

SADDLEBACK COLLEGE TECHNOLOGY PLAN

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Section 1 - INTRODUCTION

Mission

Saddleback College, as a dynamic diverse community of learners and innovators, seeks to empower students, faculty, and staff through effective implementation of information technology. This shall be accomplished through the implementation of the Saddleback College Technology Plan.

The term Technology is defined as all computer hardware, software and technology infrastructure essential to the delivery of information (gathering, storing, retrieving, communicating, or displaying) in text, image, or digitized form. Technology includes both academic and administrative computing systems as well as related software, instructional delivery systems (multimedia, data and video distribution), communications links, telephone systems, and all integrated systems and software which support the above.

Priorities

- First priority is students, faculty and staff support personnel and administration staff who will be affected in computer demonstration classrooms, in computer classrooms, laboratories, and in college offices and support service areas.
- The research and acquisition of curriculum based software for classrooms and labs.
- Identifying appropriate funding mechanisms for the Plan, such as State Block Grant Instructional funds, Basic Aid funds, Partnerships, State Lottery money and other categorical or general fund allocations.

The Saddleback College Technology Committee

The Saddleback College Technology Committee revises an ever-evolving three-year plan. This plan is used as a reference when the College Budget Committee makes budget allocations in the Fall of each year. It should be noted that funds are applied to the plan, as they become available. All Committee meetings are open to any members of the college community who choose to attend. The composition of the Committee is as follows, membership runs from January to December.

Chair

Administration (2)

Classified Leadership (2)

Classified (3)

Associated Student Government (1)

Advanced Technology & Applied Science (1)

Business Science, Vocational Education, Workforce & Economic Development (1)

Counseling Services & Special Programs (1)

Fine Arts (1)

Health Sciences, Human Services & Emeritus Institute (1)

Liberal Arts & Learning Resources (2)

Mathematics, Science & Engineering (1)
Physical Education & Athletics (1)
Social & Behavioral Science (1)

Saddleback College Technology Plan

The Committee is charged with maintaining, upgrading, as well as expanding existing technology at the College and then integrating this information into a College-wide comprehensive plan, as funding is available, this plan, at minimum, addresses:

- Equipment (hardware)
- Software identification and acquisition
- Network/Hardware/Software Management
- Network Security
- Staffing
- Staff development and training
- Funding resources
- Compatibility and connectivity between operating systems/platforms/software
- Distance learning technology
- Implementation timelines

After analyzing all the information gathered from a College-wide technology needs assessment, the technology plan is updated and implemented in a three-year timeline. The plan is reviewed and updated on an annual basis.

Section 2 - SOCCCD INFORMATION TECHNOLOGY REQUIREMENTS

Overview

For information technology to fulfill its potential, Saddleback College made an immediate and long-term commitment to a consistent use of appropriate technology throughout the College. The College sees the new information technology as not merely an option or an enhancement to traditional instructional delivery but as a process that may replace some methods of delivery or use of information with more efficient and effective means of sharing, storing, analyzing, and retrieving information.

The SOCCCD Network

There is currently a high speed, high volume network across the SOCCCD, to all classrooms and offices hereinafter called the **network**.

The SOCCCD has installed proper security systems to protect sensitive computer information in the areas of human resources, admissions and records and other appropriate areas.

General Network Capabilities

The general capabilities for the network are outlined in subsequent Plan sections. The Technology Committee will continually develop and upgrade *specific network capabilities*.

Access

Information should/will be accessible on the network, to Board Policy 4000.2 on Electronic Communication.

Connections

The District-College will maintain a high speed data network to all locations on campus. This network will also support the voice over IP (VoIP) telephone system.

Technical Support

There must be sufficient technical support to handle the purchasing, set up, and maintenance of equipment. If human resources are inadequate to provide such support or retraining of existing personnel, purchase or lease arrangements may be required to include technical support. Preventive maintenance will be practiced.

User Help Desk

User Services is available at the Innovation and Technology Center by calling 582-4397, Monday through Thursday 8 am to 7 pm and Friday from 8 am to 5 pm. Assistance is offered over the phone or by scheduling a one-on-one appointment.

Upgrades

Regular, planned replacements/upgrades of software and hardware will occur based on a 3 year refresh plan as funding permits.

Network Supervision

The Director of Technology and Broadcast Services is in charge of the entire college network, including maintenance, support and training. There is an Innovation and Technology Center staff to support this effort.

Remote Access

Faculty and staff are able to complete college-related work from off campus and communicate through the network, where authorized. Such access to the network for faculty and staff will require their own Internet service provider. Students, faculty and staff will be able to transfer to and print information (i.e., e-mail, Internet and calendar) electronically from selected off-site college locations, such as Leisure World for Emeritus Institute programs.

Standards

The Committee will regularly meet and set computer hardware, software, and network standards. The Committee will centralize and maintain a current set of standards, a list of computers, peripherals, and other devices for which the college has contracts, as well as a list of internal resources for maintenance and repair. Computer standards can be found in the Innovation & Technology web page.

Type of Computer-Supported Workstations and Servers

As noted earlier, the College will operate both computer platforms, Windows and Macintosh, at user workstations, although the network preference for maintenance and support is the Windows platform.

Section 3 - SOFTWARE

Systems programs fall into three categories, two of which overlap:

- **Application software** refers to programs (services or functions) generally available to all or specific groups of network clients.
- **Instructional software** refers either to programs taught as part of the college curricula or to programs developed or procured for specific instructional purposes as determined by the faculty and curricular requirements.
- **System software** refers to programs used to operate, develop, or manage the network and/or attached systems.

APPLICATIONS SOFTWARE

The SOCCCD will provide four categories of Application Software, each of which includes a range of programs and subsets, as follows:

1. Academic Systems including the student and instructional subsystems
2. Administrative Systems including the fiscal and human resources subsystems
3. Information Access Systems including library automation and data query
4. Desktop utilities and services

1. Academic Systems

In this first category, software programs will need to handle the multiple educational functions and to management tasks to register students, schedule classes, manage curriculum, and manage academic programs, etc.

The SOCCCD will provide the maintenance and upgrades for the listed software applications:

ACADEMIC SYSTEMS
STUDENT Admissions / Registration / Student Records / Counseling / Matriculation / EOPS-DSPS / Student web portal MySite
INSTRUCTION Curriculum Development / Curriculum Management / Class Schedules / Faculty Schedules / Faculty Assignments /Instructional Calendar / Classroom Utilization/Staff web portal

2. Administrative Systems

The second category includes the various human resources and fiscal programs that the SOCCCD will maintain and upgrade as appropriate.

ADMINISTRATIVE SYSTEMS
FISCAL SUBSYSTEMS Accounting / Budget Development / Payroll / Student Financial Aid / Financial Aid Accounting Auxiliary Accounts / Purchasing / Student Accounts Receivable
PERSONNEL SUBSYSTEMS Applicant Tracking / Position Control / Assignments / Appointments
GOVERNANCE SUBSYSTEMS Agenda Formation / Meeting Records / Policy, Procedures, and Regulations / Meeting Management / Calendars / Voting and Polling

3. Information Access Systems

The third category includes programs to access electronic library catalogs, databases and District resources. The latter, information access systems, will separate within the network into “data services” and a “data warehouse.” The system provides ready and reliable access to information on request such as, class rosters, college catalog, and class schedule.

4. Desktop Utilities and Services

The fourth category consists of various commercial, freeware and shareware programs. These products will run directly from the workstations/clients.

Users will rely upon a variety of auxiliary and utility programs to take full advantage of the capabilities offered by the network. The following four subclasses of programs consist largely of commercial products purchased by the SOCCCD and licensed for use by authorized network users.

A. Utilities and service programs will be essential for access to various features of the network, for transmitting information over the network, or for securing the network from damage. For example:

- * browser (Internet Explorer)
- * e-mail (Outlook)
- * HTML editor (Contribute)
- * virus detection (Norton Anti Virus Corporate Edition)
- * calendaring

- B. Essential general application programs will be provided, (with the SOCCCD providing network licenses) For example:
- spreadsheets (Microsoft Excel)
 - directory service software (SOCCCD Directory, Active Directory)
 - databases (Microsoft Access)
 - text editor (Microsoft Word)
 - grade books (Micrograde)
 - presentation software (Microsoft PowerPoint)
- C. Site licenses might not be provided for programs used for limited purposes or by limited groups and individuals and will be evaluated on a case-by-case basis.
- D. A final software subclass includes programs employed by a small group of network users for specific job requirements. District wide network licenses will not be provided for programs of this type, and, therefore the college and/or individual divisions/departments will be responsible for securing and maintaining necessary licenses as appropriate to meet the needs of faculty and evolving curriculum. For example:
- graphics programs (PhotoShop) or a current CAD program
 - page layout programs (PageMaker or Quark Express)
 - web editors (Dreamweaver, PageMill)

Designed to support both Windows- and Macintosh-based desktops, the network will allow students and faculty members to use both desktops. The Macintosh desktop will only be supported for those employees currently using that platform, or for those whose software can only be run on a Macintosh desktop. However, all desktop and utility software available to all network users should operate equally well on both platforms (or generate files that can be read by other programs without translational complications). Files created within any program generally available to network users must not be transportable to any other network user, and must also be stored in such a fashion that multiple users can read and edit those files within a shared environment.

All network users will be expected to work with the current versions of desktop/utility software. Two final requirements for selection of commercial software: the vendor must have a substantial presence in the marketplace and must offer excellent customer support in the form of updated manuals, on-line and telephone support for those employees whose responsibilities will include training and support for network users.

INSTRUCTIONAL SOFTWARE

Each department and/or discipline will be free to determine what software is most applicable to their courses. The college budget process will provide funds as they are available for on-going purchase of software to support college curricula.

Each academic department/division will have discretion in integrating software into its curriculum. The College will not restrict the use of such software integration except for through normal curriculum approval, technology compatibility review and the college's ability to provide funding and technical support for the software. The approved curriculum will drive the technology where possible.

The College will maintain a centralized list of computer software under site licenses or master contracts or for which it has contracts for support and enhancements.

Obsolete Software Inventory

The college will maintain *an obsolete software inventory* to phase out software no longer supported, or for which new or replacement versions have been purchased. Products on this list will be aggressively phased out and replaced with new versions as quickly as practical. The college will provide data conversion, if applicable, and training as part of the replacement process.

Master Software Copies

Original copies (masters) of all college-wide software will be centralized and stored at the ITC, and will be used only to make backup copies. Divisions shall identify person/persons who shall be responsible for the inventory/storage of all software purchased for their own division/departments. Each division will provide the ITC with a current list of licensed instructional software at the beginning of each fall term.

SYSTEMS SOFTWARE

As long as the District continues to use the Alpha server running the VMS operating system, workstations will need to continue to connect as terminals or use Intranet protocols. Additional system software may be required for purposes of system security, file and program backup, software distribution, asset management, trouble shooting, and network management.

Section 4 - HARDWARE

Overview

The Committee recommends computer hardware combining several types of technology: the core of the hardware system, a series of centrally located servers containing all or most of the software and databases available to systems, will be linked to users via the network.

Costs for training and support, including reassigned time or stipend, facilities cost, and hourly labor costs (even if using internal resources), travel, and tuition, will be part of the cost estimates for all technology acquisitions and implementation. Attention is also directed to a 1987 GartnerGroup Total Cost of Ownership (TCO) formula for computer support. **See Appendix C**

Hardware is currently defined as:

- Computers
- Printers
- Servers
- Scanners
- CD-ROM RW drives
- DVD RW drives
- Hubs
- Video Projectors
- UPC power back up devices
- Networking

The ITC's webpage will house all current computer - laptop standards.

The Trickle-Down System

Since there are different levels of computing hardware needs and some user workstations can function adequately with older-generation hardware, a trickle-down system will be implemented. The newest hardware will be assigned to appropriate workstations and older hardware currently residing at such workstations will be passed down to users whose work does not require the latest technology but may benefit from an upgrade of the hardware presently being used. Using this "trickle-down" system, no computer hardware should be more than 3 years old, and faculty and staff should receive hardware upgrades on a regular basis, as budget permits.

Section 5 - CONNECTIVITY

In order for the college to function smoothly and efficiently, all areas of the College will connect to the network to transmit and receive electronic mail and other data.

Ultimately, the increasingly sophisticated technology will minimize the use of paper for managing day-to-day college business: All areas of the College will process what presently requires paper forms via the network's electronic forms so that submissions and approvals will not require printing and hard copy signatures.

In order to remain competitive and academically current, the college will continue to explore the ability to originate or receive full motion and streaming video via the network.

Scheduled network maintenance, whether SOCCCD or College, should occur at times other than when classes are in session. Adequate notice of network maintenance shall be given to the college divisions/departments and shall provide returned access and use of the network to all units within a reasonable time span to not adversely impact students, faculty, and staff.

High Speed Connections to the Network

The campus backbone shall connect to servers on the network whose data path shall be sufficiently wide to provide data transfer rates throughout the College so that users should notice no apparent performance difference when working with local or network drives. The network should allow all faculty and staff to connect a computer (laptop, desktop or computer cart) to the network and use its resources within all classrooms, computer labs, and offices.

Remote Site and/or New Site Networking

Remote site computer labs and new sites (not yet part of the network), when feasible, shall be connected with high-speed connections maintained by the SOCCCD. Associated hardware and software may be supplied and supported by the college.

Saddleback College Telephone System

The College Telephones use the District data network for connectivity. The voice over IP (VoIP) system shares the data path as the network computers and is subject to the same operational requirements, outages and maintenance required by any network device.

Section 6 - THE NETWORK

Overview

The previous sections describe a college-wide network for instantaneous communications to all faculty, staff and students with a minimal use of paper throughout the SOCCCD. The sections below cover the details of the network.

Network Capabilities

The college-wide system will link together all computer-based technology on campus via the network. With this operational college network, any computer on the site may access some or all of the “available information” described in the examples below:

- Meetings
- Event Calendars
- Internet
- Discussion Groups
- Schedule of Classes
- Newsletters
- List Servs and Newsgroups
- Directories
- Listings
- Facilities Database
- College and SOCCCD Forms

NETWORK ADMINISTRATION

The college will be represented at all SOCCCD technology related Committee meetings and a report would be provided to the Technology Committee members.

NETWORK PRIORITIES

All aspects of the network must fulfill the following priorities and general requirements for establishing the network and will contain a strategic plan for acquisition, implementation, and training. The network must provide:

- **On Campus Access** – from any campus computer
- **Off Campus/Remote Access** - via an ISP provider or VAX access through a dial up modem.

SYSTEM SECURITY

For all computer systems and the college network, the college will work to ensure that the computer systems and the information they process are:

1. Secure from unauthorized access or use.
2. Safe from destruction, theft and damage.

Access Restrictions

Assigned administration will determine access privileges, to whom they are granted and how they are monitored while adhering to Board Policy 4000.2

See Appendix A

Backup

The Director of Technology & Broadcast Services has the primary responsibility for Data backup. Those policies and procedures, as well as their implementation and monitoring should be enforced at every echelon, from centralized computing to systems on desktops.

Emergency Preparedness Disaster Recovery

Responsibility shall be centralized at the college for planning and preparing for emergencies and continued operation of campus computers in case of a disaster such as an earthquake, fire, or power outages. Provisions will also be made to allow the college to resume at least essential operations as soon as possible.

INFORMATIONAL DATABASES

The management of Saddleback College's databases shall be centralized to: 1) to ensure access to appropriate databases by students, faculty and staff and 2) to ensure proper training, monitor passwords and security for all faculty and staff with access to the data.

Section 7 - COLLEGE SUPPORT SERVICES

Computer Literacy for Students

Committed to delivering a high level of technological training to students in their chosen course of study, the college will develop and maintain a technology-based curriculum to prepare students for the future. The college will do the following to ensure students have the opportunity to become computer literate by providing the following:

1. Sufficient networked computer classrooms and laboratories so students can learn the computer applications they need to complete their studies.
2. Encourage proficiency in essential computer skills by providing access to a variety of applications to gain introductory computer skills for students.
3. Encourage use of appropriate computer applications to support other curricula in order to reinforce students' computer skills.
4. Ensure that normal features of instruction are state-of-the-art, and that computer or computer-related equipment looks to the future of the discipline or the occupation, especially where computers form an integral component in a course or a curriculum.
5. Require a general education exit core requirement in computer literacy.

Computer Laboratory/Classroom Strategies

The college will develop the following strategies to facilitate the availability of:

1. ***Computer laboratories*** that generate FTES. Currently there exist computer labs in Liberal Arts, Health Science, CCLD, Business Science (IMC), MSE (Chemistry, Computer Science, and Math), Advanced Technology and Applied Science divisions/departments, as well as the adaptive technology of the DSPS lab. Some of these single-purpose or discipline-specific instructional computer laboratories may have the capacity to support multi-purpose or open access use while maintaining the integrity of educational programs. The college will staff these labs at times necessary to meet the instructional program needs with a minimum of one instructor and an adequate number of proposed technology assistants, as well as temporary hourly, such as student aides. Appropriate procedures for student access will be established at each lab site.
2. ***Open access***, centrally managed and maintained ***computer laboratories*** on campus may or may not generate FTES. A College Interdisciplinary Computer Center (ICC) in the Library building (Library Building, 1st floor); and a college library Research/Internet/Word Processing Center (Library building, 2nd floor) currently exist. Classified Staff and temporary hourly workers will staff the labs at times necessary to meet the computer support needs of students. A faculty member will

staff computer laboratories at all times the labs are to generate FTES. Ideally, the college goals for Open Access computer laboratories shall be to:

- have equipment sufficient to meet the computer-related needs of all the instructional programs on campus;
 - have equipment updated and replaced for the changing computer-related needs of the curriculum;
 - have knowledgeable Technology Assistants to assist students with basic computer or software problems;
 - have a connection to the network, with sufficient capacity so students may access software entering appropriate access.
3. ***Computer classrooms*** equipped with a demonstration computer workstation and computers for individual, hands-on student use. Such *computer classrooms* will first be scheduled for hands-on classes and, when not in use for instruction, may be used as a computer laboratory for students. In 2005/06, *Computer classrooms* were located in the Library 117, 213, HS 103, BGS 204, 204-1 (extension of IMC), TAS 218 & 227. Other computer classrooms will be made available as need and funding permits. When not scheduled for instruction, some hands-on *computer classrooms* may be used as an Open Access lab for students, if properly staffed.
4. Any college classroom that can use a computer demonstration workstation with or without a network connection, but which does not provide any hands-on access to computers for students will be considered a ***demonstration computer classroom***. Large-screen projection systems will be available to persons requiring a computer to demonstrate content or information, as well as for faculty who provide their own workstations.

Student Support Services

Committed to creating a sophisticated academic and administrative (software earlier defined in Section 3 as Instructional-Student Services) management systems, the college strives for more enhanced and effective service delivery to students, faculty, and staff.

1. The college will provide sufficient numbers of computers for use in student services offices (such as Admissions and Records, Registration, Counseling Services and Special Programs, Financial Assistance, and Student Development) to provide direct student support.
2. Faculty and staff within Student Services will have the opportunity to obtain the necessary data and information to provide essential support services to special students (such as registration, counseling assistance, financial assistance services, and services). Special program needs for each administrative office (such as Admissions, Counseling, DSPS, and EOPS) will provide students and faculty and staff with information, program requirements, the ability to meet state reporting requirements, and tracking capability.

3. The college, committed to creating a fully functional and sophisticated Information access system, will provide this system with high-speed, ad-hoc query capability, cohort tracking, predication analysis, and statistical application software for viewing databases to obtain not only data but information for decision-making purposes. Ideally, students should have the opportunity to access their records, registration information, course information, grades, and other data from computers located at various campus locations.
4. Students will be able to access information relating to college transfer, career and job information, financial assistance, scholarships, etc.
5. Division/department offices will have access to various student data that may reside on the network, such as registration data, digitized images of transcripts from other colleges, and other appropriate data.
6. To assist students, faculty and staff, the college will provide a universal student picture ID card with a bar code or magnetic stripe for identification, attendance accounting, Library services, and student tracking.

Faculty and Staff Support Services

Since communication within the college and access to up-to-date information will be critical in our success as an institution of higher learning, a system (or systems) will be developed to facilitate fast and accurate communications between members of the faculty and staff. Therefore, the college intends to provide its faculty and staff with appropriate computer hardware, software, and network access. The college will institute a program to provide all faculty/staff password access to a computer and supplied software

To institute access for faculty and staff to hardware, software and appropriate training, the college will follow the criteria below:

1. The college through the ITC will provide small group workshops on hardware and software as the need dictates.
2. Existing college owned computers will be replaced or upgraded to ensure continued access to technology appropriate to their positions' requirements.
3. Workstations will have access to the college network and the Internet, affording access to such as e-mail, admin records, etc.

Library Services

Technology will allow the Saddleback College Library to provide a variety of new services to the faculty, staff, and students, such as:

1. The Saddleback College Library on-line catalog available via the Internet.
2. Many on-line library catalogs will be accessible from campus sites or from off-campus sites via the network. Hundreds of library on-line catalogs (not to mention

many other informational technology resources) shall be accessible through the Internet via the network.

3. The Library's electronic data on CD ROMs will be accessible to selected locations on the network.
4. Students may access their e-mail, word process, browse the Internet, and access a variety of on-line and CD ROM-based resources in an open access computer commons located the second floor of the library.
5. The Interdisciplinary Computer Center located on the first floor of the Library affords additional computers with word processing, Internet access as well as applications from other selected disciplines for students to do lab work on.

Section 8 - COMMUNICATIONS TECHNOLOGIES

Background

The college considers it extremely critical to implement all aspects of video technology, interactive media, and distance learning. Since it is very costly to terminate fiber-optics, the college will move towards the following goals as technology progresses and funding becomes available:

DISTANCE LEARNING

Saddleback College currently offers distance education classes via the internet, radio, television and videoconferencing and will continue to explore, develop, and implement innovative ways to deliver our curriculum, as they become available. Also, Saddleback College will experiment and implement more recent distance learning capabilities to new student populations, including business partnerships, high school/college extension programs, and ultimately globally to other partners.

Off-Campus Links

Saddleback College has the ability to receive satellite broadcasts delivered in real-time at various locations on campus.

On-Campus Classrooms

The college is exploring the possibility of providing streaming video capability enabling faculty to access videos over the network

Videoconferences and Teleconferences

Saddleback College has the opportunity for videoconferences and teleconferences (interactive distance meetings) with Irvine Valley College offices, as well as with any other college or business locally or globally with compatible communications equipment. This capability provides savings in time and transportation costs between the colleges and other business and industry sites.

Section 9 - Organizational Planning & Structure

Organizational Structure/Planning

The college's organizational support group structure is shown in **Appendix B**. The Director of Technology and Broadcast Services will manage the college's information technology network, as well as its support and training functions were designated.

Computer Lab Coordinator (Instructional)

This full-time academic position (10-month) will have primary responsibility for the *computer laboratory* instruction and/or the open access *computer laboratories* from which the college generates FTES. Under the direction of a Dean of the appropriate division or department, this individual serves as the coordinator of a discipline-specific computer laboratory. When appropriate, a computer lab coordinator may have department chair responsibilities for coordinating all faculty assigned instructional hours in a specific lab, or coordination responsibility with faculty who make computer lab assignments to their students.

This position may also be responsible for training and supervising the classified support and the student assistants in the specified laboratories. The coordinator will schedule the open laboratories and perform the administrative duties required to track hours worked by student aides and/or tutors and review and recommend approval of their time sheets.

Additional compensation may be provided depending upon the size of the laboratory as determined by the appropriate Division Deans and the Office of Instruction; the duties may consist of:

- selecting and purchasing new instructional software and directing its timelines for implementation on the servers/workstations/clients;
- directing the changes and upgrades to access to software on the servers/workstations/clients based upon the installation of all software;
- determining new/changing needs on the classroom demonstration workstations;
- directing the Instructional Assistants for all necessary tasks to prepare for each term, as well as network changes that require lab servers/workstations/client changes;
- coordinating with appropriate division faculty any changes in the computer labs.
- other appropriate duties as may be assigned.

Instructional Assistant, Computers

This position serves much the same functions as the Computer Lab Coordinator, so the individual will need to know about administering software, workstations, and lab networking.

The *Assistant Computer Lab Director* (Instructional) shall:

- Work with classified support staff and student assistants in the absence of the Coordinator.
- Provide on-site, academic supervision for the labs in the absence of the Coordinator.

Saddleback College Technology Support Group

Existing technical support positions are included under the supervision of the Director of Technology and Broadcast Services and the Director of Instructional Support Services. Together these technology-related positions make up the college technology support group. Equivalent to a college department, this *Technology Support Group* will centralize the technology support for the Technology Master Plan.

Network Systems Technicians (I - III)

Provides and performs directed work activities relating to the deployment, maintenance and operation of the college's data networks, terminals and station equipment. A network Systems Technician is responsible for a variety of intermediate level and hands-on technical responsibilities related to local- and wide-area data networks, including design, engineering, operations, and documentation. In addition, a network Systems Technician coordinates installation, management, operation and maintenance of college network systems, as well as other assigned and related duties.

Applications Specialists (I - II)

Provides and coordinates software application support including documentation, training, and/or assistance to students, faculty and staff. As a result, an Applications Specialist may: develops training aids, direct and coordinate the development of end-user documentation, maintain appropriate libraries of documentation, provide complex problem-solving resources to users through research, analysis and consultation, facilitate transfer of information between users and technicians, and perform other duties, as assigned.

Hardware/Software Aids

Perform a variety of duties relating to the operation, routine maintenance and minor repairs of computer hardware and software, typically in a networked environment, as well as assists students, faculty and staff in the operation of computer hardware and software. A Technology Assistant may perform any of the following: answer questions and provide information regarding software programs, features, and equipment; interpret instructions, restore failed software; initialize and format software; and identify and resolve program errors and hardware problems. In addition, other primary tasks may be to respond to inquiries and requests for information from students, faculty, staff and visitors in computer labs (instructional or open access) or on one-on-one advising; investigate complaints regarding computer systems and availability; conduct tours for visitors and new students; prepare and set up equipment for classroom demonstrations; run diagnostic tests on equipment; assemble and set up new equipment; assist faculty in instructional activities requiring computer hardware and/or software support; schedule, reserve, check out, and inspect equipment, assist in the maintenance of a neat, orderly, and safe working environment; move and arrange furniture, equipment, and wiring as needed; assist in ordering and maintaining inventories of supplies, materials, and equipment; maintain proper backup and storage procedures; assist in budget preparation and administration; prepare cost estimates for budget recommendations, and other duties as assigned.

Audio Visual Technicians

Under the Director of Instructional Support Services, audio visual technicians deliver and maintain a wide variety of computerized and traditional instructional support hardware and software to the various classrooms and laboratories as determined by faculty and staff requests.

Instructional Innovation

User Services for the Innovation & Technology Center will be responsible for the coordination of college faculty and staff computer training (ongoing, new, in-service, etc.) and helps support the creation, development and implementation of innovative technology related ideas and/or programs by faculty and staff.

Section 10 - SUPPORT AND TRAINING

Overview

It is essential that the college commit to an ongoing program of faculty and staff support and training. The steps outlined below only begin that process; others should be added as needs are identified.

The Innovation and Technology Center will establish a series of workshops for all faculty and staff on how to access the network and use the supplied software mentioned earlier in this document. Whenever possible, the Innovation and Technology Center will schedule such short courses to be taught by the faculty and staff of the college.

Support and Training

User services located in the Innovation and Technology Center will offer technical support for any member of the faculty and staff. If the caller's question cannot be answered, the technical support person will ensure that the caller's question reaches the appropriate resource person.

Specialized Software

Support and training for some specialized software required by a division/department as part of its instructional or specific program needs may remain the responsibility of the department, although the software may reside on a server. The college will actively support the training of faculty and staff with its resources, wherever possible, such as:

- Faculty and staff development funding.
- Grants for faculty and staff to retrain in technology areas.
- Sabbatical leaves with an emphasis on technology training.
- Approved conferences, seminars, and workshops related to new applications of technology, if the funding includes appropriate substitute funds for faculty and staff.

Faculty and Staff Development

The College's Staff Development Coordinators will work closely with the Director of Technology and Broadcast Services for the Innovation & Technology Center to ensure that the staff development function responds to the College's needs for acquisition of technology skills by faculty and staff.

Whenever possible, employing these sources for training and support should come before consideration of external sources.

APPENDIX A: ELECTRONIC COMMUNICATION

<u>BOARD POLICY</u>	4000.2
SOUTH ORANGE COUNTY	PERSONNEL
COMMUNITY COLLEGE DISTRICT	

ELECTRONIC COMMUNICATION

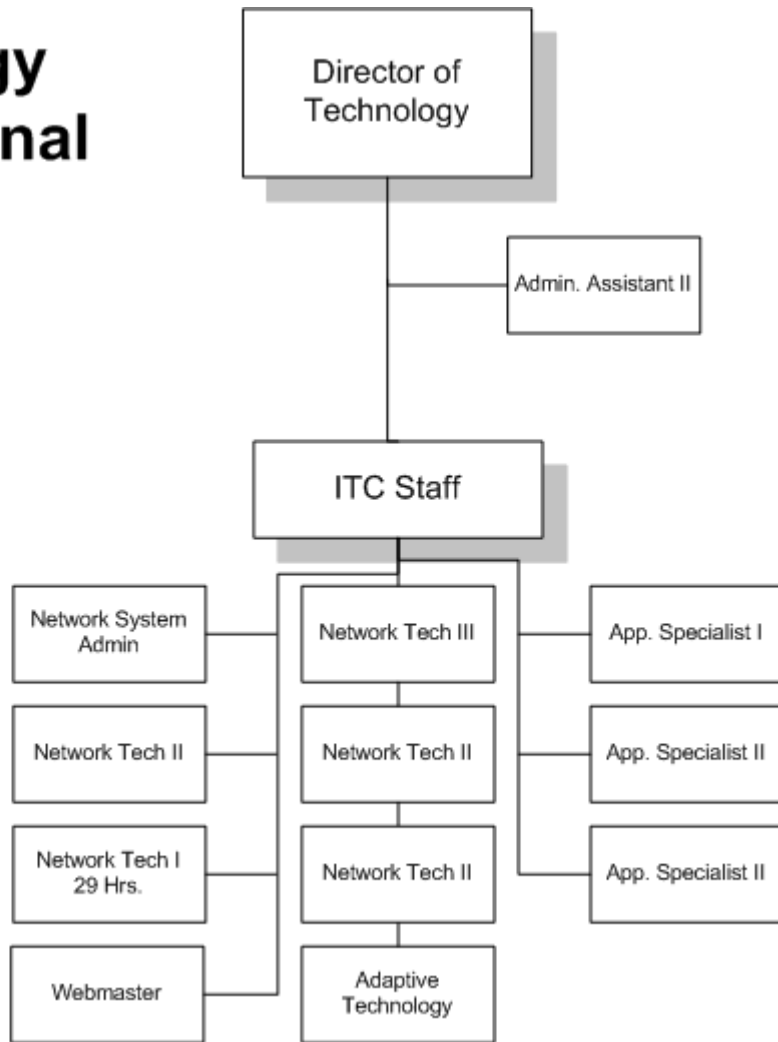
The Board of Trustees of the South Orange County Community College District recognizes that it is important for staff and students to have access to electronic-based research tools and skills through its electronic/digital information network. Such open access is a privilege and requires that individual users act responsibly. The electronic/digital information network consists of (but not limited to) District owned computers, computer networks, electronic mail and voice mail systems, internet services, audio and video conferencing, and related electronic devices such as cellular telephones, facsimile machines and copiers.

The Board recognizes that resources available on the network represent extraordinary learning opportunities and enriching educational materials, but they also offer persons with illegal or unethical motives with avenues for abuse of these resources. It is the policy of this District to restrict access to and use of the electronic/digital information network to students and staff for appropriate academic, professional and institutional purposes. Use of the District's electronic/digital information network for other purposes is not authorized and will constitute grounds for revocation of user privileges, removal of offending material, potential disciplinary action and, in appropriate cases, referral to law enforcement authorities.

There is no right to privacy in the use of the District's resources. The District may monitor and access information contained on its resources for investigative and/or administrative purposes, and may take administrative action in response to any violation of this policy, applicable administrative regulation, or other law. The Chancellor is hereby authorized to adopt and implement such administrative regulations to implement this policy.

APPENDIX B: SADDLEBACK COLLEGE TECHNOLOGY SUPPORT GROUP

**Technology
Organizational
Chart**



APPENDIX C: GARTNER GROUP TOTAL COST OF OWNERSHIP (TCO)

SECTION E: Total Cost of Ownership (TCO) Guidelines and Categories (carry-over)

Overview: When educational institutions acquire computer hardware/software, they do so often without factoring in the costs to support the equipment and infrastructure. As a result, there is often a lack of support to maintain, repair, improve performance of the equipment, as well as a lack of staff for training faculty, staff, and students. This creates delays and inefficient use. The TCO funding concept assumes a relationship between computer hardware/software and support. It is a method of determining the full cost associated with owning and using computers in an educational environment.

Background: Since 1987, GartnerGroup has counseled enterprises to consider all costs associated with computing when making management decisions about desktop and LAN acquisitions, upgrades, support and administration. During this time, GartnerGroup has created and evangelized the concept of TCO to the IT community. As enterprises have begun to address the significant and rising costs devoted to their IT infrastructure, the message has gained wide acceptance among IT users. As technology suppliers seek ways of differentiating themselves meaningfully, they too have turned to the TCO model as a means of underscoring their value to the customer.

Used as a management tool as part of an enterprise's annual planning process, the TCO model can become part of a continuous process of measurement, simulation and improvement. Because budget decisions are ultimately based on a set of strategic IT goals, most enterprises must be able to determine various levels of TCO based on the decision being made. By using the TCO model, enterprises can:

- Translate IT cost, staff, budget and other metric information into a TCO "chart of accounts" for each organization.
- Compare the enterprise's actual TCO to typical TCO-based external comparative data. The typical TCO reflects the enterprise's unique business type, size, worldwide location, assets, technology and complexity against other enterprises doing similar levels of work.
- Audit the results to highlight strengths and weaknesses in the enterprise's actual TCO.
- Create a proposed environment or target TCO based on improvements to assets and changes to technology and complexity, and compare the target TCO with the actual TCO.

The breakdown of direct and indirect costs used in the GartnerGroup TCO Model include:

- Direct (i.e., budgeted) costs - measure the direct expenditures on IT by an organization (e.g., capital, labor and fees);
- Hardware and software - the capital expenditures and lease fees for servers, client computers (e.g., desktops and mobile computers), peripherals and network components;
- Management - the direct network, system and storage-management labor staffing, activity hours and activity costs, maintenance contracts and professional services or outsourcing fees;
- Support - the help-desk labor hours and costs, help-desk performance metrics, training labor and fees, procurement, travel, support contracts and overhead labor;
- Development - the application design, development, test and documentation labor and fee expenditures including new application development, customization and maintenance;

- Communications fees - the inter-computer communication expenses for lease lines, server access remote access and allocated WAN expenses;
- Indirect (i.e., unbudgeted) costs - measure the capital and management efficiency of IT in delivering expected services to end users;
- End-user IS - the cost of end users supporting themselves (and each other) instead of relying on formal IS support channels (i.e., peer and self support), end-user formal training, casual learning (i.e., non-formal training), self-development/scripting of applications and local file maintenance;
- Downtime - the lost productivity due to planned (i.e., scheduled) and unplanned network, system and application unavailability, measured in terms of lost wages (i.e., lost time).

The GartnerGroup research shows that the initial cost of hardware and software represents only 30 percent of the Total Cost of Ownership (TCO). GartnerGroup and the Telecommunications and Technology Advisory Committee (TTAC) worked at length to determine the TCO model appropriate for the Community College environment.

The cost estimate for the technology using the Total Cost of Ownership model for the Community College is **\$3,506 per PC**. Therefore, a TCO computer is one that is funded at a level of support that corresponds to the 19 elements of the TCO model. The TCO model is designed and constructed to be reviewed and analyzed on a continual basis reflecting the ongoing changes and costs as they relate to equipment, software, training, and support personnel. The TTAC will review the model annually to determine adjustments to it as appropriate. The next tables describe the categories that funds can be spent in if minimum standards are met.

Total Cost of Ownership Model TCO Computer Categories

Direct Costs of Hardware/Software
Sub Category
PC hardware and Operating systems cost
Assistive technology hardware and software(10% of PCs)
O/S and Office Software Licenses
Peripherals
Network Operating System Hardware
NOS Licenses
Switches, hubs and bridges (Hardware and Software)
Wiring
NSM Hardware and Software
Servers (HDW and SFTW) for web services)
Sub-Total Cost

*Note: Chart does not include printers for assistive technology. The printers are estimated at \$4000 per printer. One printer per each lab that provided assistive technology would be necessary.

Direct Costs of Training
Sub Category
Training
Technical staff training
Sub-Total Cost

Direct Costs of Systems Management	
Sub Category	Assumptions @ 2,000 computers and 13,000 FTES
Network and Systems Admin. (Novel, etc. include wiring staff) Saddleback equivalent = NETWORK ADMINISTRATOR & TECHNICIAN III	1 staff / 300 PCs = 6.6 technicians CURRENT STAFF = 2 ADDITIONAL STAFF = 1
Technical Management	1 / 500 PCs
Web Administration Saddleback equivalent = WEBMASTER	1 staff per 12,000 FTES = 1 webmaster CURRENT STAFF = 1 ADDITIONAL STAFF = 1 WEB ASSIST.
Administrative Systems Support (web, user dev.)	1 @ \$85K + 25% = \$106,250

applications) Saddleback equivalent = APPLICATION SPECIALIST I & II	CURRENT STAFF = 3 ADDITIONAL STAFF = 1
Sub-Total Cost	

Direct Cost of Support	
Sub Category	Assumptions @ 2,000 computers
Level 1 Support Saddleback equivalent = NETWORK TECHNICIAN I & 2	1 staff / 150 PCs = 13.3 technicians CURRENT STAFF = 3.5 ADDITIONAL STAFF = 4
Sub-Total Cost	

Direct Cost of Development Support	
Sub Category	Assumptions @ 2,000 computers
Application Development DISTRICT IT	2 staff / 12,000 FTES
Sub-Total Cost	

Direct Cost of Communications Support	
Sub Category	Assumptions
Network DISTRICT IT	\$24,000/yr : 1-6000 FTES \$48,000/yr: 6,000-12,000 FTES \$72,000/yr: 12,000-18,000 FTES \$96,000/yr: 18,000+ FTES