

2009-2012 Technology Strategic Plan



Security / Privacy
Business Continuity Planning
Technology Infrastructure
Communications
Teaching and Learning

Prepared by the Technology Coordinating Committee Final Version August 30, 2009 Correction pg 7 October 31, 2009

Introduction

The 2004-2008 Technology Strategic Plan, served to articulate and implement a coherent and systematic response to the current and future information technology needs of the College. The work that was accomplished throughout this planning cycle established an infrastructure to effectively maintain, enhance, and support student learning and student service delivery through technological advancement and innovation. The current state of information technology at the Community College of Philadelphia is indeed capable and well-prepared to support the College's goal of providing student success and a "Path to Possibilities".

Over the past four years, access to computer technology has greatly increased in both number and efficiency for all constituencies at all campus locations. The infrastructure expansion brought wireless capabilities to the main campus as well as all three regional centers. Network reliability and capacity were upgraded and extended to all offices and classrooms college-wide. The previous Plan goal to ensure that faculty, staff, and students have equitable and appropriate access to technology to meet their teaching, learning, information, and communication needs has been accomplished.

The OASIS Project provided the College with an array of web-self-service tools for students, faculty and staff alike. The implementation of Banner as an integrated ERP solution, starting with Finance in 2003 and HR/Payroll/Admissions in 2004, ended during this planning cycle with the implementation of the Student system in 2005. The relational database back-end of this system now provides the College with data for analysis and management reporting. The expansion of web-based services for students and staff has grown throughout this plan cycle.

The Fall term of 2008 gave our new students access to their MyCCP portal accounts before their first registration. This access allowed them to self-schedule placement testing and registration events. This was expanded in Spring 2009 by the efforts of the Counseling Department in the use of computer labs as advising locations for new students. The Counseling staff instructed these new and developmental students in how to register via MyCCP and Banner self-service.

Overall, the activities of the 2003-2007 Plan, reflect an obvious effort on the part of the College to use technology to meet the demands of the community. The implementation of the VoIP system to replace the 20-year-old telephone switch is proof that the College is striving for tomorrow. This new VoIP system has allowed the College to extend telephone service into all classrooms on all sites thus providing a new method of broadcasting vital messages in cases of emergency.

In addition to adding technology resources to assist in teaching and learning, the College engaged in ensuring compliance with new e-litigation standards. E-mail messages are archived now for e-discovery purposes and the College has engaged assistance in ensuring that document and electronic media meet legal retention standards.

The IT Audit performed by the College's external auditing firm challenged the Security/Ethics section of the previous Plan. The audit confirmed that the College is using best practices by ensuring little risk to financial or personal data. A few items were noted concerning the need to embrace the best practices standards around password security and disaster recovery. Both of these issues are covered in the new plan.

This new 2009-2012 Technology Strategic Plan will bring back to the table a concentration on security & privacy, business continuity and disaster recovery planning, growth and expansion of the infrastructure, a further attempt to improve communication and a focus on the technology needs of teaching and learning.

The overarching goal of this plan will be to embrace emerging technologies by bringing them into the teaching/learning spaces developed through the Campus Expansion projects. These enhancements will bring focus to new technologies as well as those recently implemented technologies that the College has yet to fully utilize.

The VoIP system is an example of a system that has yet to be fully explored. The speech recognition system associated with our VoIP implementation has provided enhancement to staff and student services through the use of voice driven choices via the telecommunications system. This system will be further extended to provide mass calling to students for notifications and announcements. In addition, the music/announcements-on-hold feature of the system can be utilized to ensure we are marketing services and events.

Another area still experiencing growth is the College's re-entry into local broadcast services via Channel 53. The Audio Visual department of the College has recently engaged in the re-vitalization of CCPTV. This system provides the College with the opportunity to explore delivery of learning and informational content into our teaching/learning spaces and the community.

The 2009-2012 Technology Strategic Plan will provide for input from all constituents within the college community. As the College engages in the Campus Expansion projects the challenges will

be to provide appropriate technology planning to ensure all teaching learning/student/customer/client service functions are prepared for the future demands of the community.

The technology vision represented by this plan intends to promote the mission of the College by preparing students for the world in which they will be living and working. To help meet this overarching goal, technology must support the teaching/learning environment and connect with external constituencies. As a result, effective and efficient uses of technology will help create a more cohesive college community and will help present the College as a leader in educating our students in becoming engaged global citizens and leaders.

As with all College Strategic Plans, this is a "living document" that must be as fluid as the technology it attempts to represent. To meet the expectations of the Generation Y or Millennials the college community must continue to engage in change management activities that support the forward momentum demanded by the technologies that will begin to integrate into campus life, administrative and student services and the teaching/learning environment of the future.

This plan represents the current expectations of technology with a driving force toward enhancing the future through recognition of technology as a tool not a solution. The outline of goals and objectives are summarized in the matrices section. The details for each objective concerning expectations, anticipated completion date and area of responsibility are listed in the matrices and are current as of this date; August 30, 2009. Progress will, as with all plans, be updated on the Technology Coordinating Committee web site; http://www.ccp.edu/tcc/newsite/.

Technology Coordinating Committee Members 2008-2009

Delegates/Appointees

Ruth Baker

Bhavesh Bambhrolia

Frank Bartell Jody Bauer

Gary Bixby

Heidi Braunschweig

Bill Bromley

SK Calkins

Arnold Di Blasi

Ellen Fernberger

David Freeman

Jae Fisher

Tom Hawk

Sam Hirsch

Stephen Jones

Luke Kasim

Maryann Lyons

Kelly McQuain

Noelia Rivera-Matos

Karen Schermerhorn

Alternates
Connie Dauval
Robert Gallagher
Linda Konicky
Charles Rumford

Jim Spiewak

Sub-Committee Members

Security/Privacy:

Bhavesh Bambhrolia, Jody Bauer, William Bromley, Tom Hawk

Business Continuity Planning:

Jody Bauer, William Bromley, SK Calkins, Tom Hawk, Samuel Hirsch, Ellen Fernberger

Technology Infrastructure:

Jody Bauer, William Bromley

Communications:

Frank Bartell, Bhavesh Bambhrolia, Jody Bauer, SK Calkins, Matthew Shupp

Teaching and Learning:

Ruth Baker, Arnold DiBlasi, Jae Fisher, Dave Freeman, Noelia River-Matos, Kelly McQuain

I. PRIVACY/SECURITY

GOAL: To ensure the privacy, integrity and ethical use of information resources by faculty, staff, students and community members.

- A. Objective: Evaluate existing security and privacy policies to ensure they align with new/pending legislation and current best practices.
 - A.1. Complete analysis of appropriate information resource policies and procedures to align with best practices.
 - A.2. Conduct an annual audit of the security program.
 - A.3. Conduct privacy and security awareness training for all community members.
- B. Objective: Review existing security and privacy controls in critical systems to ensure accessibility of personal information follows the principle of least privilege.
 - B.1. Restrict accessibility of personal information stored within the ERP.
 - B.2. Explore techniques or technologies to encrypt or mask data in non-production application environments
 - B.3. Explore techniques or technologies to encrypt and protect database (Oracle and SQL) data files
- C. Objective: Identify the e-discovery needs of the College.
 - C.1. Develop an e-discovery plan related to the retention of data in the following areas:
 - i. ERP data
 - ii. Brio metadata
 - iii. Network data
 - iv. Email
 - 1. Determine how the use of outsourced email vendors affects the litigation process.
 - 2. Develop an appropriate policy concerning use of non-college domains for inter-campus communications.
 - v. Local storage
 - vi. Telephony¹ issues; i.e., voicemail archival needs
 - vii. Course materials
- D. Objective: Define the compliance requirements both internally and regulatory and their impact on the College use of data.
 - D.1.Engage in cooperation with the College General Counsel, the review of all document retention standards for both electronic and paper.
 - D.2.Engage in cooperation with the College General Counsel, the review of the following regulatory changes for their impact to the College.
 - i. Red Flag Rule
 - ii. HEOA

¹Telephony is the technology and manufacture of telephone related equipment.

- iii. FERPA
- iv. HIPPA
- v. E-Discovery

II. CONTINUITY PLANNING AND DISASTER RECOVERY

GOAL: To ensure that the College ITS department is both prepared and able to respond effectively in the event of a business interruption or a situation where ITS personnel are inaccessible.

- A. Objective: Establish and document an ITS divisional business continuity plan.
 - A.1. Create a divisional ITS business continuity plan that encompasses ISS and TSS.
 - A.2. Identify and document recovery point objectives and recovery time objective for critical systems.
 - A.3. Establish a central electronic repository of procedural documentation for key processes.
 - A.4. Conduct awareness training for ITS staff about the business continuity plan.
 - A.5. Update the master hardware and software inventory to assure identification and inclusion of all key assets.
 - A.6. Ensure that adequate insurance coverage is secured to allow for replacement of hardware and software.
- B. Objective: Schedule and conduct planned tests of the ITS divisional continuity plan
 - B.1. Review existing backup and recovery processes and procedures for comprehensiveness and appropriateness and improve where necessary.
 - B.2. Test recovery procedures to confirm procedures satisfy recovery time and recovery point objectives.
 - B.3. Implement a schedule of and conduct planned tests of portions of the ITS divisional continuity plan.
 - B.4. Explore capabilities for end user testing of applications and key systems from off-site locations
- C. Objective: Establish a methodology for regular review and update of the ITS divisional business continuity plan as services provided by ITS to the community change.
 - C.1. Implement a formal change management process, including approval, notification and documentation procedures.
 - C.2. Implement a regularly scheduled formal review of the ITS divisional business continuity plan.
 - C.3. Review the business continuity plans and contingency plan testing of any service provider or vendor providing recovery services.
- D. Objective: Evaluate and implement technologies that will increase flexibility in the capabilities of ITS to address recovery needs as they arise.
 - D.1.Explore data de-duplication as a method of ensuring recovery of critical business processes.

- D.2.Explore server virtualization as a method of ensuring recovery of critical business processes.
- D.3.Explore voice and data redundancy as a method of supporting critical business operations.
- D.4.Explore telecommunication services, such as CallPilot, zone paging, emergency broadcasting, to be used as methods of communicating recovery efforts.

III. TECHNOLOGY INFRASTRUCTURE

GOAL: To maximize existing infrastructure resources in a manner that will support growth and expansion efforts while sustaining existing services.

- A. Objective: Maximize existing network resources for academic and administrative pursuits
 - A.1. Implement traffic shaping to give priority to traffic in support of academic and administrative efforts
 - A.2. Evaluate the implication of the convergence of voice and data and implement identified solutions
 - A.3. Implement secure printing for faculty and staff
 - A.4. Improve in the kiosk systems for student use.
 - i. Increase the availability of ADA accessibility for all campus location kiosks.
 - A.5. Review the need for expansion of web-based services and social networking services in support of student success initiatives
 - A.6. Support administrative priorities relating to data collection and analysis.
 - A.7. Develop a project management procedure that aligns with College priorities and functions.
- B. Objective: Maximize efforts to implement new infrastructure components and adapt existing infrastructure components in an environmentally responsible way
 - B.1. Explore alternate methods, such as Power over Ethernet, of providing power to network devices
 - B.2. Ensure appropriate allocation and stability of universal power for all data and/or voice closet locations
- C. Objective: Improve technology review, procurement and installation process.
 - C.1. Improve the lease replacement cycle through examination of the lease standard equipment in relation to the equipment spec of 2009.
 - i. Develop an inventory system that encompasses the lease replacement cycle for all system.
 - ii. Develop a tracking system that enhances the inventory system to ensure reports are as accurate as possible.
 - C.2. Integrate infrastructure and technology reviews into the management of capital projects

- D. Objective: Increase accessibility to public internet and College intranet
 - D.1.Increase the wireless capability for all campus areas.
 - D.2.Improve the capability for Intranet connectivity for all staff and faculty while away from the campus wide area network.
- E. Objective: Leverage available application functionality by implementing existing components or extending available functionality to accommodate implementation of new technology in critical business processes.
 - E.1. Support the increase of student retention rates by developing letters to communicate status and reports to identify students with early warning indicators.
 - E.2. Support student services by providing necessary assistance to implement selfservice functionality for a paperless admissions application process and student compliance requests and what-if analysis.
 - E.3. Support student services by providing necessary assistance to support additional tuition payment options.
 - E.4. Support student services by providing additional secured, self-service components as critical to assist the enrollment management services as a "single point of service" process

IV. COMMUNICATION

Promote information sharing among all College constituents through the use of technology-enhanced tools.

OBJECTIVES:

- A. Review and/or develop policies/guidelines to facilitate communication and the use of technology to promote communication college-wide.
 - A.1. Establish a policy on appropriate use of wikis, blogging, text messaging, virtual worlds
 - A.2. Establish a policy on approved communication protocols based upon targeted audience (student, employee, faculty, staff, other)
- B. Provide improved information sharing from Information Technology Services to the College Community
 - B.1. Establish a policy regarding the appropriate timeliness of information sharing from ITS to the community concerning technology-related issues or events
- C. Provide improved web services to the college community
 - C.1. Develop a centralized point of contact for all technology issues
 - C.2. Develop an ITS website
 - Robust; one that provides information for all users, student; staff and faculty. Include appropriate system status updates, current project highlights, upcoming project plans, FAQs, procedural how-to documentation, training calendar, suggestions box, etc.
 - C.3. Improve the online communications ability for individuals and groups associated with the College.
 - i. Evaluate options for a communications and collaboration suite.
- D. Provide a standard email/calendaring system for the College

- D.1.Review all email systems currently in-use by the College constituents and the legal ramifications associated with that use.
- D.2.Determine an email system as a standard.
- D.3.Implement the standard across all college constituents.
- D.4.Develop policies/guidelines that are required for litigation issues.
- D.5.Develop and communicate the lack of privacy when using email.
- D.6.Develop standards for students in the use of email; netiquette.
- D.7.Develop standards for staff & faculty in the use of email; netiquette.
- D.8.Implement an appropriate email and web site disclaimer process.
- E. Perform a review and redesign process on the MyCCP portal to promote student communication
 - E.1. Implement analytics/tracking of portal pages to understand how portal is used.
 - E.2. Upgrade portal software to current version to take advantage of new functionality in the area of security and targeted communications.
 - E.3. Develop new roles as determined by the review and needs of the community.
 - E.4. Review the login page for the portal to ensure communication of important information.
 - E.5. Review Channel administration and guidelines.
 - E.6. Review all channel content for duplication and consistency with ccp.edu campus-wide web site.
 - E.7. Review all roles associated with the portal and associated tab-level views.

V. TEACHING/LEARNING INSTRUCTIONAL RESOURCES

GOAL: Promote appropriate use of and access to technology by faculty and students in conjunction with the goals outlined in the Academic Master Plan.

OBJECTIVES:

- A. Provide technological hardware adequate to meet instructional needs of faculty.
 - A.1. Inventory all faculty offices to determine hardware needs based on individual patterns of use.
 - i. Develop a lease replacement strategy for faculty offices.
 - ii. Develop a needs assessment to ensure appropriate hardware and software is available in faculty offices.
 - 1. Provide a scheduled refresh of assessment information.
 - iii. Provide updated hardware as dictated by the needs assessment.
 - A.2. Determine future hardware needs of faculty in their offices and provide it based on priority (example: microphones, speakers, cameras, storage devices, etc. needed to create course materials or to allow distance education faculty to work more effectively from campus offices)
 - A.3. Determine hardware needed to meet faculty duties for work performed outside of their offices (conferences, committees, meetings, etc).
 - A.4. Address faculty needs for archiving previous semesters' course materials.
 - A.5. Ensure building facilities are adequate to meet the needs of technological hardware in offices.

- B. Provide standard software configuration to all faculty offices
 - B.1. Determine a standard software configuration necessary for a faculty member.
 - B.2. Inventory all faculty offices to determine software needs.
 - B.3. Install the standard software to all faculty offices following a priority timetable.
 - B.4. Ensure faculty has access to the same software that students do in computer labs and classrooms.
 - B.5. Address software needs and provide support to help faculty manage electronic communication and electronic course materials more efficiently
- C. Provide specialized software to faculty offices based on departmental needs
 - C.1. Consult with each department to determine any specialty software necessary.
 - C.2. Inventory affected faculty offices to determine software needs.
 - C.3. Install specialized software, as necessary, following a priority timetable.
 - C.4. Assess need for lecture capture technology and implement based on need.
- D. Provide convenient access to secure printing from each faculty office
 - D.1.Inventory existing printer network configurations in regards to faculty offices.
 - D.2. Ensure faculty members have access to printers on each floor near their offices
- E. Provide support and training for teaching duties of faculty members inside and outside of the classroom
 - E.1. Provide centralized support staff that can respond to a comprehensive range of faculty questions about hardware and software use.
 - E.2. Promote faculty awareness of ongoing training issues provided by support staff
 - E.3. Recruit faculty and staff with an expertise in specific software to serve as volunteer to help other faculty members
- F. Provide support and training to maximize ability of faculty members and others in academic affairs to manage multiple duties (for example, committee work, advising, library duties, time management, course archiving, etc.)
 - F.1. Provide training and ongoing support in the use of current and future hardware and software
 - F.2. Inventory faculty needs for new kinds of training.
 - F.3. Develop training sessions to increase employee effectiveness in the use of existing hardware and software.
- G. Teaching/Learning Spaces Design flexible classroom and other teaching spaces that facilitate the appropriate, effective use of technology
 - G.1. Create and provide lighting design that allows flexible, multiple options for image projection and viewing.
 - G.2. Provide furniture that allows flexible configurations for both individual and group work that may include traditional teaching methods and/or technology-enhanced instruction.
 - G.3. Design and install environmental systems (e.g., HVAC, etc.) with minimal sound levels that do not interfere with faculty/student communication.
 - G.4. Install classrooms controls (light switches, screen controls, etc.) that are accessible from the instructors' space in addition to the entrance to the space.
 - G.5. Manage cords, electrical outlets and other hardware in a safe and effective manner.
 - G.6. Place classroom accessories (clocks, writing surfaces, coat hooks, etc) so that they do not interfere with image projection and are also effectively used by both faculty and students

- G.7. Provide a printing system with usage accountability and efficient, effective access to quality hard copy
- H. Public Spaces To create public spaces that provide for access and use of technology
 - H.1.Provide technology displays at high traffic locations to promote timely and effective communication among and between the College community and the world at large.
 - H.2.Provide ample, convenient electrical outlets to accommodate use of portable electronic devices.
- I. Online Learning Environment—To create a virtual environment that facilitates the best teaching practices and learning options.
 - I.1. Provide enterprise-wide implementation of the course management system (CMS) as a component of every course offered by the College
 - I.2. Investigate and select a comprehensive, Open Source CMS that fully supports web-enhanced, hybrid and distance courses
 - I.3. Provide enterprise-wide implementation of a comprehensive, real-time online learning environment including functions such as a whiteboard, two-way video, chat, etc. for online applications such as subject matter review, office hours, tutoring, and counseling
 - I.4. Evaluate, select, and integrate new and emerging online technologies into online learning, such as blogs, wikis, podcasting, lecture capture, voice activation, etc.
 - I.5. Integrate password-protected electronic Library resources into the CMS implementation for all College courses
 - I.6. Provide web-based source to track regular Quality Matters[™] reviews of online learning, including mandatory confirmation of compliance with review findings
 - I.7. Provide availability of all online learning components via portable electronic devices
 - I.8. Explore the feasibility of providing all uses of online learning with a robust, cost-effective portable electronic device
 - I.9. Evaluate, select, and integrate user authentication technologies in compliance with federal HEOA requirements
 - I.10. Provide a consistent, robust email system for all College users. This system should include storage and functionality equivalent to free e-mail sites, web-based access, collaboration tools, and synchronization with commonly available portable electronic devices.
 - I.11. Provide access to streamed, web-based, multi-media files to support the teaching and learning process, including storage, and delivery of media created in-house or purchased commercially.
 - I.12. Provide a web-based resource to allow for regular, timely change of user passwords to enhance security of personal data
 - I.13. Provide means for a single sign-on to the College portal that allows direct access to the Distance Education course management system
 - I.14. Explore the availability of an online grade book system including the passthrough of data from the enterprise-wide CMS implementation to the College grade reporting system
 - I.15. Provide access for students to portal Groups to encourage collegiality and collaboration for educational, as well as social relationships

- J. Expand technology access to students.
 - J.1. Assess the need for expanding availability and access hours when students can use non-wireless PC's for with network access
 - J.2. Provide a means to loan technological equipment (digital cameras, laptops, Kindles, etc) to students for school-related projects and activities
 - J.3. Expand computer lab facilities and support to assist students in the creation of digital media projects and portfolios for related to coursework and participation in campus organizations
 - J.4. Provide students with social networking tools to complement student organizations in student life
 - J.5. Assess student needs for accessing course content, registration, and other student services via handheld mobile devices, and implement accordingly
- K. Assess opportunities to expand broadband home access to students
 - K.1. Explore the possibility of providing student access in this area by seeking outside avenues of support, including City, business or grant funding

2009-2011 Technology Strategic Plan Activity Matrices

The responsibility matrices are in draft form.

I. PRIVACY / SECURITY

| | ACTIVITY | TARGET DATE | AREA OF RESPONSIBILITY | RESOURCE ALLOCATION |
|-----|---|--|--|------------------------|
| A.1 | Complete analysis of appropriate information resource policies and procedures to align with best practices. | Jan 2010 | ITS ² | |
| A.2 | Conduct an annual audit of the security program. | Annually with quarterly reviews | External Audit Firm, ITS | |
| A.3 | Conduct privacy and security awareness training for all community members. | On going | Human Resources , Professional Development | |
| B.1 | Restrict accessibility of personal information stored within the ERP. | In progress; Phase I May 2009, Phase II June 2010 | ITS | |
| B.2 | Explore techniques or technologies to encrypt or mask data in non-production application environments | In progress, June 2010 | ITS | |
| B.3 | Explore techniques or technologies to encrypt and protect database (Oracle and SQL) data files | In progress, June 2010 | ITS | |
| C.1 | Develop an e-discovery plan related to the retention of data in the following areas: ERP data; Brio metadata; Network data ;Email; Local Storage; Telephony ³ Issues; Course Materials | June 2010 | ITS, General Counsel | |
| D.1 | Engage in cooperation with the College General Counsel, the review of all document retention standards for both electronic and paper | In progress through the GC's office | All College Divisions | |
| D.2 | Engaged in cooperation with the College General Counsel, the review of | In progress through the | All College Divisions | |

² Information Technology services department which includes Information Support Services (ISS) and Technology Support Services (TSS).

³ Telephony is the technology and manufacture of telephone equipment.

| ACTIVITY | TARGET | AREA OF | RESOURCE |
|---|-------------|----------------|------------|
| | DATE | RESPONSIBILITY | ALLOCATION |
| the following regulatory changes for their impact to the College; RFR ⁴ , HEOA ⁵ , FERPA ⁶ , HIPPA ⁷ , e-Discovery ⁸ . | GC's office | | |

II. **CONTINUITY PLANNING AND DISASTER RECOVERY**

| | ACTIVITY | TARGET DATE | AREA OF RESPONSIBILITY | RESOURCE ALLOCATION |
|-----|---|-----------------------------------|----------------------------------|------------------------|
| A.1 | Create a divisional ITS business continuity plan that encompasses ISS and TSS. | Dec 2009 | ITS | |
| A.2 | Identify and document recovery point objectives and recovery time objective for critical systems. | June 2010 | All College Divisions | |
| A.3 | Establish a central electronic repository of procedural documentation for key processes. | Dec 2010 | ITS | |
| A.4 | Conduct awareness training for ITS staff about the business continuity plan. | Ongoing and quarterly | ITS | |
| A.5 | Update the master hardware and software inventory to assure identification and inclusion of all key assets. | Ongoing; review quarterly | ITS | |
| A.6 | Ensure that adequate insurance coverage is secured to allow for replacement of hardware and software. | In progress FY09 | Risk Manager | |
| B.1 | Review existing backup and recovery processes and procedures for comprehensiveness and appropriateness and improve where necessary. | Dec 2009 | ITS | |
| B.2 | Test recovery procedures to confirm procedures satisfy recovery time and recovery point objectives. | Mar 2010; ongoing quarterly | ITS and associated business area | |
| В.3 | Implement a schedule of and conduct planned tests of portions of the ITS divisional continuity plan. | Mar 2010 | ITS | |

⁴ Red Flag Rule – identity theft protection regulation ⁵ Higher Education Opportunity Act ⁶ Family Educational Rights and Privacy Act ⁷ Health Insurance Portability and Accountability Act ⁸ Electronic Discovery

| | ACTIVITY | TARGET DATE | AREA OF RESPONSIBILITY | RESOURCE ALLOCATION |
|-----|--|-----------------------|--|------------------------|
| B.4 | Explore capabilities for end user testing of applications and key systems from off-site locations | Mar 2010 | ITS and associated business area | |
| C.1 | Implement a formal change management process, including approval, notification and documentation procedures. | Jun 2010 | ITS | |
| C.2 | Implement a regularly scheduled formal review of the ITS divisional business continuity plan. | Ongoing; Quarterly | ITS | |
| C.3 | Review the business continuity plans and contingency plan testing of any service provider or vendor providing recovery services. | Annually | ITS, Finance & Planning, General Counsel | |
| D.1 | Explore data de-duplication as a method of ensuring recovery of critical business processes. | Dec 2009 | ITS | |
| D.2 | Explore server virtualization as a method of ensuring recovery of critical business processes. | Dec 2009 | ITS | |
| D.3 | Explore voice and data redundancy as a method of supporting critical business operations. | Dec 2009 | ITS | |
| D.4 | Explore telecommunication services, such as CallPilot, zone paging, emergency broadcasting, to be used as methods of communicating recovery efforts. | Dec 2009 | ITS | |

III. TECHNOLOGY INFRASTRUCTURE

| | ACTIVITY | TARGET DATE | AREA OF RESPONSIBILITY | RESOURCE ALLOCATION |
|-----|---|-------------|--|------------------------|
| A.1 | Implement traffic shaping to give priority to traffic in support of academic and administrative efforts | Jan 2010 | ITS | |
| A.2 | Evaluate the implication of the convergence of voice and data and implement identified solutions | Jan 2010 | ITS | |
| A.3 | Implement secure printing for faculty and staff | FY11 | ITS, Academic Computing, Planning & Finance | |
| A.4 | Improve in the kiosk systems for | Summer 2010 | ITS, Student | |

| | ACTIVITY | TARGET DATE | AREA OF RESPONSIBILITY | RESOURCE ALLOCATION |
|-----|---|--|---|------------------------|
| | student use. | | Affairs, Facilities Management | |
| A.5 | Review the need for expansion of web-based services and social networking services in support of student success initiatives | FY11 | Academic Affairs, ITS, General Counsel, Student Affairs, Marketing | |
| A.6 | Support administrative priorities relating to data collection and analysis | Ongoing | ITS | |
| A.7 | Develop a project management procedure that aligns with College priorities and functions | FY10 | ITS | |
| B.1 | Explore alternate methods, such as Power over Ethernet, of providing power to network devices | In progress – June 2009 | ITS | |
| B.2 | Ensure appropriate allocation and stability of universal power for all data and/or voice closet locations | In progress; FY10 implementation | ITS, Facilities Management | |
| C.1 | Improve the lease replacement cycle through examination of the lease standard equipment in relation to the equipment spec of 2009. | In progress; FY10 | ITS, Facilities Management | |
| C.2 | Integrate infrastructure and technology reviews into the management of capital projects | As needed ongoing | ITS, Planning & Finance | |
| D.1 | Increase the wireless capability for all campus areas. | FY11 | ITS | |
| D.2 | Improve the capability for Intranet connectivity for all staff and faculty while away from the campus wide area network. | FY10 review; implementation FY11 | ITS | |
| E.1 | Support the increase of student retention rates by developing letters to communicate status and reports to identify students with early warning indicators. | Complete | Student Affairs, ITS | |
| E.2 | Support student services by providing necessary assistance to implement self-service functionality for a paperless admissions application process and student compliance requests and what-if analysis. | In progress; CAPP pending May 2010 | Student Affairs, ITS | |
| E.3 | Support student services by providing necessary assistance to support additional tuition payment options. | Oct 2009 | Student Affairs, Planning & Finance, ITS | |
| E.4 | Support student services by providing | Jan 2010 | Student Affairs, | |

| ACTIVITY | TARGET DATE | AREA OF RESPONSIBILITY | RESOURCE ALLOCATION |
|--|-------------|------------------------|------------------------|
| additional secured, self-service components as critical to assist the enrollment management services as a "single point of service" process | | Facilities, ITS | |

IV. COMMUNICATION

| | ACTIVITY | TARGET | AREA OF | RESOURCE |
|-------|---|----------------------|--|------------|
| | | DATE | RESPONSIBILITY | ALLOCATION |
| A.1 | Establish a policy on appropriate use of wikis, blogging, text messaging, virtual worlds | Sept 2010 | TCC, IWC ⁹ , General Counsel | |
| A.2 | Establish a policy on approved communication protocols based upon targeted audience (student, employee, faculty, staff, other) | Dec 2010 | TCC, IWC, General Counsel | |
| B.1 | Establish a policy regarding the appropriate timeliness of information sharing from ITS to the community concerning technology-related issues or events | Mar 2011 | TCC, IWC, General Counsel | |
| C.1 | Develop a centralized point of contact for all technology issues | Jan 2010 | ITS | |
| C.2 | Develop an ITS website | Jan 2010 | ITS | |
| C.3 | Improve the online communications ability for individuals and groups associated with the College. | June 2010 | ITS, Marketing & Communications | |
| C.3.i | Evaluate options for a communications and collaboration suite. | Dec 2010 | ITS,TCC | |
| D.1 | Review all email systems currently in-use by the College constituents and the legal ramifications associated with that use. | June 2010 | ITS, General Counsel | |
| D.2 | Determine an email system as a standard. | June 2010 | Cabinet | |
| D.3 | Implement the standard across all college constituents. | FY12 | ITS | |
| D.4 | Develop policies/guidelines that are required for litigation issues. | June 2010 | General Counsel | |
| D.5 | Develop and communicate the lack of privacy when using email. | Ongoing; Aug 2009 | Academic Affairs, Professional | |

⁹ Institution Wide Committee

| | ACTIVITY | TARGET DATE | AREA OF RESPONSIBILITY Development | RESOURCE ALLOCATION |
|-----|--|----------------|--|------------------------|
| D.6 | Develop standards for students in the use of email; netiquette. | Aug 2009 | Academic Computing, Student Affairs | |
| D.7 | Develop standards for staff & faculty in the use of email; netiquette. | Jan 2010 | TCC | |
| D.8 | Implement an appropriate email and web site disclaimer process. | Jan 2010 | ITS, TCC, Cabinet | |
| E.1 | Implement analytics/tracking of portal pages to understand how portal is used. | Jan 2010 | ITS | |
| E.2 | Upgrade portal software to current version to take advantage of new functionality in the area of security and targeted communications. | Jan 2010 | ITS | |
| E.3 | Develop new roles as determined by the review and needs of the community. | Jan 2010 | ITS, Student Affairs, Academic Affairs | |
| E.4 | Review the login page for the portal to ensure communication of important information. | Jan 2010 | ITS, Student Affairs, Academic Affairs | |
| E.5 | Review Channel administration and guidelines. | Jan 2010 | ITS, Student Affairs, Academic Affairs | |
| E.6 | Review all channel content for duplication and consistency with ccp.edu campus-wide web site. | Jan 2010 | ITS, Student Affairs, Academic Affairs | |
| E.7 | Review all roles associated with the portal and associated tab-level views. | Jan 2010 | ITS, Student Affairs, Academic Affairs | |

V. TEACHING/LEARNING INSTRUCTIONAL RESOURCES

| | ACTIVITY | TARGET DATE | AREA OF RESPONSIBILITY | RESOURCE ALLOCATION |
|--------|--|------------------------|--|------------------------|
| A.1.i | Develop a lease replacement strategy for faculty offices. | Dec 2009 | Academic Computing, Planning & Finance, ITS | |
| A.1.ii | Develop a needs assessment to ensure appropriate hardware and software is available in faculty | Dec 2009; Quarterly | Academic Computing, Planning & | |

| | ACTIVITY | TARGET DATE | AREA OF RESPONSIBILITY | RESOURCE ALLOCATION |
|----------|---|----------------------------------|--|------------------------|
| | offices.Provide a scheduled refresh of assessment information. | | Finance, ITS | |
| A.1.ii.1 | Provide a scheduled refresh of assessment information. | Quarterly | Academic Computing, ITS | |
| A.1.iii | Provide updated hardware as dictated by the needs assessment. | Ongoing per lease cycle | ITS | |
| A.2 | Determine future hardware needs of faculty in their offices and provide it based on priority (example: microphones, speakers, cameras, storage devices, etc. needed to create course materials or to allow distance education faculty to work more effectively from campus offices) | Ongoing; Quarterly review | Academic Computing, ITS | |
| A.3 | Determine hardware needed to meet faculty duties for work performed outside of their offices (conferences, committees, meetings, etc). | Ongoing; Quarterly review | Academic Computing, ITS | |
| A.4 | Address faculty needs for archiving previous semesters' course materials. | June 2010 | Academic Computing, ITS | |
| A.5 | Ensure building facilities are adequate to meet the needs of technological hardware in offices. | June 2009 | Academic Affairs, ITS, Facilities Management | |
| B.1 | Determine a standard software configuration necessary for a faculty member. | Aug 2010; Quarterly review | Academic Affairs, ITS | |
| B.2 | Inventory all faculty offices to determine software needs. | Aug 2010; Quarterly | ITS | |
| B.3 | Install the standard software to all faculty offices following a priority timetable. | On going | ITS | |
| B.4 | Ensure faculty has access to the same software that students do in computer labs and classrooms. | Quarterly review | ITS, Academic Computing | |
| B.5 | Address software needs and provide support to help faculty manage electronic communication and electronic course materials more efficiently | Ongoing | Academic Affairs | |
| C.1 | Consult with each department to | Quarterly | Academic | |

| | ACTIVITY | TARGET DATE | AREA OF RESPONSIBILITY | RESOURCE ALLOCATION |
|-----|---|--|---|------------------------|
| | determine any specialty software necessary. | | Computing | |
| C.2 | Inventory affected faculty offices to determine software needs. | Quarterly | ITS | |
| C.3 | Install specialized software, as necessary, following a priority timetable. | Ongoing following C.1 & C.2 | ITS | |
| C.4 | Assess need for lecture capture technology and implement based on need. | Aug 2010 | Academic Computing, ITS | |
| D.1 | Inventory existing printer network configurations in regards to faculty offices. | Aug 2010 | ITS | |
| D.2 | Ensure faculty members have access to printers on each floor near their offices | FY11 | Planning & Finance, ITS | |
| E.1 | Provide centralized support staff that can respond to a comprehensive range of faculty questions about hardware and software use. | FY11 | ITS | |
| E.2 | Promote faculty awareness of ongoing training issues provided by support staff | FY11 | Academic Computing | |
| E.3 | Recruit faculty and staff with an expertise in specific software to serve as volunteer to help other faculty members | Ongoing | Academic Affairs, HR | |
| F.1 | Provide training and ongoing support in the use of current and future hardware and software | Ongoing | Academic Computing | |
| F.2 | Inventory faculty needs for new kinds of training. | Quarterly | Academic Computing | |
| F.3 | Develop training sessions to increase employee effectiveness in the use of existing hardware and software. | Ongoing | Academic Computing, Professional Development | |
| G.1 | Create and provide lighting design that allows flexible, multiple options for image projection and viewing. | In progress as detailed by campus expansion projects | Facilities Management, Academic Computing, Purchasing | |
| G.2 | Provide furniture that allows flexible configurations for both | In progress as detailed by campus | Facilities Management, Purchasing | |

| | ACTIVITY | TARGET DATE | AREA OF RESPONSIBILITY | RESOURCE ALLOCATION |
|------------|--|--|---|------------------------|
| | individual and group work that may include traditional teaching methods and/or technology-enhanced instruction. | expansion projects | | |
| G.3 | Design and install environmental systems (e.g., HVAC, etc.) with minimal sound levels that do not interfere with faculty/student communication. | In progress as detailed by campus expansion projects | Facilities Management, Purchasing | |
| G.4 | Install classrooms controls (light switches, screen controls, etc.) that are accessible from the instructors' space in addition to the entrance to the space. | In progress as detailed by campus expansion projects | Facilities Management, Purchasing | |
| G.5 | Manage cords, electrical outlets and other hardware in a safe and effective manner. | In progress as detailed by campus expansion projects | Facilities Management, ITS | |
| G.6 | Place classroom accessories (clocks, writing surfaces, coat hooks, etc) so that they do not interfere with image projection and are also effectively used by both faculty and students | In progress as detailed by campus expansion projects | Facilities Management | |
| G.7 | Provide a printing system with usage accountability and efficient, effective access to quality hard copy | FY10 | Academic Computing, ITS, Purchasing, Planning & Finance | |
| H.1 | Provide technology displays at high traffic locations to promote timely and effective communication among and between the College community and the world at large. | FY10 | Facilities Management, ITS, AV ¹⁰ | |

¹⁰ Audio Visual department

| | ACTIVITY | TARGET DATE | AREA OF RESPONSIBILITY | RESOURCE ALLOCATION |
|-----|--|--|--|------------------------|
| Н.2 | Provide ample, convenient electrical outlets to accommodate use of portable electronic devices. | In progress as detailed by campus expansion projects | Facilities Management | |
| l.1 | Provide enterprise-wide implementation of the course management system (CMS) as a component of every course offered by the College | FY11-FY12 | Academic Affairs, ITS | |
| 1.2 | Investigate and select a comprehensive, Open Source CMS that fully supports webenhanced, hybrid and distance courses | FY11-FY12 | Academic Affairs, ITS | |
| 1.3 | Provide enterprise-wide implementation of a comprehensive, real-time online learning environment including functions such as a whiteboard, two-way video, chat, etc. for online applications such as subject matter review, office hours, tutoring, and counseling | FY11-FY12 | Academic Affairs, ITS | |
| 1.4 | Evaluate, select, and integrate new and emerging online technologies into online learning, such as blogs, wikis, podcasting, lecture capture, voice activation, etc | FY11 | Academic Affairs, ITS, General Counsel | |
| 1.5 | Integrate password-protected electronic Library resources into the CMS implementation for all College courses | FY11 | Academic Affairs, ITS | |
| 1.6 | Provide web-based source to track regular Quality MattersTM reviews of online learning, including mandatory confirmation of compliance with review finding | FY10 | Academic Affairs | |
| 1.7 | Provide availability of all online | FY10-FY12 | ITS, Academic | |

| | ACTIVITY | TARGET DATE | AREA OF RESPONSIBILITY | RESOURCE ALLOCATION |
|------|--|---|---|------------------------|
| | learning components via portable electronic devices | | Affairs | |
| 1.8 | Explore the feasibility of providing all uses of online learning with a robust, costeffective portable electronic device | FY10-FY12 | ITS, Academic Affairs | |
| 1.9 | Evaluate, select, and integrate user authentication technologies in compliance with federal HEOA requirements | FY10-FY12 | ITS, General Counsel | |
| I.10 | Provide a consistent, robust email system for all College users. This system should include storage and functionality equivalent to free e-mail sites, web-based access, collaboration tools, and synchronization with commonly available portable electronic devices. | FY11 | ITS | |
| I.11 | Provide access to streamed, web-based, multi-media files to support the teaching and learning process, including storage, and delivery of media created in-house or purchased commercially. | FY11 | ITS, Academic Affairs | |
| I.12 | Provide a web-based resource to allow for regular, timely change of user passwords to enhance security of personal data | FY10 | ITS | |
| I.13 | Provide means for a single sign-on to the College portal that allows direct access to the Distance Education course management system | FY10 Review FY11 Pilot FY12 Implementation | ITS, Distance Education, Academic Affairs | |
| I.14 | Explore the availability of an online grade book system including the pass-through of | FY10 | Academic Affairs, ITS | |

| | ACTIVITY | TARGET DATE | AREA OF RESPONSIBILITY | RESOURCE ALLOCATION |
|------|--|-------------|---|------------------------|
| | data from the enterprise-wide CMS implementation to the College grade reporting system | | | |
| I.15 | Provide access for students to portal Groups to encourage collegiality and collaboration for educational, as well as social relationships | FY10 | ITS, Student Affairs, Academic Affairs | |
| J.1 | Assess the need for expanding availability and access hours when students can use nonwireless PC's for with network access | FY11 | Academic Computing, Student Affairs, ITS | |
| J.2 | Provide a means to loan technological equipment (digital cameras, laptops, Kindles, etc) to students for school-related projects and activities | FY12 | Academic Affairs | |
| J.3 | Expand computer lab facilities and support to assist students in the creation of digital media projects and portfolios for related to coursework and participation in campus organizations | FY11 | Academic Affairs, Student Affairs | |
| J.4 | Provide students with social networking tools to complement student organizations in student life | FY11 | Academic Affairs, ITS | |
| J.5 | Assess student needs for accessing course content, registration, and other student services via handheld mobile devices, and implement accordingly | | Student Affairs | |
| K.1 | Explore the possibility of providing student access in this area by seeking outside avenues of support, including City, business or grant funding | FY11 | Student Affairs, Academic Affairs | |