universities, museums, and community colleges use it. The modules are the main way that library workers interact with the system. Voyager is broken down into different modules that are focused on helping with certain tasks commonly done in a library. They are implemented as custom Microsoft Windows programs that talk to a centralized server and database. The modules are as follows:

1. The Circulation module takes care of check-in/checkout of books.
2. Media Scheduling lets people reserve videos and media equipment ahead of time. This usually means a teacher wanting to show a video in class.
3. Web Voyage lets people search the library catalog using a normal web browser.
4. Access Reports is a Microsoft Access frontend that lets library workers poke around in the database.
5. Reporter lets workers print out overdue fines, statistics, and so forth.
6. Cataloging helps catalogers work with information about the books as stored in the database.
7. There are other modules dealing with system administration.

Technology Resources Supporting Research and Institutional Effectiveness

SharePoint technologies have allowed us to create a structure for improvement in institutional effectiveness. An example is the Board Policy Review Process. Workflow processes have been set up for increased efficiency. Committees now have the option of using committee sites to house documents and agendas and those documents can be checked out for editing by any committee member for a paperless environment. Each committee site is viewable by committee members and can be set to be viewable by all staff.

A process has been developed for data mining to gather information needed for institutional research and planning. Any staff or faculty member, including the Institutional Researcher, has access to this information and the Office of Institutional Research is available for support and training.

MPC systems and programming team provides a data mining service to Institutional Research department. This system extracts records from the HPe3000 into an Access database which is then used to generate cross-tab data mining spread sheets for research purposes. The spreadsheets are posted on the Institutional Research web site at the beginning, 1st census and end of terms for staff and faculty access.

Privacy Issues

The Family Educational Rights and Privacy Act (FERPA) (20 U.S.C. § 1232g; 34 CFR Part 99) is a Federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education. [See Appendix D for detailed information.]

ASSESSMENT:

The California Community College Software Consortium (CCCSC) student records system version that runs on an HPe3000 server is in need of updating and that updating is being implemented in 2009-2010. The HP server is no longer supported by Hewlett-Packard because of its age although we outsource this support to another vendor. The upgraded Windows version of the software, when implemented, can be re-programmed and updated in house which should provide greater stability and redundancy for the system and flexibility of programming. The new student records system will use Microsoft software which is already part of our yearly Microsoft contract, thus saving over \$50,000/year on the software and support of the old HPe3000 system.

The Monterey County's Financial Management System is adequate, though not ideal; the county system does not provide users real-time processing and other desired functions. However, the benefits of a more sophisticated system do not outweigh the additional cost (purchase, maintenance, and staff support) of a new stand-alone financial software package.

VISION AND FUTURE PLANS:

The primary goal of Information Technology/ Information Systems is to implement the new, Windows/SQL-based student records system.

- Planning is underway for the installation of the new Santa Rosa Student Records System to be completed during April 2010. The cost of the upgrade is expected to be over \$100,000 which will be allocated from technology refreshment funds.
- Training for the new SRSRS is scheduled for early winter 2010. The training expense is expected to be under \$10,000 and will be delivered by Santa Rosa JC technical personnel.
- Send the printer/copier contract out to bid February 2010.

CHAPTER 5

Student and Staff Technology Training

OVERVIEW:

Assessment of the Need for Technology Training

Technology training needs are accessed in a variety of ways, primarily as a result of the deployment of new software or requests from faculty and staff. Technology training is available to staff on an ongoing basis as needed. Formal workshops are offered for standard desktop applications as well as for the distance learning course management system, and for website features. Staff or departments may arrange individualized training at any time and may drop-in to the Instructional Technology Lab or contact IT Network Support for immediate help. Unscheduled requests for training, by e-mail or telephone, are handled on a first come, first served basis. Training materials are posted on the website (Techapedia) and are updated as needed.

The Instructional Technology staff is equipped to handle requests for non-standard, academic software training needs with some lead time. New faculty and new adjunct faculty receive hands-on training on the use of Outlook e-mail and voicemail, as well as MySites and ClassSites as used for instruction or communications with students on the MPC website. All faculty and staff are encouraged to attend Flex Day workshops to upgrade their technical skills. The Academic Senate polls faculty for relevant technical training needed and the IT staff endeavors to provide up-to-date training.

Any MPC employee can take business skills or other training courses at the college as an enrolled student at the going fee or for audit at no cost. Additional training is provided by @One, the training arm of the California Community Colleges Chancellor's Office IT Center, with some limited staff development funds to cover registration. MPC has participated in the Ambassador program with the Chancellor's Office technology initiatives to allow training of staff to keep updated on new technology services from the Chancellor's Office.

Technology Training for Students

Student technology training is handled in a variety of ways: through class orientations, training documents on the website (Techapedia), teacher instruction, handouts at registration, open sessions in the Library, and open sessions during special events such as Lobos Days. The primary technical training topics are MPC student e-mail, the MPC SharePoint portal, and iLearn (Moodle) use for online classes. Login instructions for the Moodle course management system are available on the MPC website under the heading "Distance Education." Students have a phone number and e-mail address for help desk questions related to instructional software, primarily the iLearn course management system. Demonstrating "Information Competency" is required to graduate from MPC. General requests for student training can be routed through the ASMPG group to Instructional Technology for implementation. Also, the Library offers 8

sections of LIBR 50 each semester (Introduction to Information Competency and Literacy) which satisfies the MPC Information Competency Graduation Requirement. In addition LIBR 80 Internet Literacy offers a more in depth study of the technology needs of a student.

Technology Training for Staff

The primary technical training topics for staff are for the MPC SharePoint website (numerous topics), Microsoft Office (Word, Excel, PowerPoint, and Microsoft Outlook), Archiving Email, Data Back-up, Data Retrieval for the CCCSC Student Records System, Working with Digital Images and Video, and Teaching with Clickers (Classroom Response System). Training is also offered for distance learning instructors using iLearn, topics such as Gradebook, Forum Tool, Mail, Assignment Tool, Add Resource, Add Activity Function, Meeting ADA Requirements, Student Authentication, Creating and Editing Media, Online Teaching Methods and Course Design. Often the iLearn training is in partnership with California State Monterey Bay (CSUMB). Training instructional handouts are located on the MPC website in the Techapedia for reference at any time.

Faculty and staff are also encouraged to take CCC @One (sponsored by the California Community Colleges) training. MPC hosted the Northern California @One Summer Workshop in June 2008. Fifteen scholarships were available to MPC staff for the workshop. Media Services also encourages and pays for distance learning instructors to take the @One online workshops for teaching online and certification in that field. In addition, MPC has an extensive distance learning handbook for faculty that is updated yearly or more often if needed.

Technology Training for Technical Staff

Technical staff receives most of their training from recognized technology training vendors specific to MPC needs and also from the California Community College Chancellor's Office for state-wide technical initiatives.

Information Technology personnel attend outside professional training, as available, in order to remain proficient in the deployment and maintenance of system software and hardware. Media Services personnel attend training as needed and attend conferences to stay familiar with advances in instructional and distance learning technologies. Laboratory Technicians are then trained by IT personnel, Media Services personnel, CCC @One training, as well as vendors of software or hardware specific to their instructional area.

ASSESSMENT:

Feedback on the quality or scope of technical training comes in the form of e-mail or face-to-face conversations and most comments are directed to the Dean of Information Technology and Media Services directly or through one of the constituency group meetings.

MPC's training offerings for faculty and non-technical staff are primarily informal, as-needed training, since that method works best for faculty and staff. The MPC partnerships with CSUMB

and @One have extended our training options. Training gets both kudos and complaints and we have learned that “as needed one-on-one training” is most effective. All on-campus training requests are met. In a 2008 campus survey, of those responding with an opinion, 73% agreed or somewhat agreed that MPC provides quality training in the use of technology to employees and students.

Technical training for technical staff is expensive but critical to meeting our level of technical excellence. IT staff have earned a number of professional certifications, advanced degrees, and other as-needed training that support the technology maintenance of the hardware and software and also take the College technology into the future by responding to the need for new services.

VISION AND FUTURE PLANS:

Information Technology staff, Media Services staff, and Campus Laboratory Technicians will continue to offer training to staff and students as needed. There are no plans to change the methods of face-to-face training along with the Techapedia handouts available on the MPC website. Training tutorials will be added to the Techapedia as needed. In the future we may offer training with remote desk top control and the use of commercial services such as Microsoft Live Meeting, WebEx (www.webex.com) and Go-to-Meeting (www.gotomeeting.com).

- Information Technology staff, Media Services staff, and Campus Laboratory Technicians will continue to offer training to staff and students as needed.
- Concentrate the staff training focus on “What’s New” training.
- Offer orientation to the use of statewide initiatives such as CCC Confer and the @One training system
- There are no plans to change the methods of face-to-face training.
- Continue to move training or training materials online.
- Training tutorials will be added to the Techapedia as needed.
- Encourage online teaching instructors to become certified through the @One program and secure funding for this program.
- Investigate the use of remote desk top control and the use of commercial services such as Microsoft Live Meeting, WebEx (www.webex.com) and Go-to-Meeting (www.gotomeeting.com) for training purposes.

CHAPTER 6

Institutional Technology Support

OVERVIEW:

Technology resources are managed by numerous highly trained technicians and supervised by the Dean of Information Technology and Media Services who reports to the Vice President of Administrative Services. The operation and maintenance of the primary technology infrastructure, Data Center, telephones, website and network services are handled by the three network engineers and two IT support technicians. The CCCSC Student Records System is overseen by one manager, with two programmers and a support technician. Classroom technology equipment is supported and maintained by four Media Services personnel. Campus Laboratory Technicians are responsible for the technology resources in their area of responsibility as listed in the Support of Multimedia Classrooms document [Appendix P]. All engineers and campus technicians are well-trained and highly competent. Technology Committee members also oversee technology staffing and may make recommendations for adding additional staff through the Planning and Resource Allocation Process. The Dean of Information Technology and Media Services coordinates the efforts of the various technicians.

Vendor Partners

IT and Media services have numerous vendor partners that help with the installation and support of technology initiatives. Two primary partners are Microsoft and Cisco. Others include Denali for website support and Nextel and AT&T for cell phone support.

Support Contracts

IT and Media Services as well as MPC departments have entered into several support contracts. Some of the primary vendors are:

- California Community College Software Consortium (CCCSC) – student records system support
- California State University Monterey Bay – iLearn Moodle support
- Spinitar – Lecture Forum equipment (contract expired fall 2009)
- Xerox – printers and copiers
- Adager – 3rd party database maintenance software
- Ideal Computer Systems, Inc – HPe3000 hardware and software maintenance, disaster recovery warm site
- Minisoft – Terminal emulation software, middleware, printer spooling
- VESoft – Hpe3000 security software
- Activant - SpeedWare 4GL language, Autobahn Web development software.

Agility, Adaptability, and Responsiveness

Media Services personnel are cross-trained for basic services and can cover for each other for basic tasks except for online learning responsibilities which are handled by only one employee with the help of student workers. As a back-up, California State University Academic Technology staff can respond to an MPC online technical help request if needed.

Programmer Analysts and the Systems and Programming Manager have limited cross-training and documentation for the Student Records System. The two IT Support Technicians are cross-trained and either one can resolve most desktop computing problems sometimes with the help of Network Engineers. The three Network Engineers are only minimally cross-trained and only in some areas. Each is available via cell phone to talk a co-worker through a problem resolution but the ideal would be to have at least two Engineers cross-trained for each major system. Presently, all three Network Engineers log many hours of overtime because of the large workload. All three attend extensive training but often in different areas, although with some overlap. Documentation is often the only means of sharing information on the various systems.

ASSESSMENT:

The competency and dedication of MPC technical personnel is at the highest level and is the primary reason for the quality technical services available to students, faculty, and staff. During 2008-2009, three IT personnel were honored by MPC for their contributions for exceptional service to the College and for making a significant difference to the College.

The California community College Technology Plan II TCO Model (total cost of ownership) updated in 2008 lists the recommended technology staff based on college statistics. MPC's actual technical support staff positions are listed as a comparison.

<u>Job Title</u>	<u>Based on</u>	<u>Recommended</u>	<u>MPC Staff</u>
IT Support Techs	1/100 computers (not labs)	@450 computers = 4 staff	2 staff (-2)
Network Engineer	1/3000 FTES	@8200 FTES = 3	3 staff (ok)
Webmaster	2/district	2 staff	0 staff (-2)
App Developer/Admin	1/3000 FTES	@8200 FTES = 3	2 (-1)
Instructional Tech	1/100 FTE (faculty)	@250 FTE = 2	1 (-1)
Multimedia Tech	1/200 FTE	@250 FTE = 1	0 (-1)

Lab Tech positions for computer labs are adequate except for the Marina Education Center and the Public Safety and Training sites. Based on the above information, MPC should have 2 additional IT Support Techs, 2 Webmasters, 1 additional Developer/Programmer Analyst, 1 Multimedia Tech and 1 Instructional Tech, , as well as 1 ½ Lab Techs for the off-site locations for a total of 8+ additional staff. IT presently has a vacant position of Webmaster that has never been filled. All other present positions are filled including that of the Dean and Manager Information Systems and Programming. Given the understaffing for technology support, it is obvious that the MPC technicians do much more work than what is the standard in this TCO model. This results in a great deal of overtime and comp time.

In a 2008 campus survey, of those responding with an opinion, 87% agreed or somewhat agreed that Information Technology personnel are knowledgeable and helpful and 82% agreed or somewhat agreed that Media Services personnel are knowledgeable and helpful.

Some of the present vendor contracts will no longer be needed once the student records system is converted to a Windows-based environment. These include the VESoft and SpeedWare contracts.

VISION AND FUTURE PLANS:

- Provide for additional training for all technical staff.
- Provide specific training for the new Windows-based student records system.
- We may offer training with remote desk top control and the use of commercial services such as Microsoft Live Meeting, WebEx (www.webex.com) and Go-to-Meeting (www.gotomeeting.com).
- Provide for a Webmaster.
- Provide for adequate day and evening technical staff at the new Education Center at Marina as well as the Public Safety Training Center.
- Consider carefully the need for additional technical staff, beyond the two listed above, in order to reduce overtime/comp time and overworking the present technical staff.

CHAPTER 7

Planning Summary

Technology in its various forms is essential for educational programs and services. For purposes of this plan, technology has been defined as anything related to electronic devices or associated software used in the performance of job-related duties in the classroom, labs, office, or environments. The planning for new or upgraded technology must meet the following planning parameters:

- Programs, services, and learning outcomes drive technology decisions;
- Technology needs to ‘add value;’
- Actively involve users in defining needs and technology specifications;
- Draw upon internal and external expertise;
- Examine ‘best practices;’
- Establish partnerships with vendors and service providers;
- Test out new ideas through pilot programs, when feasible.

The planning process includes four areas of technology usage.

Infrastructure Support Systems:

- Network infrastructure
- Remote campus access
- Security
- Telephone system
- Audio/Visual delivery systems
- Technical support

Instructional Technology:

- Classroom multimedia
- Distance learning
- Technologies for Library resources
- Technologies for career programs
- Computer labs at all campus sites

Desktop Support:

- Desktop computer systems
- Software selection and support
- Printing/scanning options

Management Information Systems:

- Student information system
- Financial aid system
- Fiscal Services accounting system
- Human Resources information process
- Database systems
- Reporting systems
- Content management systems (Moodle and SharePoint)

- Communications systems
- Application development

California Community Colleges Technology Goals

Any California Community College Technology Plan must align where practical to the statewide California Community Colleges Technology III Plan and 2008 Update.

The following is a summary of the California Community College System’s technology goals identified to be considered for implementation over the next three years, assuming funding is available. The goals are categorized based on the relevant chapter. Tech III proposes five initiatives.

1. Infrastructure Initiative: composed of projects aimed at bolstering key capabilities needed for reliable IT connectivity that is considered standard practice in industry. Specifically, the envisioned projects will establish redundant circuits, creating multiple pathways for connectivity; ongoing funding for connectivity of CCC-approved educational centers, known as off-site centers (such as the Education Center at Marina/Public Safety Training Center at Seaside); and bolstering or establishing a baseline of wireless infrastructure at the various campuses.
2. Institutional Performance Toolkit: composed of projects focused on key tools such as:
 - a. *Accreditation Wizard*: a tool that will help the District to organize more effectively and efficiently the data, information, and analysis needed to create a “culture of evidence” and, ultimately, to support greater efficiencies and effectiveness in local accreditation efforts.
 - b. *Assessment tool*: a system-wide, Web-based site for centralized versions of the most widely used assessment tools.
 - c. *Geographic Information System*: a centralized, system-level computer system that allows users to quickly combine and display large number of datasets interchangeably and interactively. Such maps provide enhanced analyses of enrollment management, educational and workforce development planning, capital planning, and others.
3. Adjustment of IT Funding Model: composed of efforts – many already underway – to institutionalize the IT education of faculty, staff, and students to enable them to evolve toward greater use of IT as the pedagogies continue to develop. This initiative requests an increase in funding to the Telecommunications and Technology infrastructure Program (TTIP) to meet the increased demand for the programs covered by this fund.
4. IT Communications and Outreach: composed of benchmarking efforts with subsequent analysis and action planning to determine optimal communications means and methods to increase intersegmental awareness of the system-level IT resources available to students, faculty, staff, and administrators. Increasing the use of the existing communications and outreach capabilities will leverage prior investments and realize greater cost efficiencies and effectiveness across the CCC system.
5. Digital Marketplace and Enterprise Service Business: composed of projects aimed at integrating various enterprise-level applications at the CCC system level, including:

- a. Creating interoperability between Course Management Systems (such as Moodle) and Enterprise Resource Planning (Santa Rosa Student Records System) applications currently in use within the CCC system.
- b. Expanding the CCC System Office Data Mart: a database for collecting and reporting data elements pertaining to student demographics. Included will be an auto feed into the K-12 system for longitudinal studies.
- c. Expanding multiple ERP vendor's "Data Warehouses." This project aims at working with the multiple vendors to deliver increased access to data within and across ERP systems.
- d. Connecting CCC system-level capabilities with the CSU Data Mart – an intelligent library system of digital content. This would enable faculty to search course curriculum, buy/sell content and materials online, and import materials into any of the major CMS applications available today.

Monterey Peninsula College Technology Goals

The following are technology goals both general and specific for Monterey Peninsula College over the next three years. Many of the goals require funding and/or College Council approval. Additional information and background supporting the goals can be found in the applicable chapter.

Chapter 1: College Technology Goals and Processes

- Continue to update technology resources with funding to come through the technology refreshment and action plan processes.
- Review IT staffing needs through Program Review (presently in process) and the Technology Plan.
- The College design of the resources allocation process works well and there are no plans for change at this time.

Chapter 2: Institutional Technology

- Upgrade equipment as needed in order to keep maintenance costs down, including switches and other infrastructure equipment.
- Connect the Monterey Campus network to an Optiman (up to 1 Gig) or Gigaman (1 Gig or higher) network.
- Work with AT&T or other providers to upgrade network services to the Education Center at Marina and the Public Safety Training Center at Seaside.
- Install electronic monitors, including remote monitoring, to cut down on staff travel time and related expenses;
- Implement 10 GB to each IDF (Intermediate Distribution Frame);
- Complete the conversion of present wireless to a secure, controlled system and implement LWAP (lightweight Wireless Access Protocol) with coverage expanded across the Monterey campus and all remote sites.
- Implement Network Admission Control (NAC) and Remote Access Protection (NAP) in conjunction with 802.1x.

- Investigate migrating to Cisco Unity Connections for voice mail which will provide a more robust system with load balancing as opposed to the current active/passive cluster.
- Provide for electronic processes instead of paper processes in order to move toward a more paperless institution.
- Justify the awarding of Technology Refreshment funds based on instructional use of the equipment.
- Update the SharePoint website to version 2010 and implement single sign-on.
- Devise a method to remove/hibernate student e-mail accounts that have not or are no longer being used.
- Investigate the feasibility of moving all mpcfaculty.net content to the mpc.edu site in order to streamline support and provide for a consistent, professional interface for public view.
- Install Berbee alert technology in all classrooms and hallways either through existing speakers, digital clocks with speakers, or telephones.
- Reduce where possible the number of student computers without impacting programs so that we can afford to upgrade student computers on a 3-year cycle.
- Reduce the number of high cost/page staff printers by installing shared printing services.
- Complete an RFP for networked printing services.
- Revise the Board Policy and Administrative Procedures for Network and Electronic Mail Use.
- Conduct an annual evaluation of technology resources and services each Fall.
- Conduct an annual update of the Technology Plan by March every year.

Chapter 3: Instructional Technology for Student Learning & Services

MPC Library:

- The library receives requests for additional databases that would benefit student learning. Librarians continue to evaluate new databases twice a year to ensure that we are providing research tools that support student learning.
- Within two years, the library will need to upgrade both hardware and software, as CSU has indicated the wish to move to another system. Participation in evaluation of available options will allow the smoothest possible migration. They will need funding for training, conversion, software licenses, and hardware for this move.

Instructional Technology:

- Review training methods and options in order to provide additional training for staff and students.
- Work with the Staff Development Committee to plan training programs.
- Investigate the need for mobile computing and implement processes as needed.
- Assess the effectiveness of classroom and lab technology in providing an improved learning environment.
- Review options for a streaming media server in order to eliminate the need for DVDs in Living Room distance learning courses.
- Develop a plan for the technology and training support needed at the Education Center at Marina and the Safety Training Center in Seaside.

- Investigate the feasibility, through constituency groups, of shutting down the mpcfaculty.net website and moving relevant content to mpc.edu.
- Increase efforts to reduce the number of student computers, consolidate labs, and share computer lab space without impacting instructional or student services programs.
- Propose increasing the Technology Refreshment budget to \$300,000 annually.

Chapter 4: Administrative Technology

- Planning is underway for the installation of the new Santa Rosa Student Records System to be completed during April 2010. The cost of the upgrade is expected to be over \$100,000 which will be allocated from technology refreshment funds.
- Training for the new SRSRS is scheduled for early winter 2010. The training expense is expected to be under \$10,000 and will be delivered by Santa Rosa JC technical personnel.
- Send the printer/copier contract out to bid February 2010.

Chapter 5: Student and Staff Technology Training

- Information Technology staff, Media Services staff, and Campus Laboratory Technicians will continue to offer training to staff and students as needed.
- Concentrate the staff training focus on “What’s New” training.
- Offer orientation to the use of statewide initiatives such as CCC Confer and the @One training system
- There are no plans to change the methods of face-to-face training.
- Continue to move training or training materials online.
- Training tutorials will be added to the Techapedia as needed.
- Encourage online teaching instructors to become certified through the @One program and secure funding for this program.
- Investigate the use of remote desk top control and the use of commercial services such as Microsoft Live Meeting, WebEx (www.webex.com) and Go-to-Meeting (www.gotomeeting.com) for training purposes.

Chapter 6: Institutional Technology Support

- Provide for additional training for all technical staff.
- Provide specific training for the new Windows-based student records system.
- We may offer training with remote desk top control and the use of commercial services such as Microsoft Live Meeting, WebEx (www.webex.com) and Go-to-Meeting (www.gotomeeting.com).
- Provide for a Webmaster.
- Provide for adequate day and evening technical staff at the new Education Center at Marina as well as the Public Safety Training Center.
- Consider carefully the need for additional technical staff, beyond the two listed above, in order to reduce overtime/comp time and overworking the present technical staff.

To return to the three planning questions:

Is MPC delivering the appropriate technology services? The MPC technical services that are delivered are up-to-date, responsive to the instructional, service, and business needs of the College, are cost-effective and can be managed by IT personnel.

Which changes in technology services, if any, are essential to the success of student learning and college business? Increased opportunities for academic collaboration and access to information systems are essential for student learning. Electronic work flow process, moving toward a paperless environment, and a managed control of the inventory of computers and printers, are essential during this time of limited funding.

How can technology personnel best facilitate, deliver, and manage these opportunities and challenges? The MPC SharePoint website offers multiple collaboration opportunities with instructors, other students, and experts in content areas. In addition, work processes can easily be developed to cut costs and improve work efficiencies.

Planning Priorities

Now that the Data Center construction is behind us, the highest priority project is to upgrade the Santa Rosa Student Records System to the new Windows-based version. This upgrade includes the upgrade to Microsoft Exchange 2010 and SharePoint 2010 along with the integration of both to the new SRSRS and the training of staff. SharePoint 2010 offers increased collaboration, work-flow processes, and teaching resources.

The other major priority for IT and Media Services is to continue with our established program of quality technical services, training, and support.

Appendices

Appendix A

Monterey Peninsula College Institutional Technology Committee

Internet/Network Use Policy

1. **Introduction:**

Monterey Peninsula College (MPC) owns and operates a variety of computer systems for use by its faculty, student, and staff. MPC encourages the use of its computer systems for education, academic development, public service, and other educational purposes. When using MPC's computer systems, all users are required to abide by the rules of this Policy and use the system in an ethical and lawful manner.

2. **Policy Requisite:**

All users of MPC's computing systems must read, understand, and comply with the terms outlined in this Policy, as well as any additional guidelines established by the administrator of the system. *By using any of these systems, users agree that they will comply with these policies.* Users understand and agree that MPC's role in managing these systems is only as an information carrier and that they will never consider transmission through these systems as an endorsement of said transmission by MPC.

2. **Related Legislation, Policies & Regulations:**

Federal Computer Fraud and Abuse Act 1986 (US) 18 USC 1030

State Penal Code Sections: 1191-1209.5; 13848-13848.7; 186-186.8; 639-653.1; 422; and 484-502.9

MPC Electronic Mail Policy

4. **Rights:**

These computer systems, facilities, and accounts are owned and operated by MPC. MPC reserves all rights, including termination of service without notice, to the computing resources that it owns and operates. These procedures shall not be construed as a waiver of any rights of MPC, nor shall they conflict with applicable law.

5. **Authorized Use:**

Access and privileges on MPC's computing systems are assigned and managed by the administrator of the specific system. Eligible individuals may become authorized users of the system and be granted appropriate access and privileges by following the approval steps prescribed for that system. All access to MPC's computer resources, including issuing of passwords, must be approved by an authorized MPC agent. Users may not,

under any circumstances, transfer or confer these privileges to other individuals. Any account assigned to an individual shall not be used by others without written permission from the system's administrator. The authorized user is responsible for the proper use of the system, including any password protection.

6. Permissible Use:

Electronic communications facilities (such as e-mail) are for college-related activities only. Further, users are responsible for maintaining the following:

- 6.1 An environment in which access to all of MPC's computing resources are equitably shared between users. The system administrator will set minimum guidelines within which users must conduct their activities.
- 6.2 An environment conducive to learning:
 - 6.2.1 Many of the MPC computing systems provide access to outside networks, both public and private, which furnish electronic mail, information services, bulletin boards, conferences, etc. Users are advised that they may encounter material that may be considered offensive or objectionable in nature or content. Users are further advised that MPC does not assume responsibility for the contents of any of these outside networks.
 - 6.2.2 The user agrees to comply with the acceptable use guidelines for whichever outside networks or services they may access through MPC's systems.
 - 6.2.3 The user agrees to follow proper etiquette on outside networks. Documents regarding etiquette are available through specific individual networks.
 - 6.2.4 The user agrees that, in the unlikely event that someone does transmit, or cause to be transmitted, a message that is inconsistent with an environment conducive to learning or with a misleading origin, the person who performed the transmission will be solely accountable for the message, not MPC, which is acting solely as the information carrier.
- 6.3 Any user who finds a possible security lapse on any system is obligated to report it to the system administrator. The system must not be used until the system administrator has investigated the problem.

Knowledge of passwords or of loopholes in computer security systems shall not be used to damage computing resources, obtain extra resources, take resources from another user, gain unauthorized access to resources or otherwise make use of computing resources for which proper authorization has not been given.

7. Prohibited Uses:

Use of any and all of MPC's computer systems for any of the following purposes is strictly prohibited. Liability for violations of prohibited uses shall remain solely and

exclusively with the user. By using MPC's computer systems, the user further agrees to indemnify MPC for any liability incurred by MPC for misuse of the user.

An individual's computer use privileges may be suspended immediately upon the discovery of a possible violation of these privileges. Such suspected violations will be confidentially reported to the appropriate system administrator.

Violations of these policies will be dealt with in the same manner as violations of other college policies and may result in disciplinary review. In such a review, the full range of disciplinary sanctions is available, including the loss of computer use privileges, dismissal from the college, and legal action. Violations of some of the above policies may constitute criminal offenses.

The user agrees never to use the system to perform an illegal or malicious act as set forth in this section. Any attempt to increase the level of access to which the user is authorized or any attempt to deprive other authorized users of resources or access to any MPC computer system shall be regarded as malicious and may be treated as an illegal act.

7.1 Copyright Infringement:

Computer software protected by copyright cannot be copied from, into, or by using campus computing facilities, except as permitted by law or by the contract with the owner of the copyright. This means that such computer and microcomputer software may only be copied in order to make back-up copies, if permitted by the copyright owner. The number of copies and distribution of copies may not be done in such a way that the number of simultaneous users in a department exceeds the number of original copies purchased by that department.

7.2 Defamation--Libel/Slander:

Creation or transmission of any false statement that tends to cause injury to one's reputation is strictly prohibited. Any user creating or transmitting defamatory statements shall have sole liability for any damages resulting from such defamatory statement. Users will also be subject to MPC's disciplinary procedures set forth in this policy.

The user agrees never to attempt to transmit, or cause to be transmitted, any message in which the origination is deliberately misleading (except for those outside services which may conceal identities as part of the service).

7.3 Obscene Material:

Creating, transmitting, uploading, or downloading obscene materials is a strictly prohibited use of MPC computer systems. "Obscene matter" means matter, taken as a whole, the predominant appeal of which to the average person, applying contemporary statewide standards, is to prurient interest, meaning a shameful or morbid interest in nudity, sex, or excretion; and is matter which, taken as a whole, goes substantially beyond customary limits of candor in description or representation of such matters; and is matter which taken as a whole lacks

significant literary, artistic, political, educational, or scientific value. Any user violating this provision may be subject to applicable criminal and civil penalties. Civil liability shall be solely and exclusively with the user.

7.4 **Commercial Use:**

Commercial use of MPC computer systems is prohibited.

8. Accounts:

An account assigned to an individual must not be used by others without written permission of the system administrator. The individual is responsible for the proper use of the account, including password protection.

9. Confidentiality:

Programs and files are confidential unless they have been made available, with written permission, to other authorized individuals. MPC reserves the right to access all information stored in MPC computers. File owners will be notified of file access and/or maintenance, in advance, if such notice is practical. When performing maintenance, every effort is made to ensure the privacy of the user's files. However, if policy violations are discovered, they will be reported immediately to the appropriate system administrator.

The system has the ability to read mail: individual accounts and the system administrator account. All reasonable attempts have been made to ensure the privacy of accounts and electronic mail; this is no guarantee that accounts or electronic mail is private.

10. System Performance:

No one should deliberately attempt to degrade the performance of the computer system or to deprive authorized personnel of resources or access to any college computer system.

11. Unauthorized Access:

Loopholes in computer security systems or knowledge of a special password shall not be used to damage the computer system, obtain extra resources, take resources from another user, gain access to systems or use systems for which proper authorization has not been given.

12. Additional Guidelines:

MPC retains the right to revoke, amend, or change the provisions of this Policy. The system administrator will establish more detailed guidelines, as needed, for specific computer systems and networks. These guidelines will cover such issues as allowing connect time and disk space, handling of e-mail mail that cannot be retrieved, assigning responsibility for account approval and other items related to administering the system.

Approved by the Monterey Peninsula College Governing Board

December 15, 1999

Appendix B

Monterey Peninsula College

Institutional Technology Committee

Electronic Mail Policy

1. Policy

1.1 Policy Statement:

Monterey Peninsula College (MPC) electronic mail services are a college communication system to support college functions.

1.2 Policy Objective:

The purpose of this Policy is to ensure that:

- A. The College community is informed about the applicability of policies and laws with regard to electronic mail;
- B. Electronic mail services are used in compliance with college policies, State and Federal laws;
- C. Users of electronic mail services are informed about how concepts of privacy and security apply to electronic mail;
- D. Disruptions to College electronic mail and other services and activities are minimized; and
- E. This policy includes all applications of the electronic mail services, including the "All Users" Distribution of messages.

1.3 Definitions: The following definitions apply in the policies, guidelines and codes of practice related to the use of the College's computing and networking facilities:

- 1.3.1 College Record: A College record in the form of electronic mail exists whenever such electronic mail is in support of College business, whether or not the equipment, software, or facilities used to create or store the electronic mail record are owned by the College.

- 1.3.2 Electronic Mail Services: Information technologies used to create, send, forward, receive, store, or print electronic mail.
- 1.3.3 Use of Electronic Mail Services: To create, send, forward, reply, copy, store, print, or possess electronic mail messages. For the purpose of this Policy, receipt of electronic mail is excluded from this definition to the extent that the electronic mail user does not have control over the e-mail received.
- 1.3.4 Possession of Electronic Mail: Regardless of who created the original message, (a copy of) electronic mail is in the possession of a user when that user has effective control over the location of its storage. Thus, an electronic mail message that resides on a computer server waiting to download to a user's computer is deemed, for purposes of this Policy, to be in the possession of that user. The terms *electronic mail* and *e-mail* are used interchangeably throughout this Policy.
- 1.4 Scope: This Policy applies to all electronic mail services provided by the College both on central and area facilities. This Policy also applies to all users and uses of such services and to all College records in the form of electronic mail in the possession of College employees or other users of electronic mail services provided by the College. This Policy does not apply to paper records, including printed copies of electronic mail.

2. Guidelines:

Monterey Peninsula College encourages staff to use electronic mail in order to further the vision, mission, and goals of the College. The College encourages the use of electronic mail to share information, to improve communication, and to exchange ideas.

- 2.1 Accountability: The Director of Information Systems is responsible for ensuring that the Electronic Mail Policy and associated Code of Practice are observed with regard to the electronic mail services under the control and management of the College. The Vice President for Administrative Services is responsible for administration of this policy. Questions concerning the appropriateness of administering this policy may be directed to the Superintendent/President.
- 2.2 **Personal Use: The College's electronic mail services are not to be used for personal purposes.**
- 2.3 Commercial, for-Profit Activities or Advertisements: Monterey Peninsula College's electronic mail services may not be used for personal business or personal gain. Advertising or sponsorship is not permitted, except where such advertising or sponsorship is clearly related to or supports the mission of the College or other services being provided.
- 2.4 Related Legislation, Policies, and Regulations:

Technology Use Policy

Ethical Principles

Ownership of Intellectual Property - College/Staff/Students

Copyright Material - Copying

Sexual Harassment and Grievance Procedures [Human Resources Policy and Procedures]

Equal Employment Opportunity Policy and Grievance Procedures [HR Policy and Procedures]

2.5 Responsible Administrator: The Vice President for Administrative Services is responsible for the overall control and administration of the College's Electronic Mail Policy.

2.6 Authority for Approving Amendments to the Policy and Code of Practice on Electronic Mail: Monterey Peninsula College's Board of Trustees is the authority for approving significant amendments to the College's policy and guidelines on Electronic Mail.

2.6.1 Inclusion of Policy Statement in Policy Manual: Once approved by the Board of Trustees, the policy statement, Electronic Mail Policy, will be included in the Monterey Peninsula College--General Policies and Procedures manual.

2.7 Effective Date: The policy on Electronic Mail will come into effect immediately upon being approved by the Board of Trustees.

2.8 Review of Policy: The policy on Electronic Mail will be reviewed periodically. Proposed changes to the policy will be presented to the Board of Trustees for approval.

3. Administrative Procedures:

3.1 Electronic Mail Accounts:

3.1.1 Accounts for electronic mail services are issued for a period of one year and are to be renewed annually for both centrally and area managed services.

3.1.2 In the case of staff, accounts are to be issued on receipt of the appropriate form requesting an account or its renewal, whether on paper or in electronic form. By this request and by using the account, the staff member agrees to be bound by this policy and the College policies on the use of Institutional Technology (IT) and the associated Codes of Practice.

3.1.3 In order to maintain an efficient and responsive e-mail system, e-mail users need to limit the number of messages they store. Once this e-mail policy is

adopted by the Board of Trustees, all e-mail messages more than 90 days old will be deleted from the e-mail server after a notice of intent is sent to all system users. Subsequently, a monthly process of deleting e-mail older than 90 days will be implemented by the College's Information Systems Department. The Information Systems Department will issue a reminder notice to all users on the system, every 30 days, reminding them to archive any old messages they would like to retain.

3.2 Authority for Approving Amendments to the Administrative Procedures on Electronic Mail Policy: The Board of Trustees is the authority for approving amendments to the administrative procedures of the College's policy on Electronic Mail.

4. E-Mail System Maintenance:

In order to minimize the potential of exceeding server system resource limitations, and to maintain maximum system efficiency, the Information Systems Department will delete all mail that has been stored on the server and for more than 90 days. This process will be repeated every 30 days, after appropriate notification is sent to all users.

Messages that have been stored for more than 90 days may be saved by system users in the following ways:

- 4.1 Hard Copies: Prior to deletion of the electronic copy, e-mail may be printed out in paper form and filed.
- 4.2 Electronic Copy--Save as Text File: The e-mail system users may save individual e-mail messages as text files, which may be stored on their local hard drives.
- 4.3 Electronic Copy – Manual Export/Import: The e-mail system users may export individual mail files, or entire folders, to a location on their local hard drive. When the user needs to access any of this exported mail, they may then import it back into their e-mail program.
- 4.4. Electronic Copy--Automatic Archive: The e-mail system users may select the Outlook software configuration option that allows them to program the client e-mail software to automatically archive an electronic copy of their mail at a location, and frequency, determined by the user. To access any of these archived messages, the users can import this archive file back into their e-mail system.
- 4.5. Electronic Copy – Manual Open Exported File: The e-mail system users may use Outlook software to open/close any of this exported mail, without the importing process.

Electronic Mail Code of Practice

1. General Procedures:

- 1.1 Code of Practice: This Code of Practice clarifies the applicability of law and other College policies to electronic mail. In general, use of College electronic mail services is governed by policies that apply to the use of all College computing and networking facilities and, in particular, by the guidelines of this Policy.
- 1.2 Purpose of E-mail Services: The College provides and encourages the use of electronic mail services by staff and others affiliated with the College in support of its mission of teaching and learning, research and community service.
- 1.3 College Property: College electronic mail services are College facilities; all College e-mail addresses are owned by the College; and all electronic mail, which is in support of College business, whether or not the equipment, software, or facilities used to create or store the electronic mail record are owned by the College, are College records.
- 1.4 College Records: Electronic mail, whether or not created or stored on College-owned equipment, may constitute a College record subject to disclosure under the Freedom of Information laws or as a result of litigation. However, prior to such disclosure, the College evaluates all requests for information submitted by the public for compliance with the provisions of the Act or other applicable law.
- 1.5 Service restriction: Use of College electronic mail services is a privilege that may be restricted by the College, without the prior consent of the user of such services, as per paragraph 4.0. The College reserves the right to designate those categories of user to whom it will provide access to electronic mail and may revoke access at any time to persons who misuse the services.
- 1.6 Storing and Viewing of Mail: In accepting access to electronic mail service, users consent to their electronic mail being stored as per paragraph 3.3 and viewed when necessary as per paragraph 4.3.
- 1.7 Privacy: The College may deny access to electronic mail services and may retrieve, inspect, monitor, or disclose electronic mail when appropriate as per paragraph 4.

2. Use of Electronic Mail Services:

- 2.1 Responsible Use: Those who use the electronic mail services are expected to do so responsibly, that is, to comply with state and federal laws, with policies and procedures

of the College, and with normal standards of professional and personal courtesy and conduct. The College cannot, in general, protect users from receiving electronic mail they may find offensive. Members of the College community are, therefore, strongly encouraged to use the same personal and professional courtesies and considerations in electronic mail as they would in other forms of communication.

- 2.2 Non-competition: College electronic mail services are provided, subject to the other provisions of this Policy, primarily for the use of College staff and are not to be provided in competition with commercial services to individuals or organizations outside the College.
- 2.3 Personal Use: College electronic mail services may not be used for personal purposes. Electronic mail is a College record. There is no expectation of privacy of the contents of any e-mail message.
- 2.4 Restrictions: Electronic mail services may not be used for unlawful activities, commercial purposes not under the auspices of the College, personal financial gain, or purposes that contravene other College policies or guidelines. The latter include, but are not limited to, policies and guidelines regarding sexual or other forms of harassment, religious or political activities or copyright.
- 2.5 Representation: When creating and sending e-mail, users of electronic mail services should take care not to give the impression that they are representing, giving opinions, or otherwise making statements on behalf of the College or any unit of the College unless appropriately authorized (explicitly or implicitly) to do so.
- 2.6 False Identity: College e-mail users shall not employ a false identity. E-mail is not a private form of communication and can be traced to the sender.
- 2.7 Interference: College e-mail services shall not be used for purposes that could reasonably be expected to cause, directly or indirectly, excessive strain on any computing or networking facility or unwarranted or unsolicited interference with others' use of e-mail. Such uses include but are not limited to:
 - A. "Chain letter," that is, to send or forward;
 - B. "Spam," that is, to exploit list-servers or similar broadcast systems for purposes beyond their intended scope to amplify the widespread distribution of unsolicited e-mail; and
 - C. "Letter-bomb," that is, to re-send the same e-mail repeatedly to one or more recipients to interfere with the recipient's use of e-mail.

2.8 Misuse: State and Federal law and College policy prohibit, in general, the theft or other abuse of information technology facilities or resources. Such prohibitions apply to electronic mail services, and include (but are not limited to): unauthorized entry, use, transfer, and tampering with the accounts and files of others; interference with the work of others and with other information technology resources or services. Under certain circumstances, the law contains provisions for felony offenses. Users of electronic mail are encouraged to familiarize themselves with these laws and policies.

3. Security and Confidentiality:

3.1 Precautionary measures: All users of the electronic mail services are required to take necessary precautions to protect the confidentiality of electronic mail or other records containing personal or confidential information encountered in the performance of their duties or otherwise. They should, therefore, utilize whatever means of protection, such as passwords, available to them to safeguard their e-mail. Since such means of protection are not necessarily foolproof, the security and confidentiality of electronic mail are not guaranteed.

3.2 Duties of System Administrators: Operators of College electronic mail services are required to establish procedures to provide for the physical security of electronic mail records, data, application programs, and system programs. Users should be aware that, on occasion, network and computer operations personnel and system administrators will, during the performance of their duties, see the contents of e-mail messages. Except as provided elsewhere in the Policy, such personnel are not permitted to do so intentionally or disclose or otherwise use what they have seen. One exception, however, is that of systems personnel (such as "postmasters") who may need to inspect e-mail when re-routing or disposing of otherwise undeliverable e-mail. This exception is limited to the least invasive level of inspection required to perform such duties.

3.3 Back-ups of Electronic mail: Users of electronic mail services should be aware that even though the sender and recipient have discarded their copies of an electronic mail record, there may be back-up copies of such e-mail that can be retrieved. Systems involved in the transmission and storage of e-mail records may be "backed-up" on a routine or occasional basis to protect system reliability and integrity and to prevent potential loss of data. The back-up process results in the copying of data onto storage media that may be retained for periods of time and in locations unknown to the originator or recipient of electronic mail. The practice and frequency of back-ups and the retention of back-up copies of e-mail vary from system to system. Electronic mail users are encouraged to request information on the back-up practices followed by the operators of College electronic mail services that they use, and such operators are required to provide such information upon request. Operators of electronic mail

services are not required by this Policy to retrieve e-mail from such back-up facilities upon request of authorized users although on occasion they may do so as a courtesy.

- 3.4 Archiving of Electronic Mail: The College does not maintain central or distributed electronic mail archives of all electronic mail sent or received, in part because of the difficulty of assuring that electronic mail can continue to be read in the face of changing formats and technologies and in part because of the changing nature of electronic mail systems. If electronic mail is backed up (see paragraph 3.3), the purposes are to assure system integrity and reliability, not archiving and retention, although back-ups may at times serve the latter purposes incidentally. Users of electronic mail services and those in possession of College records in the form of electronic mail are cautioned, therefore, to be prudent in their reliance on electronic mail for purposes of archiving and retention. Consideration should be given to printing electronic mail where archiving or retention becomes an issue for reasons of policy or sound business practice.

4. Inspection and Monitoring of Electronic Mail:

- 4.1 Privacy: E-Mail is not a private or confidential communication system. Users should know that they cannot expect messages to be kept private.
- 4.2 Consent and Compliance: The college retains the right to inspect E-Mail messages for conformity with College policies.

5. Policy Violations:

Violations of College policies governing the use of College electronic mail services may result in restriction of access to College information technology resources in addition to any disciplinary action that may be applicable under other College policies, guidelines, implementing procedures, or collective bargaining agreements, up to and including dismissal.

6. Responsible Administrator:

The Vice President for Administrative Services is responsible for the control and administration of the policy and Code of Practice. Concerns related to the administration of this policy are to be directed to the Superintendent/President.

7. College/Area Responsibilities:

- 7.1 College Procedures: It is the responsibility of each college administrative area to develop, maintain, and publish specific procedures and practices that implement this Policy and to communicate their provisions to users of college administrative area electronic mail services. Such guidelines should include:

- A. Authorization and notification;
 - B. Response to requests for information concerning the backup of electronic mail;
and
 - C. Any other provisions of this Policy for which procedures are not explicitly stated.
- 7.2 Termination of Affiliation: When an individual's affiliation with the college is terminated, the college may elect to: terminate the individual's e-mail account, redirect electronic mail, or continue the account. The Office of the President/Superintendent will establish regulations and procedures governing policies in this regard that conform to the provisions of this Code of Practice.

Approved by the Monterey Peninsula College Governing Board

December 15, 1999

Appendix C

Monterey Peninsula College Institutional Technology Committee

COMPUTER AND NETWORK USE POLICY (proposed 8/4/2009)

BP 3720 Computer and Network Use

Reference:

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

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

See Administrative Procedures [BP 3720].

Revised 08/06

COMPUTER AND NETWORK USAGE ADMINISTRATIVE REGULATION

Monterey Peninsula College Computer and Network Use, AP 3720

September 10, 2009

(Adapted from: Liebert and Cassidy, AP 3720 Computer and Network Use, Revised 9/05, 08/06, 02/07)

COMPUTER AND NETWORK USAGE ADMINISTRATIVE REGULATION

I. SCOPE AND APPLICABILITY

A. Introduction

Monterey Peninsula Community College District (MPC) owns and operates a variety of computer systems and resources for use by its students, faculty, and staff. MPC encourages the use of its computer systems for education, academic development, public service, communications, and College business. All users of MPC's computing resources must read, understand, and comply with the terms outlined in this Policy, as well as any additional guidelines established by the administrator of the system. *By using any of these systems, users agree that they will comply with these policies.* Users understand and agree that MPC's role in managing these systems is only as an information carrier and that they will never consider transmission through these systems as an endorsement of said transmission by MPC.

B. College System

The College Computer and Network systems are the sole property of *Monterey Peninsula Community College District*. They may not be used by any person without the proper authorization of the District. The Computer and Network systems, including electronic mail (e-mail), network use, online courses, Internet use, and College websites, are for District instructional and work related purposes. MPC reserves all rights, including termination of service without notice, to the computing resources it owns and operates. These procedures shall not be construed as a waiver of any rights of MPC, nor shall they conflict with applicable law.

C. Applicability

1. This regulation applies to all District students, faculty and staff and to others granted use of District information resources. Users who are accessing Monterey Peninsula College electronic information resources from off-campus (for example, distance education students, remote connectivity, and WebMail) are responsible for obeying this regulation. This regulation refers to all District information resources whether individually controlled or shared, stand-alone or networked. It applies to all computer and computer communication facilities owned, leased, operated, or contracted by the College. This includes personal computers, workstations, wireless networks, mainframes, associated peripherals, software and information resources, regardless of whether used for administration, research, teaching or other purposes.
2. **Conditions of Use.** Individual units, such as labs and classrooms, within the College may define additional conditions of use for information resources under their control. These statements must be consistent with this overall regulation but may provide additional detail, guidelines and/or restrictions
3. **Legal Process.** This procedure exists within the framework of the College Board Policy and State and Federal laws. A user of College information resources who is found to have violated any of these policies may be subject to disciplinary action up to and including but not limited to loss of information resources privileges; disciplinary suspension or termination from employment or expulsion; and/or civil or criminal legal action.

II. GENERAL POLICIES

A. Copyrights and Licenses

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

1. Copying - Software protected by copyright may not be copied except as expressly permitted by the owner of the copyright or otherwise permitted by copyright law. Protected software may not be copied into, from, or by any College facility or system, except pursuant to a valid license or as otherwise permitted by copyright law. Number of Simultaneous Users - The number and distribution of copies must be handled in such a way that the number of simultaneous users in a department does not exceed the number of original copies purchased by that department, unless otherwise stipulated in the purchase contract.
2. Copyrights - In addition to software, all other copyrighted information (text, images, icons, video, music, other audio files, programs, etc.) retrieved from computer or network resources must be used in conformance with applicable copyright and other law. Copied material must be properly attributed.
3. Plagiarism of computer information is prohibited in the same way that plagiarism of any other protected work is prohibited.
4. Downloading of music and video files is only permitted when 1) the material is for academic use or college business, and 2) if express permission of the owner of the material can be demonstrated or if it fits into the category of "Fair Use." MPC has an agreement with the **American Society of Composers, Authors and Publishers (ASCAP)** and Broadcast Music, Inc. (BMI) to pay for use of copyrighted media.
5. Peer-to-peer applications used for the purpose of downloading copyrighted media illegally are prohibited from campus computers and guest computers that may connect to the MPC network.

B. Integrity of Information Resources.

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

1. Modification or Removal of Equipment - Computer users must not attempt to modify or remove computer equipment, software, or peripherals that are owned or housed by Monterey Peninsula College without authorization from systems administrators (Information Technology Network Support) at Monterey Peninsula College.
2. Unauthorized Use - Computer users must not interfere with others' access and use of College computers. This may include but is not limited to: deliberately running programs that intentionally damage or slow down the College network; unauthorized modification of system setups, operating systems, or disk partitions; attempt to crash or tie up a College computer or network; non-instructional/College business use of Internet radio, video, or audio communications; and damaging or vandalizing College computing facilities, equipment, software or computer files.

3. Unauthorized Programs - Computer users must not intentionally develop or use programs which disrupt other computer users or which access private or restricted portions of the system or network, or which damage the software or hardware components of the system. Computer users must ensure that they do not use programs or utilities which interfere with other computer users or that modify normally protected or restricted portions of the system or user accounts. The use of any unauthorized or destructive program will result in disciplinary action as provided in this procedure, and may further lead to civil or criminal legal proceedings. Unauthorized programs include the use of peer-to-peer file sharing applications for purposes of bypassing copyright law and other personal software.

C. Unauthorized Access.

Access and privileges on MPC's computing systems are assigned and managed by the administrator of the specific system. Computer users must not seek to gain unauthorized access to information resources and must not assist any other persons to gain unauthorized access.

1. Abuse of Computing Privileges – When using College information resources, users must not access computers, computer software, computer data or information, or networks without proper authorization, or intentionally enable others to do so, regardless of whether the computer, software, data, information, or network in question is owned by the College. For example, abuse of the networks to which the College belongs or the computers at other sites connected to those networks will be treated as an abuse of College computing privileges.
2. Reporting Problems - Any irregularities discovered in user accounts or system security must be reported promptly to Information Technology Network Support so that steps can be taken to investigate and solve the problem.
3. Password Protection - A computer user who has been authorized to use a password-protected account may be subject to both civil and criminal liability if the user discloses the password or otherwise makes the account available to others without permission of the user's supervising administrator and notification to the Dean of Information Technology and Media Services. Disclosure includes leaving a password-protected site open while away from the computer so that others have the opportunity to access password-protected data without authorization to do so.

D. Usage.

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

1. Messages and Images - Users may not use electronic communication facilities to send or intentionally access fraudulent, harassing, obscene, threatening, or other messages or material that violate applicable federal or state or other law

or District policy.-College policies prohibit the unauthorized release of confidential information.

2. Information Belonging to Others - Users must not intentionally seek or provide information on, obtain copies of, or modify data files, programs, or passwords belonging to other users, without the permission of those other users.
3. Rights of Individuals - Users must not release any individual's (student, faculty, and staff) personal information to anyone without proper authorization.
4. User identification - Users of College information resources shall not send communications or messages anonymously or without accurately identifying the originating account or station.

E. Political, Personal and Commercial Use

The District is a non-profit, tax-exempt organization and, as such, is subject to specific federal, state and local laws regarding sources of income, political activities, use of public property and similar matters.

1. Political Use - District information resources must not be used for partisan political activities where prohibited by federal, state or other applicable laws.
2. Personal Use - District information resources may be used for incidental personal purposes provided that no students are waiting to access computers or networks for academic work.
3. Commercial Use - District information resources shall not be used for non-college commercial purposes.

F. Nondiscrimination.

All users have the right to be free from any conduct connected with the use of *Monterey Peninsula College* network and computer resources which discriminates against any person on the basis of *Board Policy #5100 on nondiscrimination*.

G. Disclosure

1. No Expectation of Privacy - The College reserves the right to monitor all use of the College network and computer resources to assure compliance with these policies. Users should be aware that they have no expectation of privacy in the use of the College network and computer resources. The College will exercise this right only for legitimate College purposes, including but not limited to ensuring compliance with this procedure and the integrity and security of the system. Screening of system-wide incoming electronic information solely for the purpose of system security, i.e., virus protection, may be performed as needed.
2. Possibility of Disclosure - Users must be aware of the possibility of unintended disclosure of communications.

3. Retrieval - It is possible for information entered on or transmitted via computer and communications systems to be retrieved, even if a user has deleted such information.
4. Public Records - The California Public Records Act (Government Code Sections 6250 *et seq.*) includes computer transmissions in the definition of “public record” and nonexempt communications made on the District network and computer must be disclosed if requested by a member of the public.
5. Litigation - Computer transmissions and electronically stored information may be discoverable in litigation.

III. ELECTRONIC MAIL POLICIES

- A. Monterey Peninsula College encourages students, faculty, and staff to use electronic mail (e-mail) in order to further the vision, mission, and goals of the College.
- B. All Section III. GENERAL POLICIES as listed above, items A. through G. apply equally to the use of MPC e-mail and also:
 1. Those who use MPC e-mail services are expected to do so responsibly and to comply with state and federal laws, with the policies and procedures of the College, and with normal standards of professional and personal courtesy and conduct.
 2. In order to maintain an efficient and responsive e-mail system, e-mail users need to limit the number of messages they store and staff may regularly archive messages they want to keep.
 3. When an individual’s affiliation with the College is terminated, the College may elect to: terminate the individual’s e-mail account, redirect electronic mail, or continue the account.

IIIV. DISSEMINATION AND USER ACKNOWLEDGMENT

- A. All users shall be provided copies of these procedures and be directed to familiarize themselves with them.
 1. Computer, Network Use, and E-Mail Agreement (Legal notice posted for network access)

Monterey Peninsula College Computer, Network Use, and E-Mail Agreement

The College Computer and Network systems are the sole property of Monterey Peninsula Community College District. They may not be used by any person without the proper authorization of the District. The Computer and Network systems including e-mail, network use, online courses, Internet use, and College websites, are for District instructional and work related purposes.

Computer users must respect copyrights and licenses for software, music,

video and other online information. Users must respect the integrity of computer-based information resources. Users must not seek to gain unauthorized access to information resources and must not assist any other persons to gain unauthorized access. Users must respect the rights of other computer users. Users should be aware that they have no expectation of privacy in the use of the College network and computer resources. Attempts to circumvent these mechanisms in order to gain unauthorized access to the system or to another person's information are a violation of District procedure and may violate applicable law. District information resources should not be used for non-college commercial or political purposes.

As a condition of using MPC information resources, I agree to abide by the standards set in the MPC Computer and Network Policy for the duration of my employment, enrollment, or guest access. I am aware that violations of this Computer and Network Usage Procedure may subject me to disciplinary action, including but not limited to revocation of my network account up to and including prosecution for violation of State and/or Federal law, disciplinary suspension or termination from employment or expulsion, and/or civil or criminal legal action.

*I have read and I agree to abide by this policy. **OK***

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

Appendix D

Family Educational Rights and Privacy (FERPA)

The Family Educational Rights and Privacy Act (FERPA) (20 U.S.C. § 1232g; 34 CFR Part 99) is a Federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education.

FERPA gives parents certain rights with respect to their children's education records. These rights transfer to the student when he or she reaches the age of 18 or attends a school beyond the high school level. Students to whom the rights have transferred are "eligible students."

- Parents or eligible students have the right to inspect and review the student's education records maintained by the school. Schools are not required to provide copies of records unless, for reasons such as great distance, it is impossible for parents or eligible students to review the records. Schools may charge a fee for copies.
- Parents or eligible students have the right to request that a school correct records which they believe to be inaccurate or misleading. If the school decides not to amend the record, the parent or eligible student then has the right to a formal hearing. After the hearing, if the school still decides not to amend the record, the parent or eligible student has the right to place a statement with the record setting forth his or her view about the contested information.
- Generally, schools must have written permission from the parent or eligible student in order to release any information from a student's education record. However, FERPA allows schools to disclose those records, without consent, to the following parties or under the following conditions (34 CFR § 99.31):
 - School officials with legitimate educational interest;
 - Other schools to which the student is transferring;
 - Specified officials for audit or evaluation purposes;
 - Appropriate parties in connection with financial aid to a student;
 - Organizations conducting certain studies for or on behalf of the school;
 - Accrediting organizations;
 - To comply with a judicial order or lawfully issued subpoena;
 - Appropriate officials in cases of health and safety emergencies; and

- State and local authorities, within a juvenile justice system, pursuant to specific State law.

Schools may disclose, without consent, “directory” information such as a student’s name, address, telephone number, date and place of birth, honors and awards, and dates of attendance. However, schools must tell parents and eligible students about directory information and allow parents and eligible students a reasonable amount of time to request that the school not disclose directory information about them. Schools must notify parents and eligible students annually of their rights under FERPA. The actual means of notification (special letter, inclusion in a PTA bulletin, student handbook, or newspaper article) is left to the discretion of each school.

FERPA gives colleges the right to disclose information from a student’s education record to school officials with legitimate educational interest.

- Members of the teaching faculty of Monterey Peninsula College (MPC) are school officials with legitimate educational interest in portions of the educational records of students enrolled in their classes.
- Counselors and/or academic advisors at MPC are school officials with legitimate educational interest in the education records of students whom they counsel and advise.
- Academic administrators and support staff at MPC are school officials who may have legitimate educational interest in portions of the educational records of students depending on their scope of responsibilities and work assignments.
- It is the responsibility of every school official at MPC with access to student records to carefully protect the privacy of those records. In particular, they may not share information from student records with third parties who are not themselves school officials with legitimate education interest in those records. School officials must log out of the student records system before leaving a computer, even for a short while, and passwords may never be given out to students or staff not authorized to view the records.
- MPC and its school officials must take every precaution to safeguard student records from theft, loss, or unauthorized access or dissemination by any means, including electronic media.

- MPC has the obligation to ensure that all of its school officials with access to the education records of students are made aware of their obligations to protect the privacy of these records

Appendix E

Data Security Best Practices

- If you need to write down your passwords, keep them with you. Do not put a yellow sticky with login and password on your screen or under your keyboard.
- Do not share your login and password with anyone. Data that is added or changed can be traced to you.
- Passwords are currently required to be at least 6 characters in length and should include at least one number and at least two letters. They are case sensitive. Good passwords should include both upper and lower case.
- Be sure to change your initial password when you login for the first time. It is good practice to change your password every couple of months. This does not apply to the computers with generic logins.
- Do not leave your computer unattended without first logging off.
- Printed confidential data (SSN, address, phone, grade) needs to be shredded and not simply recycled. If you are not sure, then shred.
- Do not leave confidential data on a printer or FAX. Pick it up as soon as it prints.
- If you have downloaded confidential data to a networked, shared drive, copy to your own hard drive and delete immediately from the shared drive.
- Email may also contain confidential data or attachments. Treat accordingly.
- Use student or staff ID and not SSN whenever possible.
- Never divulge student or staff information outside the scope of your job responsibility. Check with A&R or HR for appropriate use policy.
- Data that you view is confidential and should not be used for personal reasons.
- Remember, public perception of student and staff data confidentially is important.

Appendix F

Monterey Peninsula College College Technology Committee

Classroom Technology Equipment Refreshment Guidelines

November 28, 2005 (updated 12-1-2008)

Guiding Premises:

- Students consider up-to-date classroom equipment in good working order a classroom necessity.
- Faculty members want each classroom to function at an optimal level at all times.
- Standardize equipment when possible while recognizing different needs.
- Reduce number of computers where possible by consolidating computer labs.
- Replace individual ink jet printers (@ 30 cents/page) with networked printers (@ 1-5 cents/page)

Priorities:

1st: Campus networking infrastructure including servers, networked printers, and the telephone system;

2nd: Instructional labs, classrooms, library student stations (this includes computers for campus technicians, Staff Development Lab, and also includes “power users”* as designated by divisions as well as all online course instructors);

3rd: Desktop/office computers.

Consensus Items:

1. Classroom equipment needs to be refreshed at different rates depending on a) sophistication of use and b) average life of equipment item.
 - a. Computers – average of 3-4 years; VCR/DVD combos & document cameras – average of 8 years; projectors - average of 5 years;
 - b. USB hubs, and hook-up for laptops need to be in all classrooms;
 - c. When possible, accelerate replacement of labs;
2. There should be no cascading into multimedia classrooms as new equipment is always required, however, equipment may be cascaded out of the classrooms;
3. One rolling cart must be available in A/V for emergencies, and/or; maintain a small pool of older, workable, computers and projectors as emergency replacements;
4. Document cameras must be in all classrooms and overhead projectors will be moved to A/V for storage unless they are actively being used in a classroom; Wall mounted television sets are being removed from almost all classrooms but are still available if requested by faculty and can be rolled in on a per needed basis.

5. Standardize on one or two projectors so that operations, maintenance, and replacement lamps are standardized as much as possible;
6. Classroom equipment purchased from any account must be considered “college” equipment for purposes of utilization, subject to the requirements of equipment purchased with categorical funds;
7. Continue using MPC’s implementation of technology TCO process;
8. Consolidate equipment purchases for economy of scale, typically twice/year;
9. Exchange an old PC (or printer) for a new PC – cannot keep the old PC (or printer);
10. Consolidate laboratories and general use computers if programmatically appropriate for ease of support;
11. Add specialized software to LTC computers for student access, with legal licensing and by arrangement with LTC personnel;
12. Specialized instructional software upgrades are not a part of the funding for the technology refreshment process but should be addressed in the Action Plan;
13. Increase security measures for all classrooms with priority given to classrooms opening to the outside – i.e., keypads.
14. LCD projector bulb replacement is handled by Media Services and standard replacement lamps are purchased for replacement purposes by Media Services as funds are available.

* Power users are those instructors/developers who use video editing software, animation software, image editing software, music composition software, etc. or are online course instructors/developers.

Appendix G

Institutional Goals, 2007 – 2010

December, 2007

Monterey Peninsula College is committed to promoting Academic Excellence and Enrollment Growth based on the following Institutional Goals.

1. Promote academic excellence and critical thinking across all areas and disciplines.

Objectives:

1. Support faculty and staff development for effective teaching, learning, and service delivery
2. Expand distance education by providing leadership, technical assistance, services, training opportunities, exploring partnerships, and designing quality control mechanisms
3. Articulate the meaning, value, and use of SLOs (Student Learning Outcomes) at MPC

1. Promote academic excellence and critical thinking across all areas and disciplines.

Objectives:

1. Support faculty and staff development for effective teaching, learning, and service delivery
2. Expand distance education by providing leadership, technical assistance, services, training opportunities, exploring partnerships, and designing quality control mechanisms
3. Articulate the meaning, value, and use of SLOs (Student Learning Outcomes) at MPC.

2. Foster a climate that promotes diversity throughout the institution.

Objectives:

1. Actively seek and enhance diversity in all college programs, curricula, extracurricula, outreach and community events, and in the college population, students, employees and Board of Trustees
2. Recruit and retain a diverse college-wide community

3. Grow enrollment and build MPC into an economic driving force for the Monterey area by supporting and developing programs that teach employable skills.

Objectives:

1. Improve the college's financial stability by diversifying the college's revenue sources and increasing enrollment
2. Establish and strengthen industry, government, and community partnerships

3. Establish and strengthen partnerships with high schools and transfer institutions
4. Develop an integrated, effective district- wide marketing strategy for continuing programs, new programs and services

4. Create pathways to success that address the diverse, holistic needs of all MPC students.

Objectives:

1. Identify barriers that prevent students from achieving their goals
2. Increase collaboration between Student Services and Academic Affairs to provide systems and programs that better assist students
3. Improve the delivery of academic support for diverse student learners

5. Provide educational programs and services in Seaside and Marina that meet community needs.

Objectives:

1. Develop class and service delivery schedules based on assessment and analysis of community needs
2. Provide support services that are sufficient in quantity, currency, depth, and variety to facilitate educational offerings

6. Ensure adequate levels of personnel to support current programs and establish priorities for future growth.

Objectives:

1. Provide adequate levels of well-trained support personnel to meet the needs of learning, teaching, college-wide communications, research and operational Systems
2. Attract and retain the best-qualified employees by continuing to increase compensation for full and part-time staff and faculty

7. Maintain and improve district facilities.

Objectives:

1. Create safe, attractive, functional facilities through the allocation of bond funds
2. Provide a stable and secure technical environment for the entire institution

Approved December 18 2007 College Council

Approved Governing Board (1st reading January 22, 2nd reading February 26, 2008)

Appendix H

Pandemic Response Plan for Information Technology and Media Services

The purpose of this plan is for Information Technology to be able to quickly respond to a campus emergency, such as a pandemic, in order to provide remote access to critical systems for pre-identified staff.

Information Technology staff can support most campus servers remotely and back-ups are automatically made every 15 minutes to disk or as needed. Tape back-ups are made monthly and could be delayed if needed.

The exception to this is the HP3000 (Santa Rosa Student Records System) for which there is no remote access available. The HP3000 must be backed-up and maintained by staff on-site. The HP3000, however, can remain operational for long periods of time without maintenance, although back-ups are critical for WebReg, CCCApply, and other applicable data entries.

In the event that the campus is closed down, the following services will be available to some or all personnel:

MPC Webmail:

Available to all faculty, staff and students.

MPC Website: *Documents can be posted to an individual's MySite or to a department site for at-home access. Or, you can bring home any documents you need to work on by using a flash stick (thumb drive, jump stick) or by e-mailing them to yourself and downloading them via webmail at home.*

Available to all faculty, staff and students.

iLearn (*Online Course Management System*) *The server and back-ups are managed by CSUMB, so support is subject to their availability. Technical support is handled through e-mail or to Bruce's office phone and his voicemail also gives his cell number.*

Available to all enrolled online students and instructors.

WebReg:

Available to all with data sent to the SR Student Records System. *(See back-up constraints above.)*

CCCApply:

Available to all with data sent to the SR Student Records System. *(See back-up constraints above.)*

CCCConfer: at <http://www.cccconfer.org/index3.aspx> *(hosted by the Chancellor's Office):*

For online conferencing or meetings and available to any faculty or staff with Internet connection at home, via the Web. No cost to community colleges.

Redirected telephone calls: *IT will maintain a list of home or cell phones to which we will re-direct the applicable office phone. (This will take approximately ½ hour total to complete the re-direct.) Any staff person can do their own re-direct in three steps at their office telephone or IT can do it off of their list either while here on campus or remotely.*

President's Office

President

PIO Director

Fiscal

Controller

Accounting Specialist

Payroll Analyst

Purchasing Agent

HR – none

Academic Affairs

VP Academia Affairs

Dean, Instruction

Dean, Economic Development

Division/Office Manager Ed Center, Marina

Administrative Service

VP Administrative Services

Media Services

Instructional Technology Specialist

Student Services

Dean, Student Services

Registrar

Director, Student Financial Services

Remote Desktop Access: *Requires home access to the Internet, also requires that the office computer is turned on (IT will disable automatic shut-down). In the event of a power outage, IT will send someone to the college if possible and turn back on the needed computers. NOTE: The Marina laptops will be brought in to the main campus at first notice of an evacuation, then, re-imaged with either "remote desktop access" as well as the Office Suite and with the directions on the desktop for accessing remotely from home. They will be given out to the pre-selected staff to take home for the duration of the emergency. (This will take approximately 3 hours, including travel to and from Marina.) If the campus is announced to become closed during non-working hours, one IT person will go to Marina and re-image the laptops at the Marina site and they can be picked up there.*

Fiscal

Controller

Accounting Specialist

Payroll Analyst

Purchasing Agent

HR

Associate Dean Human Resources

Administrative Services

VP Administrative Services

Academic Affairs

VP Academia Affairs

Dean, Instruction

Dean, Economic Development

Student Services

Registrar

Director, Student Financial Services

Appendix I

Printers Available for Student Use

as of July 9, 2009 (not complete)

Room #	# Printers	Class or Public Use	Fee?	Other
HU 109	1	Class use	No fee	
ESSC LTC-120	2	Class use		
ESSC LTC-150	1	Class use	\$.50/page	color
ESSC LTC-136	1	Class use		
MT-4	1	Class use	No charge but must bring own paper	
LTC 2 nd floor	2	Public use	\$.15/page	
LTC 3 rd floor	1	Public use	\$.15/page	
LTC 203	1	Class use	No fee	
LTC 204	1	Class use	No fee	
LTC 216	1	Class use	No fee	
GA 103	3	Class use	No fee	color
LS 101	1	Class use	No fee	
LS 103	1	Student drop-in	No fee	
LS 104	1	Class use	No fee	
LS 105	1	Class use	No fee	
LS 202	1	Class use	No fee	
LS 206	1	Class use	No fee	
BC 202	1	Class and drop-in	No fee (CSIS students are asked to bring in a ream of paper if it isn't a financial burden)	color
BC 204	2	Class use	Students are required to bring a ream of paper	1 color
BC 208	1	Class and drop-in	No fee	
PS 105		Class use	No fee	
PS 106		Class use	No fee	
PS 205		Class and drop-in	No fee	

Appendix J

Technology Refreshment Plan for 2008-2009

The purpose of the technology refreshment fund is to replace on a regular basis institutional technology and those computers used for instructional purposes in classrooms and student labs. If the cycle of replacement meets the ideal goal of every three years, ample computers can then be cascaded to staff. In years when there are not enough cascaded computers to satisfy staff needs, the burden falls back on the Division/Departments to purchase new computers for staff as needed.

NEED: The greatest need for refreshment this year is the replacement of old servers around campus and old, slow computers in the LTC building to include all three floors but not 203/204 or 216 which received new computers in 6/2008. Additional needs include the 16 Macs in the LS 207 lab, 9 smart classroom computers, and some miscellaneous items. There are additional needs not addressed here.

PROBLEMS: After replacing many of the LTC computers and Nursing computers and the purchase of RAM (\$964.99) for the old Nursing computers **only a few of these can be cascaded to staff since all others are outdated and slower than present staff computers.**

BUDGET: For 2008-09, \$250,000 was allocated for refreshment. Of that amount, \$69,321 has been spent for the replacement of numerous campus servers directly or indirectly serving students' needs. This leaves \$180,679 for PCs, etc. Presently the cost to replace 1 Dell computer with 4G RAM (mouse/keyboard/ no monitor) is approximately \$767, laptops are \$1,500.

PLAN: This is the list (in no order) of areas that greatly need computers, etc. There are other areas such as PS that need lab computers as well.

Location	# in need of replacement	# to replace	proj/printer/pad
Library (2 nd & 3 rd floors, LTC)	139	78 (60%)	
ESL classroom	37	37	
ESL open lab	23	13 (60%)	
ESSC classroom	31	31	
ESSC open lab	80	48 (60%)	
LS 207	12 laptops	0 (cancelled for additional PCs)	
PS 201	1	1	
PS 107	1	1	
PS 106	1	1	1 Wacom
pad			
BC 101	1	1	
HU 106	1	1	
HU 203	1	1	
BH 106	1	1	
HU 204	1	1	1
projector			
HU 205	1	1	
GA 103	0	0	1 printer
CAD Lab			(hard
drives)			
RAM for Nursing computers			(with servers)
COST	\$262,673	\$165,612	\$4,000

This will give us a cushion of \$11,068 for the remainder of the year.

Appendix K

Focus group – Website – write-up

A focus group was conducted on May 20, 2009 to better understand students' experiences with the MPC website. Students, primarily from the Life Science division, were invited to participate. Three students participated, all of whom were studying towards careers in health sciences fields.

The focus group was organized by Gail Fail, chair of the Life Science division, and it was moderated by Rosaleen Ryan, director of institutional research. The focus group was also attended by Sharon Colton, Dean of Technology, and Kim Panis, Network Engineer. Sharon Colton acted as an "observer" and Kim Panis served as a technology resource for the session.

After introductions and an "ice breaker" question, the moderator asked a similar set of questions (questions shown below) about each of the following areas of the MPC website: (a) public website, (b) MyMPC portal, (c) MySite, (d) ClassSite, and (e) MPC email.

As each of the areas of the MPC website was addressed, Kim Panis displayed the website area on a large screen for the focus group participants to see.

The following questions were asked about each area of the MPC website:

- ~ Show of hands of students who use that area
- ~ How often do you use that area/ log on?
- ~ What areas do you use? (public website only)
- ~ How or why do you use the _____ site/portal/area?
- ~ What aspects or features of the _____ do you like? What works well?
- ~ What aspects could be improved? Please be specific.
- ~ Does your instructor use ClassSite?
 - ~ In what other ways would you like your instructor to use ClassSite?
- ~ Does your instructor require you to use your mpc.edu email address?
- ~ What suggestions do you have for introducing and training students to use the MPC portal and email?

Due to the limited number of participants and the homogeneity of the group, the responses were limited in nature. The responses are summarized on the next page.

Comments about MPC website and logging in

- ~ Navigation is confusing and difficult
- ~ The different areas of the website (MyMPC portal, MySite, etc.) are confusing; students were not aware of the difference between the different areas
- ~ Most instructors do not use the ClassSite; students were not aware of this area of the webpage
- ~ Multiple log-ins are annoying
 - ~ Do not like logging in so much to teacher's web page
 - ~ Prefer to use instructor's site on mpcfaculty.net; it's much easier to access and doesn't require multiple log-ins
- ~ Directions on how to log in are confusing; there should be additional or clearer instructions for students
- ~ There should be a big button at the top of the MPC webpage that says something like "Student log in" so that it's really easy for students to find

Comments about MPC email

- ~ Do not need another email address
- ~ Prefer using the yahoo/hotmail email address I already have
- ~ Would use mpc.edu email address if it was required or there was some type of incentive to do so

Appendix L

Smart Classroom Inventory – Presentation Equipment & Student Computers September 2009

Room	Total #	Computer(podium)	Projector(s)	Doc Camera(s)	Other (DVD, VCR, Speakers, etc.)
AC-109	NONE	NONE	NONE	NONE	NONE
AC-112	NONE	NONE	NONE	NONE	NONE
AC-114	NONE	NONE	NONE	NONE	NONE
AC-117	NONE	NONE	NONE	NONE	NONE
AD-101	NONE	NONE	NONE	NONE	NONE
AD 102-lab	20	DELL DIMENSION 9150	DELL 4650	NONE	VCR
AD 103-lab	17	DELL DIMENSION	EPSON 821	ELMO HV 3000XG	DVD/VCR
AD-104	None	None	None	None	Weaving Room
AD-107	NONE	NONE	Epson 821	NONE	VCR/DVD Jewelry lab
AS 101	1	APPLE I-MAC G-5	EPSON 6100	ELMO HV 3000XG	DVD/VCR
AS-104	NONE	NONE	NONE	NONE	NONE
AS-106	NONE	NONE	NONE	NONE	NONE
AT 101	5	MAC book	EPSON 822 on a cart	NONE	NONE
AT 103	1	Dell DEMENSION 5100C laptop	EPSON 821	Dukane ZB 10A	DVD/VCR
BC 101	1	DELL 9150	SHARP PG45X	ELMO HV 3000XG	DVD/VCR
BC 107	10+1	DELL 9150	EPSON 821	ELMO HV 3000XG	DVD/VCR * There are 10 laptops in a locked cabinet
BC-201	10+1	Dell 9150	Epson 6100	Elmo p-10	DVD/VCR * There are 10 laptops in a locked cabinet
BC 202-lab	27	DELL OPTIPLEX 755	(2) EPSON 821	NONE	ELECTRONIC WHITEBOARD
BC 204-lab	41+7	DELL OPTIPLEX 755	SHARP 235	NONE	NONE
BC -207	1	DELL OPTIPLEX	EPSON 821	ELMO 3000XG	DVD/VCR

		755			
BC-208 LAB	27+2	DELL OPTIPLEX 755	EPSON 821	NONE	NONE
BH 106	1	DELL OPTIPLEX 755	Epson 822	Elmo HV 3000XG	DVD/VCR
BH 107	1	Dell Dimension 9150	Epson 821	Elmo HV 3000XG	DVD/VCR + 32" TV
BH 108	1	Dell Dimension 5150C	Epson 821	Elmo HV3000XG	DVD/VCR
COLD 101	1	Dell Optiplex 760	Panasonic PT-F300	Elmo p10	DVD/VCR-Pixie
COLD 103	1	Dell Optiplex 760	Panasonic PT-F300	Elmo p10	DVD/VCR-Pixie
COLD 104	1	Dell Optiplex 760	Panasonic PT-F300	Elmo p10	DVD/VCR-Pixie
COLD 106	1	Dell Optiplex 760	Panasonic PT-F300	Elmo p10	DVD/VCR-Pixie
COLD 119	1	Dell Optiplex 760	Panasonic PT-F300	Elmo p10	DVD/VCR-Pixie
COLD 201	NONE	NONE	TBD	NONE	TBD (LARGE MULTI-PURPOSE ROOM)
COLD 206	1	Dell Optiplex 760	Panasonic PT-F300	Elmo p10	DVD/VCR-Pixie
FACS 104	NONE	NONE	NONE	NONE	VCR and 37 in Plasma TV
FACS 106	1	Dimension 8300	Epson 765C	Dukane	VCR
FTC-114	NONE	NONE	NONE	NONE	NONE (Fitness Center Classroom)
GA 101-lab	28	IMAC G-5	EPSON 821	None	None
GA102-lab	9	IMAC G-5	NONE	NONE	NONE
GA 103-lab	24+1	DELL PRECISION 380	EPSON 821	ELMO HV 3000XG	DVD/VCR 2 plotters, 2 printers 2 scanners.
HU-101	1	Dell Dimension 9150	Epson 821 p	Elmo HV3000XG	DVD/VCR
HU 102	1	Dell Dimension 9150	Epson 821 p	Elmo HV3000XG	DVD/VCR
HU 105	1	Dell Dimension 9150	Epson 84	Elmo HV3000XG	DVD/VCR

HU 106	1	Dell Optiplex 755	Epson 822 p	Elmo HV3000XG	DVD/VCR
HU 109-lab	49 +1	Dimension 9150, (1) 8300	NONE	NONE	NONE
HU 201	1	Dell Dimension 9150	Epson 821	Elmo HV3000XG	DVD/VCR
HU 202	1	Dell Dimension 9150	Epson 821 p	Elmo HV3000XG	DVD/VCR
HU 203	1	Dell Optiplex 755	Epson 822 p	Elmo HV3000XG	DVD/VCR
HU 204	1	Dell Optiplex 755	EPSON 84	Elmo HV3000XG	DVD/VCR
HU 205	1	Dell Optiplex 755	Epson EMP 821	Elmo HV3000XG	DVD/VCR
HU 206	1	Dimension 9150	Epson 822 p	ELMO HV-3000XG	DVD/VCR
IC 101	1	DELL OPTIPLEX 755	EPSON EMP 821	ELMO P10	DVD/VCR
IC 102	1	DELL DIMENSION 9150	EPSON 821 EPSON 821p EPSON 821p	SAMSING #SDP 950DXAN	2-3M OVERHEAD PROJECTER
IC-103	NONE	NONE	NONE	NONE	NONE
IC-104	NONE	NONE	NONE	NONE	NONE
IC-106	NONE	NONE	NONE	NONE	NONE
IC 201	1	DELL DIMENSION 9150	SHARP P-10	NONE	NONE
IC 204	1	DELL DIMENSION 9150	Sharp P-10	NONE	NONE
LF 101	1	DELL DIMENSION 9150	EPSON 6100i EPSON 6100i	ELMO HV 3000XG	DVD/VCR, 1 WIRELESS MICROPHONE, LAV 1 PODIUM MICROPHONE
LF 102	1	DELL DEMENSION	EPSON 6100i EPSON 6100i	ELMO HV 3000XG	DVD/VCR, 1 WIRELESS MICROPHONE, LAV 1 PODIUM MICROPHONE
LF 103	1	DELL OPTIPLEX 755	EPSON 6100i EPSON 6100i	SAMSUNG SDP950STAN	2-DVD/VCR, 5 WIRELESS MICROPHONE, LAV MICROHONES 5 WIRED MICROPHONES 1 @ PODIUM
LS 101	1	iMac	Epson 822 p	Dukane 220C	DVD/VCR
LS 102	1	iMac	Epson 822 p	Dukane 220C	DVD/VCR
LS 103-lab	21+1	DELL DIMENSION 9150	EPSON 822	NONE	DVD/VCR

LS 104	1	APPLE	EPSON 822	ELMO HV 3000XG	DVD/VCR
LS 104A					
LS 105	1	APPLE	EPSON 822	3M	DVD/VCR
LS 108					
LS 202- lab	1	IMAC	SHARP PG45X	ELMO HV 3000XG	DVD/VCR
LS 203B	NONE	NONE	NONE	NONE	NONE
LS 206- lab	1	DELL DIMENSION 9150	3M	NONE	DVD/VCR
LS 207	1	APPLE	EPSON 821	EPSON 6100	DVD/VCR
LTC 119-lab	34+1	DELL OPTIPLEX 755	PROXIMA DB870	NONE	DVD/VCR
LTC ESSC- lab-120	30+1	DELL OPTIPLEX 755	PROXIMA DB870 Epson 821	ELMO 3000	DVD/VCR
LTC 203-lab	19	OPTIPLEX 755	PROXIMA DP6870	NONE	DVD/VCR
LTC 204-lab	17	OPTIPLEX 755	PROXIMA DP6870	NONE	DVD/VCR
LTC 216-lab	18	OPTIPLEX 755	PROXIMA DP6870	NONE	DVD/VCR
LTC-233 Karas	1	OPTIPLEX 755	EPSON EP-5000	SAMSUNG HV5100	DVD/VCR
MU Hall (MU- 101)	1 (cart)	One G-4 on a cart	EPSON 6100	NONE	NONE
MU- 102	NONE	NONE	NONE	NONE	NONE
MU 115-lab	19	11 G-4 8 Mac mini	None	NONE	NONE
MT 2	1	DELL LAPTOP D510	PAN PT-LB60U	ELMO p10	VCR
MT 3	1	DELL LAPTOP D510	PAN PT-LB60U	ELMO p-10	VCR
MT 4 lab	31	DELL LAPTOP DIMENSION 830	TOSHIBA TDP- EW25U	SAMSUNG HV5100	VCR
MT 5-	1	DELL LAPTOP DIMENSION 830	TOSHIBA TDP- EW25U	SAMSUNG HV5100	DVD/VCR
NU 101	1	DELL DIMENSION 9100	SHARP NV6	NONE	DVD/VCR

NU 103+	1	NONE	NONE	NONE	NONE (Simulator lab)
NU 105-lab	22	Optiplex 755	One cart with Epson 821	NONE	NONE
PE 102	None	None	None	None	NONE
PE 103	1	DELL DIMESION 9150	EPSON 821	NONE	NONE
PE-205	NONE	NONE	NONE	NONE	NONE (Massage skills)
PS 102	1	Dell Laptop D-830	Epson 822+ Epson 822+	Samsung #SDP 950DXAN	DVD/VCR; 2 overhead projectors
PS 103	1	Dell Dimension 9150	Epson 821 Epson 822 p Epson 822 p	Elmo HV5100XG Elmo HV5100	NONE
PS 104	1	DELL LAPTOP D830	EPSON 822	3M SAMSUNG950	NONE
PS 106	1	DELL DIMENSION 8200	EPSON 830	ELMO HV3000XG	DVD/VCR
PS 107	1	OPTIPLEX 755	(2) Sharp C-45	ELMO HV5100XG	DVD/VCR, ONE OVERHEAD PROJECTORS
PS 201	1	OPTIPLEX 755	EPSON 830	ELMO HV5100XG	VCR
PS 202	NONE	NONE	NONE	NONE	NONE chem. lab
PS 205-lab	25	DELL DIMENSION 9150	2(EPSON 830)	DUKANE 220C	DVD/VCR
PS 206	NONE	NONE	None	NONE	CLASSROOM
SS 101	1	Dell Optiplex 755	Epson 822 p	Elmo HV3000XG	DVD/VCR
SS 102	1	Dell Optiplex 755	Epson 822 p	Elmo P10	DVD/VCR
SS 104	1	Dell Dimension 9200	Epson 821	Elmo HV3000XG	DVD/VCR
SS 201	1	Dell Dimension 9150	Epson 822	Elmo HV3000XG	VCR (no separate DVD)
SS 202	1	DELL DIMENSION 9150	EPSON 822	ELMO HV3000XG	VCR
SS 205	1	Dell Optiplex 755	Sharp C-45X	Elmo HV3000XG	VCR/DVD
TH-102	NONE	NONE	NONE	NONE	NONE
TH-111	NONE	NONE	NONE	NONE	NONE
TP-103 (Trio) lab	22	DELLS DIMENSION 8400	NONE	NONE	NONE

Appendix M

Technology Plan II TCO Model

March 19, 2008

Student Lab/Library, PC Baseline Standards

A1.a	PCs for student	One PC will be dedicated to student use for every 20 FTES.
A1.b	PCs for student with assistive technology	10 percent of all computers in this category will be configured with assistive technology to provide increased access to students with disabilities.
A2	Printers	One workgroup printer will be dedicated to every 30 student computers.
A3	Office Software	All student computers will have access to word processing, spreadsheet, and presentation software.
A4	e-Communications (email, text, chat)	All students will have access to a college-provided or personal electronic communications account (email, chat, text, etc) to facilitate college-to-student, faculty-to-student, and student-to-student communication.
A5	Internet	All student computers will have access to the Internet via a browser.
A6	Security	All campus-owned student-access computers will be protected by anti-virus, anti-spyware, and firewall software.
A7	Student Online Services	All student computers will have access to all student online services provided by the college.
A8	Refresh rate and currency of computers	PCs will be replaced on a three-year basis. This requirement is consistent with industry practices.
A9	Online Library and Learning Resources	All student computers will have access to electronic library databases and the electronic library card catalog.

Student/Faculty/Staff-owned Computers

A5	Internet	All student computers will have access to the Internet
A6	Security	Each personally-owned computer will be protected by anti-virus, anti-spyware, and firewall software.

Faculty PC Baseline Standards

B1.a	PCs for Full-time Faculty	One PC, with appropriate assistive technology as needed, will be provided for every full-time faculty member.
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B1.b	PCs for Adjunct Faculty	One PC, with appropriate assistive technology as needed, will be dedicated to part-time faculty for every part-time FTEF.
B2	Printers	One workgroup printer will be dedicated to every 25 faculty computers.
B3	Office Software	All faculty computers will have access to word processing, spreadsheet, and presentation software.
B4	e-Communications (email, text, chat)	All faculty will have access to a college-provided or personal electronic communications account (email, chat, text, etc) to facilitate college-to-faculty, faculty-to-student, and faculty-to-faculty communication
B5	Internet	All faculty computers will have access to the Internet.
B6	Security	All campus-owned faculty-access computers will be protected by anti-virus, anti-spyware, and firewall software.
B7	Faculty Online Services	All faculty computers will have access to all faculty online services provided by the college.
B8	Refresh rate and currency of computers	PCs will be replaced on a three-year basis. This requirement is consistent with industry practices.
B9	Online Library and Learning Resources	All faculty computers will have access to electronic library databases and the library card catalog.
B10	Digital Media Services	Optical-character recognition and image scanning are available to faculty.

Administrative and Classified Staff PC Baseline Standards

C1	PCs for permanent administrative & classified staff	One PC, with appropriate assistive technology as needed, will be provided for each of 80% of the permanent administrative and classified staff.
C2	Printers	One workgroup will be dedicated to every 25 staff members.
C3	Office Software	All staff computers will have access to word processing, spreadsheet, and presentation software.
C4	e-Communications (email, text, chat)	All staff will have access to a college-provided or personal electronic communications account (email, chat, text, etc) to facilitate college-to-staff, staff-to-faculty, and staff-to-staff communication
C5	Internet	All staff computers in this category will have access to the Internet via a browser.
<u>C6</u>	Security	All campus-owned staff-access computers will be protected by anti-virus, anti-spyware, and firewall software.
C7	Administrative Online Services	All staff computers will have access to job-related administrative online services provided by the college.
C8	Refresh rate and currency of computers	PCs will be replaced on a three-year basis. This requirement is consistent with industry practices.

Support Baseline Standards

Based on supporting only Monday -- Friday, 8 hours a day (5x8). Note that this is not sufficient to support most colleges' requirements for IT support.

	Position	Description	Basis	<u>Minimum</u>
S1	Computer Technician	Installs, configures, repairs, & maintains computer hardware, including portable and handheld devices (laptops, PDAs, etc.) and software including servers, peripherals (excluding labs) and assistive technologies. Maintains network connectivity and provides staff and faculty support.	1 / 100 computers (for all college / district computers, excluding labs)	1
S2	Computer lab/classroom technical assistant	Provides simple technology maintenance and assists faculty & students during and out of class with technology issues.	1 / 75 computers (for all computers in labs, smart classrooms, and classrooms, including mobile labs)	1
S3	Network Engineer / Technician	Designs, installs, configures, repairs, & maintains campus backbone(s), wired and wireless networks, WANs, and telecommunications systems (e.g. VOIP) and wiring.	1 / 3000 FTES	1
S4	Webmaster / Web Administrator / Web Designer	Designs and maintains the district's / college's Web software infrastructure and Web site	2 per District or Institution plus 1 for each additional site	2*
S5	Instructional Designer / Technology Specialist	Assists faculty with integrating content, using technology, into curriculum	1 / 100 FTE faculty (PT & FT)	1
S6	Technical Training Specialist	Trains staff and faculty. May runs a technology training center.	1 / 300 FTE faculty & staff (PT & FT)	1
S7	Broadcast Technician	Installs, configures, repairs, & maintains broadcasting equipment, including IP and broadcast HD	1 / 300 FTE faculty (PT & FT)	0.5*
S8	Multi-media Production Specialist	Supports faculty with multi-media production, delivery, and operations.	1 / 200 FTE faculty (PT & FT)	0.5

S9	Instructional Application Developer / Administrator	Designs, installs, configures, repairs, & maintains software applications to support instruction (e.g. systems analyst, programmer, systems administrator roles) to include support for library systems, course management software, list serves, and newsfeeds.	1 / 3000 FTES (PT & FT)	1
S10	Help Desk Technician (Skill set equivalent to S1)	Provides a central point of contact to receive reports of technical problems from students, faculty, and staff. Provides technical answers and solutions. .	1 / 3,000 FTES	1
S11	Technical Manager	Manages technical personnel & sub-functions	1 /10 technical staff	0
S13	Director or higher-level manager who supports instructional systems	Manages overall instructional technology function. Acts as liaison with academic administration.	1	1

Key Definitions

Term	Definition	Applies to:
Computer	Personal computer: Any system which is based on Intel or AMD chip architectures, thin clients (such as Sun's "Sunray"), and Apple computer systems such as the Macintosh series qualify. Includes mobile and hand-held devices such as laptops, PDAs and cell phones.	All Students, Faculty, Administrative and Classified Staff Baselines
Offsite access	The email system will have the capability to allow members to access their accounts via home or remote computers. Current email system standards in 2001 that facilitate this are SMTP, MAPI, and POP3. Offsite access does not imply the requirement for a college or District to employ remote access services – RAS (e.g. modem dial-up services).	B4.a, B4.b, C4
Staff computers	Requirements for services referring to "staff computers" apply only to the personal computers assigned to permanent staff members as personal workstations (and not to all computers that may be dedicated to supporting administrative functions).	Administrative and Classified Staff Baselines

Appendix N

Student Use Computers

June, 2009
Susan Steele

Revised September, 2009
Sharon Colton

Issues: MPC currently has 864 [903] computers dedicated to student use in support of their instructional experience. This number is not the result of a plan. The computers are dispersed across study rooms, open use laboratories, special use laboratories, and classrooms (Appendix I), each of which has its own rationale and most of which have been established without a broader consideration of campus needs and constraints. The cost to the College of maintenance, refreshment and replacement is not insignificant. (A three-year replacement cycle at \$1000 [now \$750] per computer yields an annual expenditure for student use computers of \$286,000 [revised to \$225,750].) Perhaps more problematic is that, in the absence of a plan, the number of student use computers could easily continue to grow. New needs will develop and the easiest way to accommodate them is to add computers to the inventory. This set of recommendations to address this situation is based on the ideas generated by a group including: Laurie Buchholz, Sharon Colton, Jamie Dagdigian, Mila MacBain, Paula Norton, and Karen Warburton.

I. A Standard

The minimum standard is one personal computer dedicated to student use for instructional purposes for every 20 FTEs.¹ The baseline for MPC is, thus, 424 such computers or roughly half the current inventory. It is by no means obvious that the baseline is sufficient. Let's assume, for the sake of argument, that a full-time student needs access to a computer at least 1 hour per day 6 days a week to meet his/her educational requirements. Thus, every 20 FTEs generates 120 hours per week of computer access need or 20 hours per day for 6 days a week. The campus isn't open 20 hours per day, so it couldn't meet what would appear to be a minimal need. *[Actually we assume that many students use their computers at home for most of their work and use campus computers to check e-mail, etc. Also we know that many students never need or use computers on campus and other students are required to use computers every day in class. Given that assumption and not having accurate information, it may be better to look at actual computer usage. Computer usage like classroom usage has its highs and lows and there are generally enough computers available for student needs. From observations by campus techs we do not need additional student computers at this time although a number of student computers need to be upgraded.]*

¹ The standard is based on CCCCCO guidelines.

Recommendation 1: I recommend the development of an MPC standard upon which the size of the inventory of student use computers can be based. The MPC standard should be more nuanced than the baseline, taking into account projections of student need and campus resources. As part of this review, I recommend that a full-scale effort to develop widespread understanding of the standard and acceptance of its basis.

Accompanying the standard should be a recognition of a fundamental difference between computers for general use, as in the Library, and computers to support specialized instructional needs, as in the CAD lab. The former are available to MPC students as well as to the public; they also are not restricted to instructional support. The central question here goes to the heart of why the College provides computer access.

Recommendation 2: I recommend the development of policies of use for general use computers. These policies could include a time limit, as most public libraries have. They could also include a charge to users who are not registered MPC students.

II. A Measure of Control

Given that the College has to husband its resources especially in the short term, it is important also to assert some measure of control over the inventory of student use computers. I recommend a three-pronged strategy that will: (1) target computers to be removed from the inventory, (2) create opportunities for reduction through consolidation, and (3) make wireless access campus-wide so students can easily use their own computers. This strategy should make the current inventory more robust and reduce pressure on it to expand.

1. Slightly less than a quarter of the student use computers are at least 5 years old. (See Appendix 2.) None of these will be updated in the next fiscal year. When technology refreshment money is next available, the value of replacing these should be assessed on a case by case basis. Some should not be replaced.

Recommendation 3: Twenty-three of the computers in the English and Study Skills Center, ten of the computers in the ESL Center, and the twelve computers in Life Science 207 fall in this category. The individuals overseeing these locations believe that these could safely be removed without impacting services to students. I recommend that all of these computers be identified in the inventory as slated for removal without replacement. *[This assumption was based on a scheduling plan which could not be implemented due to logistical constraints so 10 of those computers must remain in place for now and be upgraded when possible.]*

2. One of the factors that appears to contribute to the growth in the number of computers for student use on campus is specialization. Many of the current computer laboratories are designated as support for a particular discipline or set of disciplines.

Recommendation 4: Some of the special use computer laboratories can be consolidated. One initiative on this score is the envisioned consolidation of the World Languages Laboratory and the ESL Laboratory into a single Language Laboratory on the first floor of the Library and Technology Center beginning in Fall 2010. This consolidation will reduce the number of student use computers by 25. Other like consolidations may be possible. I recommend a study of the special use computer laboratories to determine consolidation targets. [*This is a great idea although it appears to not be workable for ESL and WLL at this time.*]

Recommendation 5: Some of the computer-equipped classrooms are not well-used, a consequence of MPC's distributed scheduling system. For example, the computer-equipped classrooms in Business are used almost exclusively in the evening. [*This is dated information since other classes – English and Engineering - are now scheduled into the Business labs during the day. These labs are used 45% of the daytime hours and are in use as labs at other times.*] If computer-equipped classrooms were centrally scheduled, their availability would be easily determined. Barring a system of central scheduling, I recommend that an inventory of computer-equipped classrooms be made widely available and that the DOMs who schedule these rooms facilitate their use beyond their divisions. Whether this recommendation will create an opportunity to reduce the number of student use computers will turn on the utilization of these classrooms once they are more generally available. It is possible that the demand will not support the current number of computer-equipped classrooms and, thus, the number could be reduced. Minimally, this recommendation should minimize the creation of new computer-equipped classrooms.

3. Another factor contributing to the need for students to use campus computers rather than their own laptops is the absence of a reliable wireless network campus wide.

Recommendation 6: I recommend the implementation of the campus wireless system as soon as possible. The total cost is estimated to be \$102,881.

Equipment

Controllers, etc.: \$27,881

Access Points: 120 @ \$475 = \$57,000

Installation

Wiring and installation 120 @ \$150 = \$18,000

[*The other constraint in implementing wireless campus-wide is the availability of staff time to implement the installation. IT has been asked to greatly limit overtime hours during the budget crisis which has made it difficult for IT staff to respond to complex requests, such as this, within the normal work day.*]

III. The Future

With standards in place, a robust inventory, and a reduction in expansion pressure, the campus will be in a position to respond appropriately to developing needs. MPC needs to be prepared for the possibility that some classrooms or class laboratories that do not now have computers will require them in the

future; we don't want to be in the position of pitting new needs against established needs. It should not be the case, however, that the constituencies with developing needs can act unilaterally. The action plan process would appear to be a reasonable vehicle to vet proposals for new student use computers.

Recommendation 7: I recommend that plans in regard to student use computers be included in the action plan process.

[Presently, many requests for additional computers do not go through the Action Plan process, yet are approved for purchase anyway.]

Appendix I

Room # or name	# of student computers	
		REVISED
AD 102	17	20
AD 103	17	17
AT 101		5
BC 107		10
BC 201		10
BC 202L	28	27
BC 204	51	50
BC 208L	25	30
GA 101	28	28
GA 102	9	9
GA 103	23	24
ESL/LTC 119	23	23
ESL/LTC 118	37	37
ESSC lab/LTC	94	94
HU 109	55	49
LS 103	22	21
LS 105	12	12
LS 202	7	7
LS 206	29	29
LS 207	12	12
LTC 203	19	19
LTC 204	17	17
LTC 216	18	18
LTC-RefLb	71	71
LTC-CirLab	44	44
LTC-StRms	34	34
InstrTechLab	12	12
MU 115	17	19
MT1	3	3
MT5	35	35
NU 103	3	3
NU 105	21	22
PS 106	18	18
PS 107	8	8
PS 201	1	1
PS 205	27	25

TP 102	7	7
Trio	9	22
Testing Center	6	6
College Center	5	5
TOTAL	864	903

Appendix 2

Location (year)	Approximate # of student use computers* more than five years old
Library (2003)	61
English and Study Skills Center (2003)	32
ESL Center (2003)	10
Life Science 103 (2004 Mac)	22
Life Science 202-Dental Asst (2002 Mac)	5
Life Science 202/206- Med Asst (2002 Mac)	24
Life Science 207 (2001 Mac)	12
Music MU 101 (2000 Mac)	17
TRIO (2001, 2002, 2004)	20
Approximate total	20

*These numbers are an approximation of front-line student lab computers. They do not include critical “secondary use” machines GoPrint Paystations, TimeKeeper computers, [staff and imaging computers](#), etc.

Appendix O

MONTEREY PENINSULA COLLEGE GOVERNING BOARD POLICIES 5000 SERIES PERSONNEL

A. All Employees

5060 Telephones

College telephones are for the purpose of conducting District business. Personal use of the telephone is limited to necessary, local calls. The personal use of College telephones for long distance calling is a violation of federal regulations.

Adopted: May 10, 1989.

Appendix P

Support/Maintenance of Multimedia Classrooms at Monterey Peninsula College

Revised 10-27-05

The purpose of this document is to outline the various support and maintenance responsibilities of individuals and departments associated with multimedia classrooms on campus. It is the ultimate goal of campus technicians to provide support in training and help-desk questions for faculty using the multimedia classrooms, and to provide regular and “as needed” maintenance to the electronic equipment in each room.

Multimedia classrooms with an assigned campus technician will have that technician designated as the single point of contact for classroom support and maintenance with exceptions noted below. If the designated single point of contact technician is not available, a back-up person may be designated. If no one is designated as back-up, then IT (Information Technology) personnel will act as the back-up. Support and maintenance for the classrooms without a designated campus technician will be handled by IT (Information Technology) personnel. Evening support will be handled by Media Services.

Exceptions to the single point of contact:

- cleaning of projector filters (Media Services)
- cleaning of computers (on-site tech)
- second tier trouble shooting or repair for computer problems (IT)
- second tier trouble shooting or repair of A/V equipment (Media Services)
- training on the use of the equipment (Instructional Technology)
- room lighting (Facilities)
- some supplies (i.e., batteries and projector lamps) and back-up equipment (Media Services)
- access to keys (DOM)
- ADA (Americans with Disabilities Act) compliance issues (Alexis Copeland)
- Security (Security)
- Room cleaning (Custodial)

Media Services will be responsible for repairs and supplying replacement parts and lamps for the Lecture Forum rooms and will take the responsibility for repairs and lamps in other classrooms as Media Services or Technology Refreshment funds are available. When a technical support person is assigned to departmental classrooms, it is expected that the department will have a back-up fund for repairs and replacement parts and lamps. Departments without a designated technical support person may also be asked to supply repair/parts for their multimedia rooms if available funds are exhausted. The long term plan is to establish a general fund budget line for repair and replacement of classroom equipment.

Installation of parts in the Lecture Forum is the responsibility of Media Services. Installation of parts in classrooms with a designated technical support person is the responsibility of that person so designated with back-up support by Media Services. Installation of parts for other classrooms is the responsibility of Media Services.

The following people or departments have been designated as point of contact for support/maintenance of the multimedia classrooms. Contact information will be posted in each classroom.

The point of contact person is responsible for the following:

- Set-up of equipment as needed;
- Troubleshooting problems or notifying the responsible person;
- Cleaning of computers and other equipment (Media Services cleans projectors unless instructed otherwise);
- Deploy multimedia carts stored in the building;
- Training for faculty (and students) in use of equipment;
- Record keeper for maintenance, etc.

Classroom	Point of Contact Person	Back-up Support*	Back-up Support
		(8am-5pm)	(5–10pm, M-Th)
AD-102	Adaptive Tech. Specialist	IT (-4080)	MS (-4088)
AD-103	Adaptive Tech. Specialist	IT (-4080)	MS (-4088)
AS-101	Eddie Gil De Montes (-4234)	IT (-4080)	MS (-4088)
AT-101	Jeremy Hertzberg (-4019)	IT (-4080)	MS (-4088)
AT-103	Jeremy Hertzberg (-4019)	IT (-4080)	MS (-4088)
BC-101	Steve Bruemmer (-4289)	IT (-4080)	MS (-4088)
BC-107	Steve Bruemmer (-4289)	IT (-4080)	MS (-4088)
BC-201	Steve Bruemmer (-4289)	IT (-4080)	MS (-4088)
BC-202	Steve Bruemmer (-4289)	IT (-4080)	MS (-4088)
BC-204	Steve Bruemmer (-4289)	IT (-4080)	MS (-4088)
BC-207	Steve Bruemmer (-4289)	IT (-4080)	MS (-4088)
BC-208	Steve Bruemmer (-4289)	IT (-4080)	MS (-4088)
BH-106	Anne Marie Illien (-4174)	IT (-4080)	MS (-4088)
BH-107	Anne Marie Illien (-4174)	IT (-4080)	MS (-4088)
BH-108	Anne Marie Illien (-4174)	IT (-4080)	MS (-4088)
CDC 201			MS (-4088)
COLD 101			none
COLD 103			none
COLD 104			none
COLD 106			none
COLD 119			none
COLD 206			none
GA-101	Eddie Gil De Montes (-4234)	IT (-4080)	MS (-4088)
GA-102	Eddie Gil De Montes (-4234)	IT (-4080)	MS (-4088)
GA-103	Gabino Valladares (-4214)	IT (-4080)	MS (-4088)
FC-104-K	Karen Warburton (-4133)	IT (-4080)	MS (-4088)

FACS 105	Karen Warburton (-4133)	IT (-4080)	MS (-4088)
FC-106	Karen Warburton (-4133)	IT (-4080)	MS (-4088)
HU-101	Anne Marie Illien (-4174)	IT (-4080)	MS (-4088)
HU-102	Anne Marie Illien (-4174)	IT (-4080)	MS (-4088)
HU-105	Anne Marie Illien (-4174)	IT (-4080)	MS (-4088)
HU-106	Anne Marie Illien (-4174)	IT (-4080)	MS (-4088)
HU-109	Todd Davalos (-3015)	IT (-4080)	MS (-4088)
HU-201	Anne Marie Illien (-4174)	IT (-4080)	MS (-4088)
HU-202	Anne Marie Illien (-4174)	IT (-4080)	MS (-4088)
HU-203	Anne Marie Illien (-4174)	IT (-4080)	MS (-4088)
HU-204	Anne Marie Illien (-4174)	IT (-4080)	MS (-4088)
HU-205	Anne Marie Illien (-4174)	IT (-4080)	MS (-4088)
HU-206	Anne Marie Illien (-4174)	IT (-4080)	MS (-4088)
IC-101	Anne Marie Illien (-4174)	IT (-4080)	MS (-4088)
IC-102		IT (-4080)	MS (-4088)
IC-201	Pete Benavente (-4274)	IT (-4080)	MS (-4088)
IC-204	Pete Benavente (-4274)	IT (-4080)	MS (-4088)
LF-101	Media Services (-4088)	IT (-4080)	MS (-4088)
LF-102	Media Services (-4088)	IT (-4080)	MS (-4088)
LF-103	Media Services (-4088)	IT (-4080)	MS (-4088)
LS-101	Karen Warburton (-4133)	IT (-4080)	MS (-4088)
LS-102	Karen Warburton (-4133)	IT (-4080)	MS (-4088)
LS-103	Karen Warburton (-4133)	IT (-4080)	MS (-4088)
LS-104	Karen Warburton (-4133)	IT (-4080)	MS (-4088)
LS-105	Karen Warburton (-4133)	IT (-4080)	MS (-4088)
LS-106	Karen Warburton (-4133)	IT (-4080)	MS (-4088)
LS-202	Karen Warburton (-4133)	IT (-4080)	MS (-4088)
LS-206	Karen Warburton (-4133)	IT (-4080)	MS (-4088)
LS-207	Karen Warburton (-4133)	IT (-4080)	MS (-4088)
MU 101	Eddie Gil De Montes (-4234)	IT (-4080)	MS (-4088)
MU 115	Eddie Gil De Montes (-4234)	IT (-4080)	MS (-4088)
MT 2		IT (-4080)	MS (-4088)
MT 3		IT (-4080)	MS (-4088)
MT 4		IT (-4080)	MS (-4088)
MT 5		IT (-4080)	MS (-4088)
NU-101	Pete Benavente (-4274)	IT (-4080)	MS (-4088)
NU-103	Pete Benavente (-4274)	IT (-4080)	MS (-4088)
NU-105	Pete Benavente (-4274)	IT (-4080)	MS (-4088)
PE-103	IT (-4080)	IT (-4080)	MS (-4088)
PS-102	Bob Otter (-3035)	IT (-4080)	MS (-4088)
PS-103	Bob Otter (-3035)	IT (-4080)	MS (-4088)
PS-104	Bob Otter (-3035)	IT (-4080)	MS (-4088)
PS-106	Bob Otter (-3035)	IT (-4080)	MS (-4088)
PS-107	Bob Otter (-3035)	IT (-4080)	MS (-4088)
PS-201	Bob Otter (-3035)	IT (-4080)	MS (-4088)
PS-205	Bob Otter (-3035)	IT (-4080)	MS (-4088)
PS-206	Bob Otter (-3035)	IT (-4080)	MS (-4088)
SS-101	IT (-4080)	IT (-4080)	MS (-4088)
SS-102	IT (-4080)	IT (-4080)	MS (-4088)
SS-104	IT (-4080)	IT (-4080)	MS (-4088)
SS-201	IT (-4080)	IT (-4080)	MS (-4088)
SS-202	IT (-4080)	IT (-4080)	MS (-4088)
SS-205	IT (-4080)	IT (-4080)	MS (-4088)

TP-101		IT (-4080)	MS (-4088)
TP-103		IT (-4080)	MS (-4088)
LTC-216	Gregg Yearwood (-1310)	IT (-4080)	MS (-4088)
LTC-203	Gregg Yearwood (-1310)	IT (-4080)	MS (-4088)
LTC-204	Gregg Yearwood (-1310)	IT (-4080)	MS (-4088)
LTC-ESL lab	Anne Marie Illien (-4174)	IT (-4080)	MS (-4088)
LTC-119	Anne Marie Illien (-4174)	IT (-4080)	MS (-4088)
LTC-120	Brian Streetman (-3078)	IT (-4080)	MS (-4088)
LTC-Karas	Gregg Yearwood (-1310)	IT (-4080)	MS (-4088)

Clarification of responsibilities:

- a) Division support staff:
keys – DOM;
scheduling of classrooms – DOM; Robin (Karas & LF Rooms)
maintain departmental budget for parts/repairs/lamps
primary point of contact – lab technician.
- b) Media Services (A/V):
TV, VCR, data projector, speakers, microphones, document camera maintenance;
evening “help desk” support;
portable equipment set-up:
cleaning of projector filters (each semester);
change batteries and lamps if requested;
supply batteries and spare parts as available.
- c) Instructional Technology:
training in use of the equipment;
provide troubleshooting information;
ADA compliance issues;
demonstration/evaluation of emerging technology;
maintain budget for parts/repairs/lamps as funds are available;
coordination of new multimedia construction.
- d) Information Systems:
*CELL PHONES: Linda: 760-2253, Helmut: 901-4672
computer maintenance and repair;
network/Internet access;
campus standard list of equipment;
telephones.
- e) Facilities:
temperature control:
electric power;
lighting.
- f) Custodial:
cleaning.
- g) Security:
security

Appendix Q

Smart Classrooms, Computer Labs, and Other student Computers

as of 12/2009

Smart Classrooms

AS 101
 AT 101
 AT 103
 BC 101
 BC 207
 BH 106
 BH 107
 BH 108
 CDC 201
 COLD 101
 COLD 103
 COLD 104
 COLD 106
 COLD 119
 COLD 206
 FACS 105
 FACS 106
 HU 101
 HU 102
 HU 105
 HU 106
 HU 201
 HU 202
 HU 203
 HU 204
 HU 205
 HU 206
 IC 101
 IC 102
 IC 201
 IC 204
 LF 102
 LF 103
 LS 102
 LS 104
 LS 108
 LS 207
 LTC 233 (Karas)
 MU 101 (Hall)
 MT2
 MT3
 MT5

TOTAL Smart Classrooms 58

Computer Labs

AD 102 (18)
 AD 103 (15)
 AT 101 (10)
 BC 107 (10)
 BC 201 (10)
 BC 202 (27)
 BC 204 (41)
 BC 208 (27)
 GA 101 (28)
 GA 102 (9)
 GA 103 (24)
 HU 109 (49)
 LS 101 (6)
 LS 103 (21)
 LS 105 (11)
 LS 202 (8)
 LS 206 (25)
 LTC 119 (35)
 LTC 120 (30)
 LTC 203 (19)
 LTC 204 (17)
 LTC 216 (18)
 MU 115 (19)
 MT 4 (31)
 NU 105 (22)
 PS 106 (18)
 PS 205 (25)
 PS 206 (8)
 TP 103-Math UB (22)
 TP 101-Trio (24)

TOTAL labs 30

Other

ESSC Area (64)
 LTC Ref Lb (60)
 LTC Cir Lb (40)
 LTC Study Rooms (17)
 Assessment Ctr (4)
 Transfer Center (6)
 ASMPCC (5)
 Testing Center (3)
 Women's Program (1)
 MT1 (3)
 ESL Open Lab (22)
 Other LTC (26)

Total Lab/Student Computers (627)

Total Other/Student Computers (251)

GRAND TOTAL of ALL SMART CLASSROOMS+COMPUTER LABS 88

GRAND TOTAL STUDENT COMPUTERS 878 (not including the additional 58 smart classroom computers)

OR 936 with the smart classroom computers

Appendix R

Textbook Software Installation Request Form

(Please see the Hints and Tips sheet for help)

Instructor: _____ Date: _____ Semester: _____

Phone: _____ e-mail: _____

Software (Name and version): _____

Textbook (Name and ISBN): _____

Course (Name and number): _____

Instructor: Please follow the steps below. See the Hints and Tips Sheet for help.

- Step 1 - Evaluate software** for appropriate content and workflow.
- Step 2 - Contact lab regarding possible software use**
- Step 3 - Read Hints and Tips sheet**
- Step 4 - Determine licensing agreement covers intended software use**
- Step 5 - Meet with lab technician and deliver software for lab compatibility testing (a minimum of one week required for testing)**

Please bring software and this form.

Step 6 - Provide directions for software operation to students and lab staff

Step 7 - Orient students to software

Lab Technician: Technician may be able to help with several steps above before continuing.

Step 1 - Test software for lab compatibility

Comments:

Step 2 - Notify Instructor of software test results date: _____

Step 3 - Notify instructor of final installation results

installed in full lab **installed in part of lab** **not installed**

Comments:

The need for this software will be re-evaluated on an annual basis. Please keep the lab informed of any software or licensing changes that may affect the usability of the software in the lab.

Hints and Tips for Textbook Software Installation Request Form

General Tips

Textbook Software Installation Request Form: Submitting this form lets everyone involved track the progress of a software installation. Labs avoid wasting time figuring out how to contact an instructor or figuring out which course a CD-ROM supports. Instructors know how or if their software was installed, and if there were any problems. The students benefit from all of the above.

Carefully consider which software students are asked to use outside of class.

Just as choosing the wrong textbook can be a nightmare, so can choosing the wrong software. Many textbooks are now coming with supplemental CD-ROMs. Sometimes this software can be quite helpful to instructors and students alike. However, this trend is in its infancy. Unfortunately many publishers use bonus software mostly as a marketing ploy to sell new books. The actual software is often confusing and not very useful. Contact the Office for Instructional Technology and Development for other ideas for delivering supplemental content.

Consider making software lessons optional rather than required.

Students cannot generally use their software as easily as opening their textbook. Many students do not have their own computers, and installing software in a lab can be tricky. Investigate thoroughly before assigning software lessons the students may not be able to access.

Tips for Filling out the request form

Step 1 - Evaluation of software: It is important that instructors evaluate the software to check its appropriateness for their students prior to asking that it be installed in a lab. This should include working through the different types of lessons in the same way the students will be asked to do. Software that is inappropriate or extremely confusing can then be discarded. Instructors can then discuss a clear software workflow with the lab staff so all staff involved have a clear understanding of what the student is supposed to do. Reading the "Read Me" file that is often on these disks can give important insight into how the software works.

Step 2 - Contacting lab regarding possible software use: Early contact with the lab in which the instructor would like software installed is helpful for everyone. This needs to be done before sending students to the lab to work on the software. This helps ensure the software is efficiently installed in the most appropriate lab and in the best way possible.

Most labs test their computers' software configuration during breaks and slower times like Early Spring. Once a stable configuration is found it is "locked down" and sent to all the machines for the main semester. Getting software to the lab well before the main semester allows it to be included in this testing period and avoids difficult mid-semester changes to already stable computers. Often CD-ROMs from instructors' desk copies of textbooks can be used.

Step 4 - Software Licensing Agreements: Instructors should be careful to determine that they have a proper software licensing agreement for the way they intend their students to use the software. MPC has worked hard to make sure software installed on campus is legal. In addition, some software will not run without a proper license. For example, students usually are required to buy a new book in order to be licensed to use the book's software. This book often has a CD they need or an access code they must individually use for logging in to the software. If they buy a used book or share a book with a friend, they are stuck, especially if they need to have the CD in the computer to run the software. Determining the licensing agreement may need to include conversations with the software vendor (book publisher), a lab technician and campus bookstore. The Office for Instructional Technology and Development may be able to assist you.

Step 5 - Required time for software compatibility testing: A minimum of one week lead time is required for evaluation of supplemental software from textbook CD-ROMs by the lab technician. Please provide the lab with a copy of the software students will be using as well as any relevant support or technical documentation. This includes phone numbers of any vendors or technical support people who have been contacted about the software. This allows the technician a reasonable amount of time to explore any technical issues involving the installation of your software into the lab.

All of the labs on campus now have complex configurations with necessary security measures in place. Not all software is easily compatible with this type of environment and adjustments have to be made. Sometimes a special network version of the software or a special licensing agreement has to be acquired from the vendor in order to use the software in this type of lab environment. If there are still existing problems after one week, the technician will discuss possible resolutions with you.

Step 6 - Directions: Often students show up in a lab with a CD and say, “My instructor said this CD has good exercises on it related to what’s covered in class. How do I get started?” Unfortunately the lab staff’s initial response often is, “We have no idea.” By providing directions for how to use the software to their students and the lab staff, instructors are able to indicate which parts of the software are helpful. Directions also allow the staff to avoid saying, “Go ask your instructor” which is frustrating for everyone involved. This may require discussion with the lab staff to confirm details of software operation in the lab environment.

Step 7 - Software Orientation: It is helpful for the instructor to provide software orientation for their students before sending them into an open lab to work on their own. This may be simple or complex depending on the software. Along with directions, orientation increases students’ comfort level with the software and helps them get positive results faster, sometimes without having to wait for staff help.

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