STANDARD III.C
Technology Resources
STANDARD 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

Norco Campus manages its technology services and support through the following district-level departments:

- **Academic Information Architecture and Web Services**
  Academic web-server management, systems management, accessibility standards, web policies, practices, and procedures related to faculty, academic and instructional program websites (III.C.1-1).

- **Information Services (IS)**
  Computer, network and information technology including administrative systems (DATATEL/Colleague software suite), data center operations, district help desk, microcomputer support, network administration, and telephony (III.C.1-2).

- **Open Campus**
  Responsible for technology-mediated instruction and faculty technology training including distance and online class software (III.C.1-1). Technology training is currently a district supplied service through the Office of Institutional Effectiveness.

- **Instructional Media Center (IMC)**
  Instructional media support including audio, video, video-conferencing, and classroom projection systems (III.C.1-3, III.C.1-4, III.C.1-5).

- **Library Technology**
  District-wide online library catalog, e-books, streaming media materials, online periodicals, videotapes, microfilm, and assistive media technologies (III.C.1-6).

- **Learning Support Services**
  Includes Disabled Student Services, Computer (CIS) lab, math lab, Writing and Reading Center lab (III.C.1-7).

- **Public Relations**
  Provides and maintains website infrastructure for the district and campuses, including online catalog, schedules of classes, and other online college publications (III.C.1-3).

- **Facilities**
  Workstation fixtures and furnishings, centralized systems for power, environmental control, fire suppression, and
assistive facilities for disabled students. (III.C.1-1).

Open Campus, Academic Information Architecture, and Public Relations are entirely district functions. Information Systems, IMC, Airey Library, Learning Support Services, and Facilities have one or more full-time staff at the Norco Campus. Library and IMC staff report to the Norco Campus Assistant Dean of Library and Learning Resources.

- IMC has one full-time and several part-time employees located on the Norco Campus.
- Norco Campus has a full-time instructional support specialist (reporting directly to the Norco Assistant Dean of Library & Learning Resources) responsible for training faculty and staff as needed on an ad hoc basis, by appointment, or through FLEX workshops. This specialist serves as a member of several college committees to assist Norco in improving current technical operations, plan for future technological needs, and enhance communication to create more effective student learning and teaching opportunities.
- Front-line support to the Norco Campus user community (students, staff, faculty, and administration) is provided primarily by two full-time members of the Information Services Microcomputer Support group assigned to the Norco Campus. These staff members work under the direction of the district’s Information Services office and are responsible for handling work orders generated through the IS Help Desk, as well as the ongoing maintenance and upgrades of desktop hardware and software for both administrative and academic computing. This Norco-based IS team interacts with the campus Instructional Media Center (IMC) and instructional departments to ensure a useful and appropriate link at the campus. The on-site team interfaces with other IS district staff to ensure district and campus hardware and software standards are met.

Network Administration and Telephone Group are located on the Riverside City College campus; staff in the operations centers at that location provide remote monitoring and routine management of the networking infrastructure and PBX/VoIP phone system. Technicians and engineers are dispatched to the Norco Campus as needed for on-site maintenance or troubleshooting; the microcomputer support specialist provides assistance in conducting initial on-site diagnostics. Both the District Help Desk and the Administrative Systems group support the Norco Campus community from their respective locations at the Riverside City Campus.

**Academic Information Architecture and Web Services** provides the following services from its district office:

- District-wide assistance to academic departments and programs and individual faculty in the development of websites, and provide input related to e-learning strategies.
- Oversight of system management tasks, including data backup, preventive maintenance, internal structure, security, and performance monitoring.
- Management of academic web-servers including the assignment of server space and creation of individual system accounts.
- Web policies, practices, and procedures related to faculty, academic and instructional program websites. (III.C.1-2).

The **Information Services Group** (IS), which has administrative oversight of the district-wide information infrastructure and...
its supporting components, provides computer hardware, software and network support to the Norco Campus. The IS Group is organized into the following service and support areas:

- Administrative Systems (DATATEL/Colleague software suite)
- Data Center Operations
- District Help Desk
- Microcomputer Support
- Network Administration
- Telephone Group (III.C.1-1).

The District Help Desk, as mentioned above, operates from a central location on the Riverside City College campus. Its purpose is to provide a centralized system for addressing incoming help desk requests and distributing work assignments as appropriate, including:

- Desktop support
- Laptop support
- Open Campus assistance requests
- Network support
- E-mail support
- Campus lab support
- WebAdvisor
- Wireless access (III.C.1-1).

Open Campus is responsible for all aspects of online and distance education at the campus and district levels, including:

- Online, hybrid and web-enhanced course set-up and maintenance, upgrades and training, backup and implementation, in conjunction with the host provider (Web CT/Blackboard).
- Online support training including use of web page publishing software, streaming media software, and peripherals via one-on-one training, FLEX workshops, and hybrid academy.
- Maintenance of servers and software licenses for online related instruction (III.C.1-2).

Open Campus also provides support for many other software applications such as Excel, PowerPoint, Camtasia, and a wide variety of software applications that support the instructor in and out of the classroom.

The Instructional Media Center’s primary purpose is to provide instructional media support to academic programs. IMC supports audio-visual equipment in classrooms as well as videoconferencing services. Primary areas of responsibility include:

- Audio-visual equipment delivery to classrooms and conference/meeting rooms
- VIP media requests
- Service and repair of media equipment
- Video conferencing
- Satellite downlinking
- Streaming media
- Assistance with new equipment acquisition, installation, and training of faculty/staff (III.C.1-4).

IMC provides technical assistance and media production services in the following formats: video, audio, graphics and animation, digital imaging, scanning, digital photography, and PowerPoint presentations. IMC services are also available on a fee basis for special programs, which are supported and/or sponsored by the Campus in cooperation with city, county, civic and community agencies. These resources can be reserved through the IMC website (III.C.1-8).

Library Technology. Adaptive equipment and software are available to assist disabled
students in the learning process. The printers and copy machines in the library are on maintenance contracts enabling parts, hardware and software to be replaced without additional charge. Norco IS technicians maintain student and staff computers (hardware and software) and update all the software and security packages. Multimedia equipment in the library, including televisions, DVD players, VCRs, is secured to tabletops to prevent theft.

In addition to these major technological resources, Norco students are provided access to two district library websites, LAMP (http://library.rcc.edu) and the IMC (http://imc.rcc.edu). LAMP is an online resource for all students in the district which includes the district online catalog, ebooks and streaming media titles, electronic course reserve materials, district-wide subscription databases, tutorials and library guides. Details of equipment, materials and support services for the library are discussed in Standard II.C (III.C.1-2, III.C.1-6).

**Learning Support Services.** Norco Campus maintains several classroom laboratories equipped with appropriate and sufficient hardware and software designed to enhance the operation and effectiveness of the institution. These include: 3 CAD computer classroom/ labs; 3 CIS computer classroom/ labs; one lab each for math, art, language media, assessment/testing, chemistry and biology; and a general purpose computer classroom. Mobile computer equipment is also available: a mobile physics lab and Apple wireless computer cart for physics, 2 Gateway classroom laptop carts, and a mobile electronics lab.

The IS staff at Norco Campus makes every effort to protect the software and equipment on its computer systems. Computer workstations are installed with the most updated software available; administrative, staff and faculty computers are configured to download the most updated versions of Trend Micro anti-virus and registry protection software to avoid time-consuming repairs. All academic computers in classrooms that are linked to the Internet also contain anti-virus software. District Information Services provides centralized security and intrusion detection, anti-spam filtering, and network monitoring to insure a reliable, secure network environment (III.C.1-9).

The Technology Resources subcommittee of the Norco Strategic Planning Committee (NSPC) is developing a campus-based technology standards and processes document that addresses the ongoing need for providing enhanced facilities, hardware and software to meet teaching and learning needs, campus-wide communications, research, and campus operations (III.C.1-10). The goal of this document is to provide guidelines for the ongoing analysis and prioritization of hardware, software, services and facilities needs anticipated by Norco Campus departments and programs.

In the fall of 2005, the Technology Resources subcommittee surveyed faculty, administrators and staff to determine their immediate technology needs (III.C.1-11, III.C.1-12). Based on the results of this survey, the committee was better able to prioritize technology needs so as to incorporate them into the proposed campus technology standards and processes document (III.C.1-13).

**SELF-EVALUATION**

The standard is met. Norco Campus provides appropriate support to faculty for research and course development and/or maintenance; to students for learning activities; and to staff and administration for the performance of their job duties. Academic

**STANDARD III.C: TECHNOLOGY RESOURCES**

**NORCO CAMPUS ACCREDITATION SELF STUDY**
Information Architecture, Information Services, Open Campus, IMC, Library Technology, Learning Support Services, Public Relations, and Facilities departments provide a wide variety of services and support to maintain and enhance the operation and effectiveness of the campus.

Technology surveys conducted in fall 2005 indicate that 64 percent of staff, faculty and administrators agree that Norco Campus is providing adequate technology; 87 percent of faculty members believe that the software provided meets their needs inside and outside the classroom. Some staff suggested various types of hardware that would improve or enhance teaching. (III.C.1-13).

Fortunately, as a result of previous equipment requests from departments and personnel, in fall 2005 all faculty received new computers in their offices; as a result, a recent accreditation survey conducted in March 2007 confirmed that 82 percent now agree that the computer equipment in their offices is adequate. In March 2007, 73 percent of faculty agreed that the software and network connections are adequate in their classrooms. However, it remains difficult to keep up with faculty and student needs given the rapid pace of technological change.

PLANNING AGENDA

- The Norco Technology Resources subcommittee will continue to engage in dialogue about technology standards and processes in order to create a guideline for future technology upgrades and purchases.

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

DESCRIPTIVE SUMMARY

The district and Norco Campus provide quality in-house training in technology and its applications to faculty and staff on a regular basis. Norco’s administration and Instructional Support Services (ISS) staff are committed to the provision of ongoing quality training through flex activities and other staff development opportunities as needed throughout the year. When new software is introduced to facilitate fiscal, purchasing, enrollment, classroom management or any other district/campus process, district experts in Information Services implement a thorough training plan for the campus staff. (III.C.1-14).

Faculty members receive training as requested when new software or equipment is installed, as well as through ongoing and FLEX day workshops (III.C.1-15). At the district level, online instructors receive extensive training and support through the Open Campus Faculty Innovation Center\(^2\) (III.C.1-15). Although the district Open Campus office is responsible for training faculty in basic use of the Web CT platform and hybrid/online course management, training in supplemental tools (such as podcasting and Tegrity) is available at Norco from Instructional Support Services staff (III.C.1-16). Additional training in methods and techniques for effective online teaching is provided by faculty with appropriate experience and expertise.

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\(^2\) Open Campus trains faculty to use the Web CT course management system through mandatory attendance at a one-day Hybrid/Online Academy. These Academies are offered on a regular basis throughout the year. In addition, the Innovation Center schedules regular workshops and one-on-one appointments to train faculty in the use of Office and Adobe products/software suites, open source software, streaming media technologies (audio, video, and iTunes/mp3 services) and software, CD/DVD editing, Dreamweaver, Grade book, and the like.
The district also provides training for all employees on system-wide technology upgrades (III.C.1-14). The Help Desk supports faculty and staff by forwarding requests for in-person or on-site assistance to Norco ISS staff. Instructor training in the use of Web Advisor, the district’s online enrollment management site, is ongoing through regularly scheduled sessions on Norco Campus or one-on-one sessions with a district applications support specialist. Other district services provided locally on the Norco Campus include:

- IMC equipment training/support for faculty and staff
- Application support staff training in Datatel, Resource 25, and a variety of student and record management applications
- Workshops for faculty on compliance of online and traditional course material with section 508 of the Federal Rehabilitation Act and with ADA requirements.

As mentioned above, Norco faculty members experienced in online instructional methods and techniques provide technology-related training to other faculty. For example, during winter 2006, a Norco Campus faculty member in the humanities provided a five-week series of workshops in methods and techniques for effective online teaching and in distance education course design for new online instructors. Both Norco and Riverside faculty participated in these workshops (III.C.1-17). At campus-wide Norco faculty meetings, faculty members in science, math, social science, humanities and many other fields have shown examples of their online courses or of how they use new software such as Tegrity in their classroom.

In spring 2006, a Norco faculty member created an Online Faculty Handbook which was promoted and endorsed by the Norco Faculty Senate. This handbook offers useful technical advice for online instructors, and also describes best practices for online course design (III.C.1-18). The Online Faculty Handbook has been widely distributed to Norco Campus faculty and shared with district deans, the district vice chancellor, and the Board of Trustees (III.C.1-19).

The Norco ISS specialist and outside vendors demonstrate the use of many new kinds of software and hardware at faculty and staff meetings or through one-on-one training. Norco’s ISS specialist has most recently provided training in podcasting and Tegrity for instructors to enhance their online and face-to-face course content and delivery (III.C.1-16). For general staff and faculty needs, Norco instructional support staff provide training as requested in Adobe, Microsoft Windows and Office applications, webpage technology and development, Tegrity, podcasting, graphics, electronic grade books, classroom management systems, hardware, scanning, OCR recognition, Web Advisor, database and spreadsheet development.

Quality training in the application of information technology is also available to Norco students to meet a variety of learning needs. Specifically:

- The Norco math discipline has developed a video tutorial for students enrolled in online math courses (III.C.1-20).
- Weekly library orientations and workshops instruct students about district policies on appropriate internet use, remote access procedures for electronic resources, and conducting research using electronic databases and websites, including instruction in the use of citation and essay writing tools available online (III.C.1-21).
- The Transfer Center in the Student Services department provides training in a
variety of software to support students’ career and educational goals.

- The Writing and Reading Center (WRC), Computer (CIS) and math labs, and language lab provide students with basic training in Microsoft Office and internet software to assist them in completing their coursework successfully.

The district Disabled Students Programs and Services (DSP&S) unit modifies teaching materials for use with disabled students and assists with campus-wise communication and college-wide events such as convocation and graduation. DSP&S conducts ongoing assessment of needs related to specialized technology and works in collaboration with the district and its campuses to ensure ADA access compliance. DSP&S provides the following adaptive technology assistance to Norco Campus students and staff:

- A district DSP&S specialist visits the campus weekly to train students on adaptive software and hardware. The specialist also provides student lab assistants and training on adaptive software/hardware for Norco faculty on site as needed.
- With assistance from DSP&S through Open Campus, instructors may create section 508 compliant web pages using Dreamweaver and Frontpage; perform webpage accessibility verification with ACCVerify/Repair; and receive training in mp3 creation using TextAloud.
- Students with print disabilities receive e-text access training on WYNN and ReadPlease.
- Students with mobility impairments are trained in the use of Dragon Naturally-Speaking.
- Visually impaired students receive screen-reader training using JAWS and OpenBook; those with low vision impairment are instructed in the use of ZoomText (III.C.1-22).

Site licenses have been purchased for the core assistive software programs detailed above, and computer stations equipped with these specialized programs are available in the library, the CIS/math lab, the Writing and Reading Center, the language lab, the Student Assessment Center, and in the DSP&S Center.

**SELF-EVALUATION**

The standard is met. Norco Campus makes appropriate technology training available to all students, faculty and staff who need assistance and support. The campus has the goal of providing effective and quality training to students who use technology in their courses or research work, including an array of services to students with special needs.

The results of a 2005 Norco Student Computer Skills Survey conducted by faculty in the BEIT department suggested that students were interested in further training in how to use wireless internet communications on campus. This issue has been resolved (III.C.1-13). The faculty and staff technology surveys indicated that while most faculty and staff are satisfied with the quality of the technology training provided, there is a need for a broader range of technology training on site at the Norco Campus.

Currently, technology training at Norco is limited by lack of space; this need is being addressed by the inclusion of a Faculty Innovation Center in the Student Success Center (III.C.1-23).

The Technology Resources subcommittee of the Norco SPC also recognizes the need for an overall RCCD technology standards and
processes document in order to prioritize and act upon facilities and software requests, as well as training for staff and faculty in the effective application of technology to enhance student learning.

**PLANNING AGENDA**

- Use the strategic planning process and the Technology Resources subcommittee of the NSPC to draft a campus technology standards and processes document for the Norco Campus.

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**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**

RCCD Information Services and Norco Campus work closely together to meet the technological needs of the campus using a variety of funding sources. As a team, they strive to maintain high quality technology services at Norco, upgrading and replacing infrastructure and equipment to serve student, staff and faculty needs and the campus technology mission.

**DISTRICT RESPONSIBILITIES AND INFRASTRUCTURE PLANNING**

Information Services’ Network Administration office provides all necessary components for a district-wide Cisco-based Gigabit Ethernet. This new district-based network equipment has provided increased bandwidth and a more reliable infrastructure. Campus internet service is provided by CENIC, a statewide ISP for educational institutions. Other services include:

- Network services to all district offices and off-site locations;
- Free wireless Internet service to any registered student, staff or faculty member at each campus
- Centralized security and intrusion detection, anti-spam filtering, and network monitoring to insure a reliable, secure network environment
- Planning, implementation and maintenance of appropriate solutions for email, storage area networks (SANS), and servers in support of academic and administrative needs (III.C.1-24).

Network Administration office is currently working with the Norco Strategic Planning subcommittees to build a Network Operations Center on the Norco Campus in 2007. This NOC will house an independent server for the Norco Campus. At present, Norco Campus has a DS3 Internet connection to the Riverside City College campus, which is the main portal to the internet.

Information Services’ Administrative Systems office is responsible for the implementation and support of the district-wide Datatel administrative system suite (Colleague and Benefactor) and related software packages. Currently, the district supports and maintains licensing on the entire suite of Datatel modules (Student, Financial Aid, Finance, Advancement and Human Resources). The institution is currently running version 17 of the software and is planning the implementation and migration to version 18 in 2007-2008 (III.C.1-24).

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3 Colleague is a comprehensive, academic management system used by Admissions and Records, Student Financial Services, Academics, Student Accounts, Matriculation, Alumni Foundation and other groups to facilitate the record keeping and reporting of student, faculty and staff activity and transactions in campus and district daily operations.
The Telephone Group is also district based and administered through Information Services. It maintains a centralized telephone system for the entire district. Currently, this is a NEC hybrid PBX capable of supporting the legacy digital system as well as Voice-over-Internet Protocol (VoIP) deployment. As new buildings are constructed or remodeled within the District, VoIP will be utilized, decreasing wiring and management costs. Telephone Group is also responsible for the planning, construction and maintenance of the district’s cable plant and related technology infrastructure. Recently, to help facilitate long range cable and network planning, Information Services initiated a comprehensive review of all existing cable plant and conduit pathways. This information will be used in planning for each campus to ensure adequate infrastructure for future campus building phases (III.C.1-24, III.C.1-27).

NORCO TECHNOLOGY INFRASTRUCTURE AND PLANNING

Most classrooms on the Norco Campus are equipped with a TV, a DVD/VCR combination unit, flip charts, and an overhead projector. Classrooms are also equipped with ceiling-mounted data projectors which are integrated into an instructor console comprised of a portable computer cart with monitor and speakers. Computers and related peripherals have been replaced for classified staff as needed through non-instructional department funding; software has been replaced on a regular basis to meet district upgrades and institutional needs. All Norco faculty offices are equipped with a computer (desktop or laptop) loaded with appropriate and updated software, a printer, a telephone, and a variety of peripherals based on discipline needs and departmental requests.

As part of its mission to emphasize technology programs, Norco Campus has acquired a considerably upgraded and enhanced technology infrastructure over the past five years:

**2000-2002**
- Norco Campus used a one-time allocation of funds to purchase new Dell computers (approximately 400 replacement workstations) for staff and faculty offices and student areas (library, DSP&S, Tutorial and Assessment Centers).
- Upgrade of 8 administrative computers with 18” LCD monitors; purchase of 15” LCD monitors for Student Services front counter workstations; acquisition of 20 new computers for the Student Assessment Center.
- Purchase of 25 computers for a student general-use computer technology classroom; replacement of 36 computers/student workstations in the Drafting lab; the CAD lab/student classroom replaced 32 computer workstations with upgraded software; purchase of 37 LCD displays for technology classroom.
- Purchase of Apple Wireless notebook cart with 16 iBook laptops for physics classes.

**2003-2004**
- 6 new servers for the CISCO network upgrade (installed in 2006); additional administrative workstations; high-speed scanner (counseling); new printers (Student Services); new staff workstations (Transfer Center); widescreen laptops for engineering instructors.
- 70 replacement workstations for CIS, WRC, and CAD/CIS labs; 34 LCD monitors for general purpose computer classroom.
• 7 new all-in-one “profile” workstations for Airey Library; 16 laptop computers for TRIO/Upward Bound student checkout/use.

• iBook wireless cart with 20 iBook laptops and new Gateway mobile lab cart with 17 laptop computers for BEIT department courses and programs.

2005-2006

• 12 replacement administrative computers; widescreen laptops for administration and IS personnel; three tablet PCs for administration; printers for Student Services; server for library; new SATA storage system.

• 95 replacement computers for engineering program and CIS computer lab; 3D scanner for manufacturing program; 3 Apple MacBook laptops for instructional use; 13 computers for library; 70+ replacement student computers in classrooms.

• Mobile lab 30 Gateway laptops for faculty use; 60 replacement faculty computers and printers.

2006-2007

Technical support was provided via two allocations: one was for instructional equipment; the second was a career technical allocation.

• 35 replacement computers for BEIT classroom; Zbrush software; Adobe software upgrade; 30 computer monitors for a business classroom; memory modules; graphics adapters.

• 36 replacement computers for the Writing and Reading Center.

• Basic skills allocation for purchase of 6 (OHP) projection units for classrooms in the JFK Middle College High School building.

• 53 replacement computers for the Airey Library.

Norco Campus technology staff carries out regular computer maintenance, upgrade, and replacement tasks. Other duties include installation of hardware and software and user support. IT staff also troubleshoot and are responsible for warranty issues.

The Norco Campus capital asset inventory is maintained by the district’s Inventory Control Department (III.C.1-24). Technical equipment is identified by unique asset tags which are recorded in a district database in the Inventory Control office.

SELF EVALUATION

The standard is met. It is the philosophy of Norco administration, and an integral part of the Norco Campus mission, that classrooms where technology is taught or used should maintain current hardware and software to stay up to date with the learning needs of Norco students. Norco has made every effort to replace and upgrade its technology infrastructure regularly, and a majority of its equipment is less than three years old.

The development of a campus technology standards and processes document will provide a systematic means of replacing and upgrading hardware and software at the Norco Campus. Funding for technology infrastructure at Norco Campus is primarily reliant on the availability of funding from the state making it difficult to stay on track given the fluctuation in state funding.

PLANNING AGENDA

• Develop systematic, scheduled evaluation and replacement processes and protocols to meet institutional technology needs.
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

Standard III.C.1.c has explained the upgrading and purchase of technology resources over the past five years in order to support the development, maintenance, and enhancement of Norco Campus programs and services to meet student learning needs.

Allocation of technology resources is made by administrative decision after incorporation of input from faculty, campus technical specialists, and data from end-users; and on an “as-needed” basis, subject to funding availability. The Technology Resources subcommittee of the Norco SPC, using information from discipline program reviews and departmental budget requests, prioritizes the purchase of equipment in order to ensure equitable distribution and utilization of technology resources.

A secure technical infrastructure for Norco Campus is assured in multiple ways, as described in standards III.C.1.a. and III.C.1.c above. This includes physical protection of Norco technology resources; robust firewall and anti-virus software protection and maintenance of Internet and network linkages on all Norco computers; regularly scheduled remote systems maintenance; and responsible district and campus-based operational support staff. Additionally, a number of district Information Services and Norco-based IS and technology resources support the maintenance and enhancement of campus programs and services:

- Intercampus connectivity from Riverside to Norco operates via T-3 lines, with additional redundant T-1 connectivity wired through the Moreno Valley campus for failover purposes (III.C.1-24).
- Norco’s IS technicians participate in the Microcomputer Support group of the district Information Services division. They respond to Norco Campus-specific needs and provide on-site assistance to the Network Services group for network and web-specific troubleshooting.
- All Microsoft and academic software used at Norco is up to date.
- The on-site Instructional Media Center (IMC) staff provides faculty instructional media support including audio, video, video-conferencing, and classroom projection systems. IMC instructional media services supporting maintenance and enhancement of Norco technology resources also include:
  - **Service and Repair.** Includes a routine equipment maintenance schedule. Prior to the beginning of each semester, preventive maintenance on all IMC related classroom media equipment. Evaluation and repair of any equipment needing service.
  - **Equipment Acquisition.** Assisting faculty and staff with the acquisition of new media equipment and media technology for the classroom. Recommending equipment based on need, equipment specifications, and budget.
  - **Installation and Training.** Equipment installation including any necessary wiring. Training of faculty and staff on proper use of the equipment (III.C.1-4).
- The planned Network Operations Center to be built at Norco Campus will provide independent, upgraded server operations for the campus.
The technology infrastructure at Norco Campus is the responsibility of the district. Information Services identifies the major technological goals and direction of the district, including assessment of budgetary funding needs to maintain current technology and acquire new, state-of-the-art hardware and software (III.C.1-27). At the campus level, the IS staff implements decisions with support from administration. In addition, the IMC continually monitors the development of new instructional media and equipment, and takes responsibility for integrating emerging technology into the instructional environment it supports.

The district’s Information Services office purchases Microsoft Windows operating system and Microsoft Office suite licenses for all district and campus computers. When possible, the district uses FCCC for purchases of software licenses. In addition, the FCCC has created a program for students and staff to purchase personal copies of software for work-related use at a reduced rate, while Dell and Apple offer discounts on their products to staff via the web (III.C.1-25).

The district’s commitment to distance learning is accommodated through the use of the Web CT/Blackboard course management system and other web-based learning platforms. As explained in detail in standard III.C.1.a., Open Campus is responsible for technology-mediated instruction and faculty technology training across the district.

Open Campus supports the district infrastructure, allowing for delivery of technology-mediated classes. Effective distribution and utilization of distance education technology resources involves:

- **Servers.** Currently, Open Campus accommodates a production WebCT server hosted in Canada by Web CT, a Web CT development server located on the Riverside City College campus, and a streaming media server hosted in Los Angeles.

- **Application Service Providers.** Open Campus licenses Turnitin.com, a leading online anti-plagiarism software service for all instructors throughout the district.

- **SIS Integration.** Open Campus obtains information on term deadlines, courses, instructors and students from Datatel, reformats it, and imports it into WebCT.

- **Reporting.** Open Campus provides reports for district administration, the State Chancellor’s office, national organizations, and other constituencies.

- **Software.** Open Campus licenses assessment software (Respondus, StudyMate), and ToolBook) used to create computer-based instructional programs for online course development (III.C.1-26).

Priorities for maintaining, upgrading, and purchasing new software are dependent on campus-based discipline annual program review updates provided to departments, which in turn identify goals and communicate technology resource requests to the Norco Academic Planning Council (NAPC), the Technology Resources subcommittee, and the NSPC. Department equipment requests are incorporated into the Norco Academic Master Plan, which becomes part of the district AMP.

**Self-Evaluation**

The standard is met. Norco Campus uses and distributes technology resources to support, develop, maintain, and enhance campus programs and services. Norco Campus and the district remain reasonably up to date technologically.
In recent years, the use of instructional technology and the Internet has become an essential tool for all disciplines. More faculty and students regularly utilize technology than ever before; thus, faculty staff and students have a direct interest in the decision-making process for technology resources allocation.

As a result, the Norco Campus is making a conscious transition from earlier informal processes to a formalized long-range planning process for the acquisition of technology resources. The Technology Resources subcommittee of the NSPC has clearly articulated the need for a Norco Campus technology standards and processes document to assist in strategic planning and budgeting for technology resources. This plan will prioritize future technology goals and include an inventory of current technology hardware and software, with anticipated schedules for replacement or upgrade.

**Planning Agenda**

- Develop systematic, scheduled evaluation and replacement processes and protocols to meet institutional technology needs.

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**List of References**

| III.C.1-1 | Administration and Finance functions maps |
| III.C.1-2 | Academic Affairs functions map |
| III.C.1-3 | Chancellor’s Office functions map |
| III.C.1-4 | IMC Norco Purpose and Responsibilities |
| III.C.1-5 | IMC Production Processes |
| III.C.1-6 | Library Program Review |
| III.C.1-7 | www.rcc.edu/services/dsps/hightech.cfm |
| III.C.1-8 | IMC website – [http://imc.rcc.edu](http://imc.rcc.edu) ; Norco IMC Operation Chart |
| III.C.1-9 | Information Services report |
| III.C.1-10 | Minutes: Technology Subcommittee; draft Norco Technology Plan |
| III.C.1-11 | Norco Faculty Technology Survey |
| III.C.1-12 | Norco Staff/Administration Technology Survey |
| III.C.1-13 | Report on results of Norco Inland Empire Computer Skills Survey |
| III.C.1-14 | E-mail notices and flyers announcing training for Resource 25 and Datatel |
| III.C.1-15 | Flyers announcing WebAdvisor training for FT and PT faculty; Innovation Center calendar |
| III.C.1-16 | E-mail announcements: training workshops in Tegrity and podcasting |
| III.C.1-17 | E-mail announcements of Online faculty training workshops |
| III.C.1-18 | *Online Faculty Handbook* |
| III.C.1-19 | Board minutes, Oct-Nov. subcommittee meeting, introduction of *Online Faculty Handbook* |
| III.C.1-20 | Math video tutorial for online Beginning Algebra (Math 52) |
| III.C.1-21 | Library program review |
| III.C.1-22 | DSP&S list: adaptive equipment and software |
| III.C.1-23 | Minutes, Student Success Center Program |
| III.C.1-24 | Administration & Finance functions maps |
| III.C.1-25 | [http://www.collegebuys.org](http://www.collegebuys.org) |
Standard III.C.2. Technology planning is integrated with institutional planning. The institution systematically assesses the effective use of technology resources and uses the result of evaluation as the basis for improvement.

DESCRIPTIVE SUMMARY

Technology planning and evaluation of resources are the responsibility of both the district and the individual campuses. Evaluative processes are in place at the district level to systematically review, assess and modify systems and processes to ensure the effective use of technology resources. District-based entities (Academic Information Architecture, Information Services and its sub-divisions, Open Campus, and Public Relations) provide leadership and assistance to campuses in planning their resources. Hence, the process of requesting, planning, acquiring and maintaining new technology for Norco Campus is supported throughout at the district level.

At the individual campus level, there is a series of processes and evaluations used to assess and then upgrade or modify technology resources to ensure their effective use. For general institutional technology needs assessment, Norco Campus follows a variety of established procedures:

- In purchasing new technology to meet administrative computing requirements, the Norco administration is guided by end-user input and the appropriate support department within the district’s Information Services group.
- Hardware purchases for the Norco Library are approved and specified by the assistant dean, library faculty and staff.
- In the case of vocational programs, technology requests incorporate the input of industry advisory committees when appropriate.
- Large purchases, such as projects which are significant enough to require competitive bidding, may involve the oversight and support of the Purchasing office (district), the Administration and Finance office, and the guidance of a number of district-wide committees—formerly the district Technology Equity and Access Committee and now the District Strategic Planning Committee.

Academic purchasing decisions generally originate with a request from faculty. For academic computing at the Norco Campus, either individual faculty members or an instructional discipline may initiate a request for new equipment or upgrades through their academic department, often with the assistance of IS staff. These requests are reviewed and prioritized in departmental meetings, then communicated to campus administration. Prior to deciding the disposition of a request, Norco administrators usually seek the guidance of the Norco Strategic Planning Committee (NSPC), the

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4 Initially, the annual program review update process evaluates whether technology needs are being met for individual disciplines and programs. A more comprehensive evaluation takes place through the four-year program reviews conducted by instructional and non-instructional units at the district and campus level. The recommendations from these program reviews and updates are communicated by discipline faculty to the departments.
Technology Resources subcommittee, the Norco Academic Planning Council (NAPC), and the Academic Senate, particularly when multiple requests are competing for available funds. Also, technology resource requests are incorporated each year by the departments into the Norco Academic Master Plan, with input from the NAPC and the NSPC.

Once approved, new technology proposals are reviewed by the district Information Services group or the Instructional Media Center at the Digital Library. For hardware purchases, the district staff develops detailed technical specifications and pricing which are used to acquire the requested technology (through competitive bidding if appropriate) through the district Information Services Group and district Purchasing office.

Through the process of informed recommendations and decision-making at the campus and district levels, technology planning is integrated with institutional planning at Norco Campus.

SELF EVALUATION

The standard is met. Technology planning and decision-making take place at many levels within the campus and the district to ensure that the proper technology resources are available for the Norco Campus. A system has been developed to ensure that all requests for additional equipment or software are researched and analyzed.

PLANNING AGENDA

5 The Technology Resources subcommittee has as its primary task to evaluate and recommend appropriate use of technology equipment for both administrative and instructional enhancement and efficiency.