

III.C Technology Resources

Technology resources are used to support student learning programs and services and to improve institutional effectiveness. Technology planning is integrated with institutional planning.

III.C.1 The institution assures that any technology support it provides is designed to meet the needs of learning, teaching, college-wide communications, research, and operational systems.

III.C.1.a Technology services, professional support, facilities, hardware and software are designed to enhance the operation and effectiveness of the institution.

DESCRIPTIVE SUMMARY

Technology at Citrus College is an integral component of multiple aspects of learning, teaching and student support as well as the foundation and infrastructure for administrative and business processing. Students utilize technology to apply to the college, register for classes, and complete coursework. Faculty use technology to develop curriculum, obtain class rosters, input course grades and provide a distance-learning environment. Staff employ technology for purchasing, scheduling, managing student data, communicating, and managing their daily work. Managers rely on technology for data and statistical analysis to support planning and decision-making.

Technology Implementation and Decision Making

To meet the expanding integration of technology in these aspects of college life, Citrus College has chosen to focus its technology resources on the implementation of available technology applications. This change to a technology "implementation" environment is a major departure from prior technology efforts of developing and supporting institutionally created, i.e. home-grown applications. The most important step, taken during the current reporting period, was the implementation of Sungard's Banner Enterprise Resource Planning (ERP) system. The Banner System, known at Citrus College as WingSpan, is an essential component of the college's administrative system.

The change in technology focus was accompanied by a change in technology decision-making. Functional area managers and staff from student services, instructional services and administrative services now partner with the Technology and Computer Services department (TeCS) to plan and implement

technology projects. To ensure the Banner WingSpan system continues to meet the college needs, a Banner Working Group was formed to set priorities for future upgrades and to coordinate implementation. This cross-functional group is composed of functional area leaders from credit and non-credit instruction; student services offices of admissions and records, counseling, and financial aid; administrative offices of finance and human resources; and representative from the TeCS department. Instructional services, represented by several deans, meets regularly with the TeCS department to plan and coordinate upgrades to classrooms and teaching laboratories. A subcommittee of the Academic Senate, the Academic Computing Committee, has met with representatives from the TeCS Department to clarify teaching needs in the classroom. The TeCS Department is now an integral part of college-wide construction with a representative sitting on the Construction Projects Committee to ensure that technology is considered in all building projects. **(III-C-1, III-C-2, III-C-3)**

In addition, in support of this change in focus, technology is integrated into many aspects of governance at Citrus College. The technology governance committee, the College Information Technology Committee (CITC), was formed to develop policies and procedures related to technology and to undertake technology planning for the college. The CITC developed the *Technology Master Plan* in June 2009 not only to guide the implementation of technology at the college, but also to support of the educational, facilities and strategic plans. In addition to the CITC, the TeCS department has representation on many governance committees, including physical resources, fiscal resources, institutional research, educational programs and steering. Also, the chief information services officer (CISO) attends the president's cabinet meetings and board of trustees meetings. **(III-C-4, III-C-5, III-C-6, III-C-7, III-C-8, III-C-9)**

Organizations Supporting Technology

The chief information services officer, who reports directly to the superintendent/president, leads the TeCS department. The TeCS department manages the college network and related infrastructure, the central server room, the telephone system and related infrastructure, desktop computers and related peripherals for faculty, staff, classrooms and laboratories, and the administrative applications including the Banner WingSpan system and related support applications. The TeCS department has a staff of 16 including the CISO, two supervisors and 13 classified staff. Student workers provide help desk service and support for the open computer lab. **(III-C-10)**

In 2006, the TeCS department was restructured to enhance its ability to support the college's operations and improve effectiveness. Three functional groups were created to support each of three key technology areas. The network, central computing and telecommunications group has responsibility for all networks, the college website, e-mail, central hardware with associated software, security, telephones and construction support. The technology operations and support services group has responsibility for instructional computer labs, classroom and staff desktop support, instructional software and hardware in classrooms and labs, help desk support and training. The instructional and administrative systems group implements and maintains all administrative software applications and is responsible for supporting all state and federal reporting requirements. In support of the Banner WingSpan system, an ERP coordinator was appointed to lead the continuing implementation and upgrading of the Banner WingSpan system. The coordinator chairs the Banner working group. **(IIIC-10)**

In addition to the TeCS department, several offices and departments provide technology support and facilities. The library provides an extensive online research environment, open computer labs, and computer classrooms. The Audio Visual Department, managed by the dean of library and learning services, provides audio visual equipment upon request and assists in the maintenance of classroom projection equipment. The distance education office, managed by the dean of business, computer systems and information services (CSIS), and distance education, provides support for the Blackboard course management system including training for faculty using Blackboard, support for students using Blackboard and management of the remote Blackboard system. The Reprographics Center manages all technology support for publications and printing. The Office of Purchasing and Warehouse manages the college purchasing system, Escape. Finally, as described below, several of the college systems are fully hosted and maintained off-site by third party vendors.

Student Learning Outcomes

As student learning outcomes (SLOs) have become increasingly integrated throughout the college, technology is playing a key role in developing, assessing, and analyzing them. In 2007, the college began using Governet's CurricUNET curriculum management system. SLOs had already become integral to course outlines of record. The implementation of CurricUNET allows for easy departmental review of course-level SLOs as well as the inclusion of SLOs in degrees and certificates. CurricUNET also simplifies the tracking of the courses that had developed SLOs.

Given the large number of courses that have had to be reviewed by the Curriculum Committee for SLO assessment, moving to CurricUNET has also significantly reduced the amount of paper used by this committee. **(IIIC-11)**

Several programs have begun using the Blackboard course management system as a key component of their SLO assessment process. This allows direct statistical assessment of SLOs either on a section-by-section or course-wide basis. The Office of Institutional Research (OIR) has been able to provide timely data to programs and individual courses using the operational data storage (ODS) component of the Banner WingSpan system including demographic data that give a more complete and meaningful picture of SLO assessment information. In addition, Banner WingSpan data on courses are available to the curriculum chair and student learning outcomes and assessment coordinator to facilitate tracking of SLO completion. Finally, an SLO assessment committee, the HotShots, is reviewing options for developing a central repository of samples, resources and reports for use by the college community. **(IIIC-12)**

Teaching and Learning Needs

Instructional technology supports students with computer equipment and software applications in classrooms and laboratories. Citrus College has robust classroom and laboratory resources with 105 classrooms incorporating podium system projection equipment and 39 computer classrooms and labs supporting a variety of programs in all instructional divisions. The faculty and deans define the instructional needs for the classrooms and labs. The TeCS department and the instructional deans then work cooperatively to deliver the technology. As noted above, Distance Education supports and manages the Blackboard course management system. During spring 2009, 129 full distance education classes, over 100 distance education/traditional hybrid classes and 300 traditional classes used Blackboard resources. **(IIIC-13, IIIC-14, IIIC-15)**

Several instructional departments provide specialized technology. The Recording Arts Department maintains a state-of-the-art recording studio. The Nursing Program provides human simulation systems that provide real-life situations for nursing students. A video capture system records students responding to the simulations enabling instructors to immediately review student performance and provide feedback. The automotive technology program provides students with a fully computerized Toyota training environment.

The TeCS department collaborates with the deans of student services to provide technology that supports students in many ways. TeCS coordinates directly with the dean of admissions and records to support reporting and processing needs for all aspects of student records. The Financial Aid Office works closely with the TeCS department to ensure that the Banner WingSpan system upgrades meet the annual requirements for financial aid processing. TeCS also works closely with the dean of counseling to support the SARS-SUITE applications for counseling. **(IIIC-1)**

Collegewide Communication

In 2006, a cross-functional task force led a comprehensive restructuring of the college's web environment, consolidating four separate Internet sites to form the current site. The new site was developed using a content management system (CMS) provided by Sector Point. The task force designed a format that allows easy and consistent navigation throughout the website while providing flexibility for individual offices and departments to present their web pages. The TeCS department provides design support and training to assist offices and departments to maintain their sites. An intranet site was also developed for use by Citrus College faculty and staff. The intranet enables working groups to share materials. The intranet also provides a platform to offices and departments to provide information, resources and forms to the entire college community. The Haugh Performing Arts Center also developed a new Internet site using the Sector Point tools.

All faculty and staff have access to e-mail from both on and off campus. E-mail boxes, maintained on a central server, average 250 megabytes in size. Once the size limit is reached, users have the option to archive e-mails either to a local desktop drive or to a centrally provided server. The college has implemented an emergency communications tool, Citrus Alert, using Blackboard's Connect-ED tool. In the event of an emergency, the college is able to communicate quickly with students, faculty and staff via phone, e-mail and text messaging.

The college's student portal system, which will be implemented on the Banner Luminous platform, is under development. This portal, developed as a component of the Banner WingSpan system, will link directly to student data and provides students with a single point of access to all online materials and information. The portal will also provide a platform for departments and divisions to communicate to the entire student body or to defined groups of students.

Research

The Office of Institutional Research works closely and collaboratively with the TeCS department to meet the research and reporting needs of the college. As noted above, the OIR office and the TeCS department have developed a shared data environment using the operational data storage (ODS) component of the Banner WingSpan system.

Transactional and longitudinal data from both the college's and the California Community College Chancellor Office's (CCCCO) databases are maintained in the ODS and made available to the OIR staff. In addition, the TeCS department and the OIR have developed a second research database that accommodates historic data from the college's legacy system and enables the OIR office to combine current and future data from the Banner WingSpan system. The OIR office implemented an online work request environment in summer 2009 to track and manage their own reporting requests. **(IIIC-16)**

Operational Systems

During the current reporting period, the college has almost completely upgraded its administrative applications and supporting hardware. The college technology environment is network based. Servers with large storage capacity allow faculty to provide file sharing with students in computer labs in addition to separately providing secure private data storage and sharing. Staff use the file-sharing environment on the servers to create information and data resources for use by all members of a department or office. A variety of hardware platforms, including Intel-based desktops as well as Apple computers, are provided for faculty and staff. Every network user has access to word processing, presentation, spreadsheet, database and communication software. In addition, many discipline-specific packages are available. Network servers provide centralized printing and file sharing support to all administrative and instructional users. **(IIIC-17)**

The core of the administrative systems is the Banner WingSpan system, which includes the student, financial aid and human resource modules. Several related applications are integrated with the Banner WingSpan system to support college information processing needs. A document processing system, Xtender, and a reporting tool, Crystal Reports, are directly linked to the Banner WingSpan system. Admissions and records, financial aid and fiscal services use Xtender extensively to store and access supporting documentation. The TeCS department and OIR utilize Crystal Reports to develop reporting tools that can be accessed by student and instructional services offices to run reporting as needed. Other applications integrated with the Banner WingSpan system

include third party support applications for forms printing (Evisions), online fee payment (EOP&S) and computer job scheduling (AppWorx).

Several additional applications not directly integrated with the Banner WingSpan system have been implemented or expanded to support specific college processing needs. The SARS-SUITE provides counselors with appointment tracking, early alert functions, reminder calls and reporting support. Escape is a procurement application implemented by the Purchasing Department to support paperless purchasing. Instructional services is implementing an enrollment management application (EMS) that allows deans to accurately management enrollment data. Collegenet's Resource 25 enables the college to coordinate academic room scheduling with meeting and event management. The NoHo Software application provides administrative processing support for the childcare center. To record student attendance in computer, science, music and dance labs, an attendance tracking system, CI Tracker, was implemented that records not only which course a student worked on while in the lab but also the time spent on the assignment. A specialized system for tracking nursing student data is being developed by an outside vendor to support the unique needs of the nursing program.

To maximize the ability of the college to provide technology applications and support with limited staff, the college has chosen to implement several systems that are fully hosted by the application provider. As noted above, the college uses Blackboard as the course management system in a fully hosted environment. To provide current enrollment information to Blackboard, the college implemented an interface between the Banner WingSpan system and the hosted Blackboard environment. Curriculum development and maintenance has been automated with the CurricUNET application, again fully hosted and maintained offsite. Assessment testing is supported by the College Board's Accuplacer testing systems, which is also hosted offsite. Students access the Accuplacer testing services from the Testing Center on campus, and, when testing is complete, their scores are automatically uploaded to the Banner WingSpan system. Community education is implementing a fully hosted third party support environment, Lumens, in the spring of 2009 to manage course advertisement, student records and faculty assignments. In February 2009, Citrus College began using the CCCApply application system supported by the California Community College Chancellor's Office. Financial systems continue to be fully supported by Los Angeles County Office of Education including accounting, payroll and some human re-

sources functions. The human resources department implemented an applicant tracking system hosted by PeopleAdmin. **(IIIC-18)**

SELF EVALUATION

The college meets this standard. Technology is utilized in multiple offices and departments to support the college mission to deliver high quality instruction by enhancing the operations and effectiveness of the institution. Applications have been implemented that provide new tools and more data and information to assist staff and faculty.

The technology philosophy change from developing home grown applications to implementation of commercial products has brought functional users more fully into decision and implementation roles for technology, and allowed the college to utilize technology in a more complete and sophisticated way than ever before. The CITC, with representation from all college constituencies, has been established to develop formal technology policies and to develop a college technology plan. This planning is being closely coordinated with the overall *Educational Master Plan*. Technology decision-making for specific offices and programs is inclusive of those working in and often those served by all offices involved.

Also, technology supports the growth of learning outcomes assessment. Already, individual courses and offices have begun evaluating the effectiveness of the SLOs in classrooms and course work and feeding back this analysis into the decision-making process at the program level.

PLANNING AGENDA

None.

III.C.1.b. The institution provides quality training in the effective application of its information technology to students and personnel.

DESCRIPTIVE SUMMARY

A variety of resources at Citrus College provide technology training. Training is provided in several formats including one-on-one help for specific tasks; workshops, which teach general applications; working groups, which focus on recent updates and improvements to applications; and credit and non-credit classes, which provide general and discipline specific technology education. Participants in formal training sessions evaluate the training sessions to validate course content and quality of training delivery and to provide feedback to training instructors.

Student Training

Technology is integrated in a wide variety of course offerings. Citrus College is a member of the Microsoft Information Technology Academy (ITA). ITA provides computer-based training for all Microsoft products that can be incorporated into existing courses or provides independent modules. Computer classrooms and labs provide specialized applications where students learn and refine technology skills. In the division of business, CSIS and distance learning, programming courses are taught in the Department of Computer Science and Information while courses related to administrative office support are taught in Office Technology and Computer Applications Hardware Department. The Engineering Technology Department, in the division of Career and Technical Programs, offers networking and computer-aided design (CAD) courses. Finally, most divisions including those mentioned above as well as physical, natural and health sciences, fine and performing arts, and the library provide specialized training in discipline-specific technology. **(IIIC-19)**

Several offices and departments provide technology training for students. Distance Education provides web-based and in-person training for students using Blackboard. Disabled Student Programs and Services (DSP&S) provides a technology lab that teaches students how to use specialized technology for both course work and student services tasks such as registration. Student workers and staff members in admissions and records are available to help students learn to navigate the online Banner WingSpan admission and registration processes. The admissions and records office set up 10 new kiosks to provide student access for the Banner WingSpan system. The library conducts orientation workshops at faculty request to acquaint students with library resources including the online library environment. The library also provides online help for students using the wide range of online materials available for reference and research. **(IIIC-20, IIIC-21)**

Faculty and Staff Training

Several departments provide technology training for staff and faculty. TeCS provides, in scheduled workshops and in one-on-one work sessions, desktop training in general applications such as Microsoft Word and Excel. The one-on-one work sessions focus on the detailed needs of the trainee and meet the specific needs of one office or department. ITA is also available for faculty and staff training. This training can be used to prepare participants for Microsoft certification exams. As each module of the Banner WingSpan system is implemented, new training needs for staff and faculty have followed. For new modules and applications, consultants provide train-

ing for functional area experts and technical staff. A TeCS department staff member or a trained member of the respective office provides detailed training for staff via one-on-one sessions. **(IIIC-22)**

The deans and academic divisions support staff require specific training with each scheduling cycle due to upgrades to the Banner WingSpan system. A team of staff members from instruction, admissions and records, and TeCS provides this training. Following each training session, instructional staff members who would like additional help developing the academic schedule in Banner can attend work sessions. This Banner WingSpan instructional training team also conducts review sessions to help faculty obtain rosters and input grades. Consultants provide training for offices that require annual Banner WingSpan upgrades, such as financial aid. **(IIIC-23)**

Distance Education provides training each semester for faculty using Blackboard. Both introductory and advanced training is available. Distance Education also offers one-on-one support for faculty needing assistance developing courses in Blackboard. In addition, faculty from across campus present workshops demonstrating how they have applied Blackboard to their courses. The distance education office has taken the lead to provide overall technology training to faculty by coordinating Technology Toolbox training sessions. These sessions, offered during flex days, are open to both new and returning faculty. During these sessions, a team of staff members from distance education, instruction services, admissions and records, and the TeCS department provide an overview of the technology tools and applications available to faculty. **(IIIC-24)**

In conjunction with the TeCS department, specific programs offer specialized technology training as needed. For example, training in CurricUNET is presented at the first Curriculum Committee meeting each academic year, as part of the student learning outcomes assessment workshops (SLO marathons), and as one-on-one training provided by members of the Curriculum Technical Review Committee.

SELF EVALUATION

The college meets this standard. Training workshops are provided for general use applications. Specialized workshops are conducted to provide on-going training when applications are updated. Also, training for faculty/staff desktop environments is also done on a one-on-one basis to focus on individual and areas of interest.

Since the Banner WingSpan system is a dynamic system, staff need to continually upgrade their skills. For this training need, workshops have proven to be the best training option as staff members learn from issues brought up by others in the workshop. Instructional division staff especially appreciate hands-on work sessions following workshops. When Banner was first implemented, training was provided to faculty through large workshops. Staff and faculty often attended more than one session to ensure they had obtained the skills they needed and thoroughly understood how to apply them to support their courses. Since then, faculty training for Banner has focused on one-on-one sessions to meet specific needs of an individual faculty member.

Student training is provided both formally in technology related courses and informally as a part of many classes across campus. The library and the Office of Admissions and Records maintain staff to provide students with technology training.

PLANNING AGENDA

The standard is met, and the college will continue to support meeting the standard.

III.C.1.c. The institution systematically plans, acquires, maintains, and upgrades or replaces technology infrastructure and equipment to meet institutional needs.

DESCRIPTIVE SUMMARY

Network and Infrastructure

TeCS department administers the college's technology infrastructure including the network, central computer server room and equipment, and telephones. The Citrus College computer network core is a switched 100-gigabit Ethernet with 1-gigabit Ethernet fiber connecting individual buildings to the core and a DS3 fiber optic high-speed connection to the Internet. The college network has a backbone with fiber-optic cable, as well as twisted pair copper wiring to support communications. The core network has two secured segments, one administrative and the second instructional with additional segmentation as required for support services within the instructional environment. Wireless networking is available in several public areas of the campus including the student center, cafeteria, library, Lifelong Learning Center, and Center for Innovation for individual laptop and PDA users. Wireless connectivity will soon be available in the Math Building. The TeCS department maintains computer servers in a secure

room with environmental control and uninterrupted power supply (UPS). In 2007, the TeCS department had a network security audit conducted by an outside vendor with no major findings. The department has implemented a five-year refresh plan to keep the college network up to date. **(IIIC-25, IIIC-26)**

To ensure the reliability of the college's data resources, the TeCS department has clustered major application servers. TeCS also maintains the storage area network (SANS) for the Banner WingSpan system on a multi-tiered cluster. The college has a contract for same day replacement for severe server failures. The disk drive can be replaced without loss of service. **(IIIC-17)**

The TeCS department has implemented a three level backup strategy. The TeCS department performs incremental backups daily on all servers in the central server room and the tapes are stored in the department vault in the Information Services Building. The TeCS department performs full backups on weekends and stores the backups locally in the cashier's vault in the administration building and sends backups offsite for storage on a regular basis. The TeCS department encourages staff and faculty to use central server disk storage for all data to ensure the data is backed up daily. Server space is also provided for data backup even if not utilized for daily processing.

The TeCS department has developed a disaster recovery plan to respond to the loss of the central server room as well as a major campus failure. Citrus College also participated in the California Community College Chancellor's Office Statewide Architecture Committee disaster recovery plan using VM Ware. **(IIIC-27)**

Desktop Environments

The TeCS department manages the desktop equipment in the majority of computer classrooms and labs across campus as well as staff and faculty desktops. Desktop computers are currently on a four-year replacement cycle. With almost 2,000 computers in classrooms, labs and on staff and faculty desktops, this equates to a replacement of approximately 500 desktop computers per year. Since replacement is not always feasible due to funding restraints, within any given budget year the TeCS department replaces the oldest computers first. Exceptions occur when faculty or staff members require an upgrade to their desktop to accomplish their given tasks. Construction projects that include funds for new desktop computers supplement the desktop replacement cycle. Grants also periodically provide funding for computer equipment. Whenever possible, desktops are recycled and redeployed.

The TeCS department licenses desktop and general use software. The college purchases the majority of the licenses from the Foundation for California Community Colleges. Twice a year, the TeCS department upgrades and replaces instructional software in classrooms and labs. Faculty make requests to their respective deans for software upgrades in classrooms and labs. These requests are then coordinated with the TeCS department via the instructional status meetings noted above. **(IIIC-28, IIIC-29)**

The operations and technology support group within the TeCS department provides general maintenance and support for all desktops. The TeCS department put in place an online technology work order system supported by the Footprints application in 2006 to manage desktop support. Staff can submit and track their work orders online. Non-TeCS department personnel provide technical support to a few areas of the college. Staff members from the Fine and Performing Arts Department support technology in the recording arts program, the Haugh Performing Arts Center, and the music department. Staff from physical, natural and health sciences departments provide support for several science programs and the nursing program. The library's audiovisual services supplies audio visual equipment to classrooms, meetings and campus events as well as training on the use of multi-media classroom equipment. **(IIIC-30)**

Supported by funds from a Science, Technology, Engineering and Math (STEM) Center grant, a pilot project began in spring 2009 to replace current desktop computers with a virtualized computing environment. A new computer math lab and online tutoring environment will be implemented using this new technology. Through this pilot project, the TeCS department will obtain training and experience for implementing and supporting a virtual desktop environment.

SELF EVALUATION

The college meets this standard. The technology infrastructure is adequate to support the needs of the college. Wireless networking is available in several public areas and will be expanded. A five-year network refresh cycle has been developed. The TeCS department has a comprehensive maintenance and upgrade plan for the campus that includes a replacement cycle for all desktop machines and regular upgrades of major campus servers and other systems.

PLANNING AGENDA

The standard is met, and the college will continue to support meeting the standard.

III.C.1.d. The distribution and utilization of technology resources support the development, maintenance, and enhancement of its programs and services.

DESCRIPTIVE SUMMARY

Technology Distribution

Planning for the college's technology needs is integrated into the college's program review, governance and planning processes as discussed in Section 2C below. Once the technology needs are defined and prioritized via the planning process, the implementation of these resources is coordinated between the functional areas and the TeCS department. This inclusive method allows the college to most effectively apply funding sources (general budget, instructional equipment, matriculation, construction, bond and grants) to comprehensively meet technology needs.

Instructional equipment planning is coordinated between instructional services and the TeCS department and informed by the Educational Master Plan. A representative group of instructional deans, the TeCS networking central computing and telecommunications systems supervisor and technology operations and support services supervisor attend periodic coordination meetings. As instructional equipment funds become available either via yearly allocations from the Chancellor's Office or via grant funds, Instructional Services determines how to distribute the funds to best support instructional programs. The deans bring these plans to the instructional status meeting to coordinate the implementation with the TeCS department. **(IIIC-31)**

The TeCS department dedicates a portion of its budget to keeping the desktops and peripheral equipment up to date. As stated above, desktop computers are currently on a four-year replacement cycle although replacement is not always feasible because of funding restraints. Construction projects that include funds for new desktop computers, categorical funds and grants provide assistance to the replacement cycle. Desktop computers are also redeployed whenever possible. The five-year network refresh plan developed in 2007 is a major step forward to ensuring that the college will have sufficient network resources to support its programs. **(IIIC-26, IIIC-32)**

Planning for implementation of a new application includes hardware requirements. The TeCS department upgrades and expands servers and related

support equipment in the central server room as new administrative systems come online. Whenever possible, applications share server and data storage equipment to reduce maintenance and replacement costs. Bond funds from Measure G enabled the college to purchase the Banner WingSpan system and included major upgrades to server and data storage equipment.

System Security

Providing a secure technology infrastructure is a high priority for the college and security is a consideration for all technology facilities. Access to the campus central server room is limited to network and system administration personnel. All servers are maintained in this room with environmental control and UPS power support. The TeCS department patches the server systems regularly with current operating system spy-ware and anti-virus software maintained from a central server. A perimeter firewall protects the college network. To provide additional security, the TeCS department has split the network into two segments, administration and instruction. The college wireless network is limited to providing access to the Internet and does not provide direct access to college systems. (IIIC-25)

Users access all applications, whether supported on campus or hosted offsite, via assigned user logons and passwords. Password authorization is required for all staff and faculty and is granted on an as needed basis. The college provides access to college network resources only to active students. Students must renew their password at the beginning of every term. Users must obtain permission for access from the respective functional area managers. The TeCS department then assigns the user ID logons and passwords. The CITC developed board policies and administrative regulations that define acceptable computer and network use and include security and privacy provisions. The CITC committee will submit these policies and administrative regulations for full governance approval during fall 2009. (IIIC-33, IIIC-34, IIIC-35)

Distance Education Program Support

Distance Education is the focus of support for the instructional division and faculty distance education needs. In 2008, when the Blackboard license was due for renewal, DE led a task force to evaluate the distance education course management system options. The task force evaluated several course management system providers before determining that the renewal of the Blackboard system was the best option for the college.

The college provides student services support for distance education in several ways. DE students can apply to the college via CCCApply and register online with the Banner ERP application. The new student portal will provide single access to college information. For courses that utilize the Blackboard system, students can access their overall grades as well as grades on assignments. All students can view their course grades on the Banner WingSpan system. The Financial Aid Office provides direct links from their department website for students to apply for financial aid online. During the next year, Financial Aid will implement the student self-service options on the Banner WingSpan system. The Counseling Department provides several services online for distance education students. Students can fulfill their orientation requirements online. The Counseling Department will pilot an online counseling support system in the summer of 2009 and plans to fully implement the system in the fall. In addition, in the fall of 2009, students will be able to make counseling appointments online with the ESARS component of the SARS-SUITE.

SELF EVALUATION

The college meets this standard. Integrating technology evaluation into planning across the college ensures that division and department technology needs will be considered. The college provides a secure and reliable infrastructure. Within the available budget, the college's technology environment is kept up to date to meet program and service needs. System security is a high priority, and the college passed an independent security audit in 2007 with no major findings. Distance education programs provide not only options for instruction, but also student services support.

PLANNING AGENDA

The standard is met, and the college will continue to support meeting the standard.

III.C.2 Technology planning is integrated with the institutional planning. The institution systematically assesses the effective use of technology resources and uses the results of evaluation as the basis for improvement.

DESCRIPTIVE SUMMARY

Technology Planning

During this reporting period, technology planning has been increasingly formalized and integrated with college-wide planning. Technology planning is now

being informed by output from program review, the *Strategic Plan*, the *Educational Master Plan*, the *Facilities Master Plan*, and the *Technology Master Plan*.

The Collegewide Information Technology Committee (CITC) developed the first version of a college-wide *Technology Master Plan* during spring 2009. CITC conducted a SWOT analysis and integrated the analysis with the technology needs defined in the *Educational Master Plan*, the *Facilities Master Plan* and the college's *Strategic Plan*. The CITC will evaluate and revise the *Technology Master Plan* on an annual basis. Based on this document, TeCS will plan and prioritize technology for central server room needs and college-wide infrastructure. **(IIIC-36, IIIC-37, IIIC-38, IIIC-39)**

Both instructional and student services incorporate the results from program reviews into prioritization and planning for their technology needs. Instructional technology implementation is coordinated between instructional services and the TeCS department at a weekly instructional status meeting. The student services senior staff has been working with the chief information services officer to prioritize the implementation of their technology needs. The *Facilities Master Plan* provides input to technology infrastructure planning.

Long term planning for technology infrastructure needs is coordinated in governance committees. The Physical Resources Committee coordinates long term planning for technology infrastructure needs. Both the chief information services officer and TeCS network supervisor attend the Physical Resources Committee meetings. At these meetings, multimedia networking and other technology needs are discussed including new construction, remodeling, and moving of technology resources and relocation of employees. The Construction Projects Committee manages the implementation of these major projects. The TeCS network supervisor attends the committee meetings on a regular basis to ensure that TeCS department planning is coordinated with major project development. The successful opening of the Center for Innovation (CFI) building demonstrates the effectiveness of including technology planning in construction projects. Over 80 faculty and 20 staff from across campus moved to CFI with new desktops and printing support. To ensure that the network continues to upgrade and expand to meet increasing demands, the TeCS department developed a five-year network refresh plan in 2007. **(IIIC-3, IIIC-5, IIIC-26)**

Evaluation of Technology Effectiveness

The college has evaluated the overall effectiveness of its technology for faculty and staff through a college-wide survey, the All-Employee Survey 2007, and for students via the Community College Survey of Student Engagement (CCSSE). These surveys evaluated the overall satisfaction with technology programs and services and included questions on the availability and applicability of technology.

In general, employees felt that the college provides technology to meet their needs with 80 percent of respondents agreeing or strongly agreeing to that statement. Students reported general satisfaction with computer labs with 71 percent in 2006 and 72 percent in 2008 of respondents reporting very or somewhat satisfied with the computer lab services provided. **(IIIC-40, IIIC-41, IIIC-42)**

Departmental program reviews also provide feedback on technology effectiveness as well as additional technology needs. Program reviews also defined technology needs for individual departments. The needs were then prioritized first by the respective area dean, and then by instructional services. **(IIIC-43)**

SELF EVALUATION

During this reporting period, the college expanded technology planning. The TeCS department worked closely with many groups to define technology requirements for departments and divisions. The TeCS department also worked closely with the Physical Resources Committee and the Collegewide Construction Committee to ensure technology is integrated into building construction and upgrades. The college-wide Information Technology Committee initiated formalized technology planning by developing the initial *Technology Master Plan*. The CITC will review and update this plan annually. Technology planning has also been integrated into overall college planning. While these efforts have established a foundation for technology planning, more work is needed to fully institutionalize technology planning.

CITC is instituting a yearly evaluation of the *Technology Master Plan* and will continue to utilize formal technology planning to closely integrate all aspects of technology implementation. The TeCS department will conduct a program review during the 2009/2010 academic year and will put in place a schedule to formalize the annual review cycle. Evaluation of technology use and effectiveness are tied to program reviews and the college instituted surveys to gather feedback. While the responses to these surveys were favorable, the scores indicate that

there is room to improve. Methods for evaluating the effective use of technology resources need to be expanded to provide more information on how technology is used across campus and to provide guidance for improvement.

The TeCS department will work with OIR to include more technology-focused questions in the next All-Employee Survey scheduled for spring 2010 and thereafter on a three-year cycle. In addition, the TeCS department, in consultation with OIR, will conduct technology evaluations on yearly basis. The TeCS department will also conduct a departmental program review.

PLANNING AGENDA

Recommendations for this standard are addresses by institutional planning agenda number 5.

IIIC EVIDENCE

- IIIC-1 Banner Working Group Meeting Notes
<http://www.citruscollege.edu/accreditation/Documents/Evidence%20Documentation/Standard%20III/Standard%20III%20C>
- IIIC-2 Academic Community Committee Meeting Notes
<http://www.citruscollege.edu/as>
- IIIC-3 Construction Program Meeting Minutes
<http://www.citruscollege.edu/finance/facilities/constructioncommittee>
- IIIC-4 College Information and Technology Committee Meeting Notes
<http://www.citruscollege.edu/admin/president/steering/citc>
- IIIC-5 Physical Resources Committee Meeting Notes
<http://www.citruscollege.edu/admin/president/steering/prc>
- IIIC-6 Fiscal Resources Committee Meeting Notes
<http://www.citruscollege.edu/admin/president/steering/frc>
- IIIC-7 Institutional Research and Planning Committee Notes
<http://www.citruscollege.edu/admin/president/steering/irpc>
- IIIC-8 Educational Programs Committee Meeting Notes
<http://www.citruscollege.edu/admin/president/steering/epc>
- IIIC-9 Steering Committee Meeting Notes
<http://www.citruscollege.edu/admin/president/steering/Documents/Forms/AllItems.aspx>
- IIIC-10 TeCS Department Organization Chart
<http://www.citruscollege.edu/accreditation/Documents/Evidence%20Documentation/Standard%20III/Standard%20III%20C>
- IIIC-11 Curriculum Committee Meeting Notes
<http://www.citruscollege.edu/curriculum>
- IIIC-12 HotShots Committee Meeting Notes
<http://www.citruscollege.edu/sloa>
- IIIC-13 TeCS Department Computer and Podium Lab Chart
<http://www.citruscollege.edu/accreditation/Documents/Evidence%20Documentation/Standard%20III/Standard%20III%20C>
- IIIC-14 TeCS Department Computer Lab Description Chart
<http://www.citruscollege.edu/accreditation/Documents/Evidence%20Documentation/Standard%20III/Standard%20III%20C>
- IIIC-15 TeCS Department Computer Lab Load Chart
<http://www.citruscollege.edu/accreditation/Documents/Evidence%20Documentation/Standard%20III/Standard%20III%20C>
- IIIC-16 Institutional Research Office Report Requesting System
<http://www.citruscollege.edu/accreditation/Documents/Evidence%20Documentation/Standard%20III/Standard%20III%20C>
- IIIC-17 TeCS Central Server Maintenance Chart
<http://www.citruscollege.edu/accreditation/Documents/Evidence%20Documentation/Standard%20III/Standard%20III%20C>
- IIIC-18 TeCS Application Diagram
<http://www.citruscollege.edu/accreditation/Documents/Evidence%20Documentation/Standard%20III/Standard%20III%20C>
- IIIC-19 College Catalog
<http://www.citruscollege.edu/schedule/Pages/Catalog.aspx>
- IIIC-20 Distance Education Online Support "Getting Started"
<http://www.citruscollege.edu/de>
- IIIC-21 Citrus College Library Orientation Services
<http://www.citruscollege.edu/library/Pages/LibraryOrientation.aspx>
- IIIC-22 TeCS Department Online Staff Training and Support Documents
<http://www.citruscollege.edu/accreditation/Documents/Evidence%20Documentation/Standard%20III/Standard%20III%20C>
- IIIC-23 Banner Scheduling Manual
<http://www.citruscollege.edu/accreditation/Documents/Evidence%20Documentation/Standard%20III/Standard%20III%20C>
- IIIC-24 Technology Toolbox Training Manual
<http://www.citruscollege.edu/accreditation/Documents/Evidence%20Documentation/Standard%20III/Standard%20III%20C>
- IIIC-25 TeCS Department Network Diagram
<http://www.citruscollege.edu/accreditation/Documents/Evidence%20Documentation/Standard%20III/Standard%20III%20C>
- IIIC-26 TeCS Department Five Year Network Refresh Plan
<http://www.citruscollege.edu/accreditation/Documents/Evidence%20Documentation/Standard%20III/Standard%20III%20C>
- IIIC-27 TeCS Department Backup and Recovery Plan
<http://www.citruscollege.edu/accreditation/Documents/Evidence%20Documentation/Standard%20III/Standard%20III%20C>
- IIIC-28 Foundation for California Community College Licensing
<http://www.foundationccc.org/CollegeBuys/CollegeBuysHome/tabid/484/Default.aspx>
- IIIC-29 Instructional Lab Load Request Schedules
<http://www.citruscollege.edu/accreditation/Documents/Evidence%20Documentation/Standard%20III/Standard%20III%20C>
- IIIC-30 TeCS FootPrints Online Work Order
<http://www.citruscollege.edu/accreditation/Documents/Evidence%20Documentation/Standard%20III/Standard%20III%20C>
- IIIC-31 Instructional Technology Meeting Notes
<http://www.citruscollege.edu/accreditation/Documents/Evidence%20Documentation/Standard%20III/Standard%20III%20C>
- IIIC-32 TeCS Department Desktop Replacement Charts
<http://www.citruscollege.edu/accreditation/Documents/Evidence%20Documentation/Standard%20III/Standard%20III%20C>
- IIIC-33 Password and Access Request Form
<http://www.citruscollege.edu/accreditation/Documents/Evidence%20Documentation/Standard%20III/Standard%20III%20C>
- IIIC-34 Board Policy 3720 Computer and Network Use Policy (Draft)
<http://www.citruscollege.edu/accreditation/Documents/Evidence%20Documentation/Standard%20III/Standard%20III%20C>

- IIC-35 Computer-Related Administrative Procedures 3720-3726 (Drafts)
<http://www.citruscollege.edu/accreditation/Documents/Evidence%20Documentation/Standard%20III/Standard%20III%20C>
- IIC-36 *Strategic Plan*
<http://www.citruscollege.edu/admin/planning>
- IIC-37 *Educational Master Plan*
<http://www.citruscollege.edu/info/reports>
- IIC-38 *Facilities Master Plan*
<http://www.citruscollege.edu/info/reports>
- IIC-39 *Technology Master Plan*
<http://www.citruscollege.edu/tecs/Documents/Forms/AllItems.aspx>
- IIC-40 All-Employee Survey 2007
<http://www.citruscollege.edu/admin/planning>
- IIC-41 Community College Survey of Student Engagement (CCSSE) 2006
<http://www.citruscollege.edu/admin/research/Pages/CCSSE.aspx>
- IIC-42 Community College Survey of Student Engagement (CCSSE) 2008
<http://www.citruscollege.edu/admin/research/Pages/CCSSE.aspx>
- IIC-43 Program Reviews
<http://www.citruscollege.edu/pr>