Technology Master Plan 2007-2012

Executive Summary

The Technology Master Plan is intended to focus on the technology needs of the college in the upcoming years. This document will assist in the planning and sculpting of the information technology efforts to an end that is both beneficial and functional for the college. While this plan contains goals and recommendations for the college over the next five years, it should be viewed with a degree of flexibility as it is impossible to account for rapidly changing technology and funding issues.

This Plan contains the technological recommendations that should be implemented and supported if the college intends to continue to maintain the high standard of education it currently provides. In effect, this Plan should become a "living document" that serves as the strategic guide for current and future technology for Glendale Community College.

To achieve the goals, procedures, and objectives set forth in this Plan, the support (both financial and policy) of the college and the administration is essential. Support needs to be provided in the following areas:

- *Funding for technology.* The college should no longer rely on special funding as the sole source for technology purchases. Based on the growth of the college and the technological need of the instructional and administrative programs, a percentage of the college's general budget should be allocated for technology.

- *Wired Facilities.* All facilities of the college should be wired for technology access and the network electronics necessary to interconnect these facilities to the rest of the campus.

- *Adequate Technical Support.* In order to maintain and support a growing technology infrastructure, the college must commit to funding necessary positions in the Computer Support, Application Development, Learning Resources and Telecommunications areas with the expertise to provide technical support to the college. A complete infrastructure plan must include qualified support staff on a full-time basis.

- *Access to Technology.* The college must continue its commitment to providing access to computer systems for all students, faculty, and staff.

- *Employee Training.* Technology, no matter how advanced, provides no benefit to the College if its employees are not properly trained to use it. Staff Development must work closely with the Campus-Wide Computer Coordinating Committee to ensure training classes are offered on all technology supported by the college and to provide the support necessary to incorporate new technology into the various administrative departments and the curriculum.

Annual reviews are imperative to the success of this Plan and the technological health of the college. A review of this Plan should be conducted each year and if properly executed, it will provide a dynamic, structured view of technology as it pertains to education and the business services of the college. With the college continuing to maintain and support the technological growth of the campus, it should be well poised to support the academic and administrative goals of the students, staff, faculty and administration throughout this Plan and beyond.

Table of Contents

Campus-Wide Computer Coordination Committee

Mission Statement

The mission of the Campus-wide Computer Coordinating Committee (4C) is to develop, oversee, and review the implementation of campus-wide policy and planning efforts pertaining to the use of computers and information technology (IT) at Glendale Community College. The CCCC will:

1. Act as a central focal point for input from all campus constituencies on computer and IT related issues

2. Seek to identify and resolve computer policy problems

3. Act as a communication conduit for computer and IT related issues and

4. Advise the Campus Executive Committee on policy and planning matters pertaining to computer and IT usage at Glendale Community College

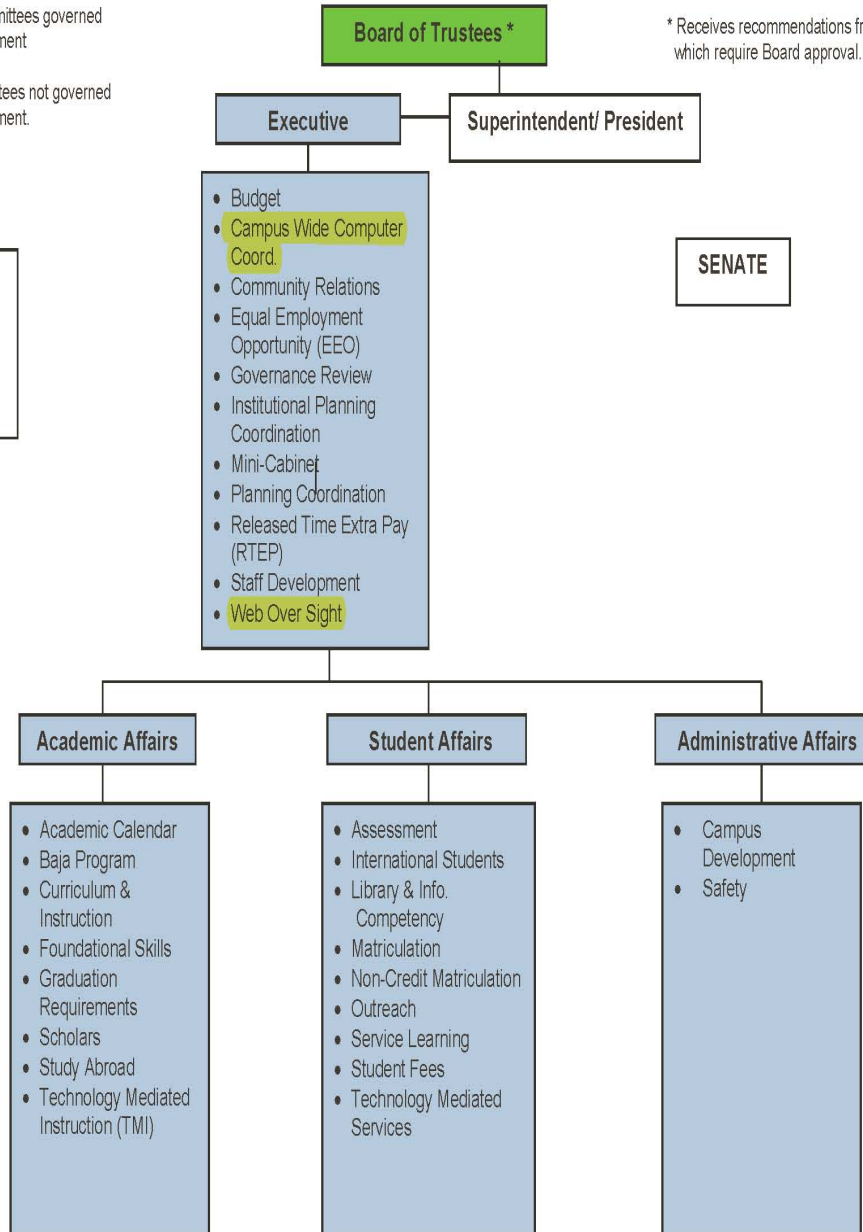| Senate:	Kathy Flynn (09-10)
Guild:	Dennis Doyle (09-10)
Joint Faculty:	Tom Voden (10-11), Michael Dulay (09-10), KC Camp (09-10)
CSEA:	Simon Mirzayan (09-10), Joe Wong (09-10), Bill Elbettar (08-09), Susan Roberts (08-09)
Administration:	Chair, Arnel Pascua, Amir Nour, Jewel Price, Mary Mirch, Alfred Ramirez, Jan Swinton (08-09)
ASGCC:	Antonio Zarate, Danny Ramirez
Resource: Non-voting	Edward Karpp, Research & Planning Reed Anderson, IT Dave O'Donnell, IT Shereen Fogel Allison, Instructional Technology Susan Courtey, Business Services Gretchen Smart, Enrollment Services Ed Bugayong, Human Resources Mary Stone, ACTC Brenda Jones, Library & Learning Resources Kaleung Tsou, IT
Recording Sect: Non-voting	Gordon Lui, IT

4C Relative to College Governance Structure

GOVERNANCE COMMITTEES

Blue = Governance Committees governed by the Governance Document

White = On-going committees not governed by the Governance Document.

* Receives recommendations from all committees which require Board approval.

Board of Trustees *

Executive

Superintendent/ President

- Accreditation
- Master Plan
- Program Review
- SLO Committee

- Budget
- Campus Wide Computer Coord.
- Community Relations
- Equal Employment Opportunity (EEO)
- Governance Review
- Institutional Planning Coordination
- Mini-Cabinet
- Planning Coordination
- Released Time Extra Pay (RTEP)
- Staff Development
- Web Over Sight

SENATE

Academic Affairs

- Academic Calendar
- Baja Program
- Curriculum & Instruction
- Foundational Skills
- Graduation Requirements
- Scholars
- Study Abroad
- Technology Mediated Instruction (TMI)

Student Affairs

- Assessment
- International Students
- Library & Info. Competency
- Matriculation
- Non-Credit Matriculation
- Outreach
- Service Learning
- Student Fees
- Technology Mediated Services

Administrative Affairs

- Campus Development
- Safety

As of 6/2009

The 4C and web oversight committee are highlighted in yellow. These committees are chaired by the Associate Vice President of Information & Technology Services.

College Strategic Master Plan

The college strategic master plan (SMP) 2008-2014 is shown below in its shortest form. The technology master plan is driven by the SMP.

STUDENT ACCESS

Goal I: Provide access for students, including under-represented groups in the communities that Glendale Community College serves, who can benefit from any one of the several instructional paths the college offers (transfer, degrees, certificates; academic career and technical education, non credit, and personal development).

STUDENT LEARNING OUTCOMES, ASSESSMENT, and RETENTION

Goal II: Develop and implement Student Learning Outcomes and Assessments at the course, program, and campus levels in order to help our students achieve success.

Goal III: Increase and improve the quantity, quality, and variety of learning opportunities that promote student success.

Goal IV: Increase student retention and success by strengthening student connections with the college and responding to student needs.

Goal V: Streamline and enhance the delivery of Student Services by focusing on proactive services.

PARTNERSHIPS AND WORK FORCE DEVELOPMENT

GOAL VI: Expand the academic, and the career and technical education programs offered on the main and the Garfield Campuses.

EMPLOYEE EXCELLENCE AND INSTITUTIONAL EFFICIENCY AND EFFECTIVENESS

GOAL VII: Increase faculty and staff excellence in all aspects of college operations.

GOAL VIII. Improve administrative efficiency and effectiveness and fiscal stability.

GOAL IX: Improve the integration of the planning process.

GOAL X: Upgrade the college's information technology infrastructure and its management information system.
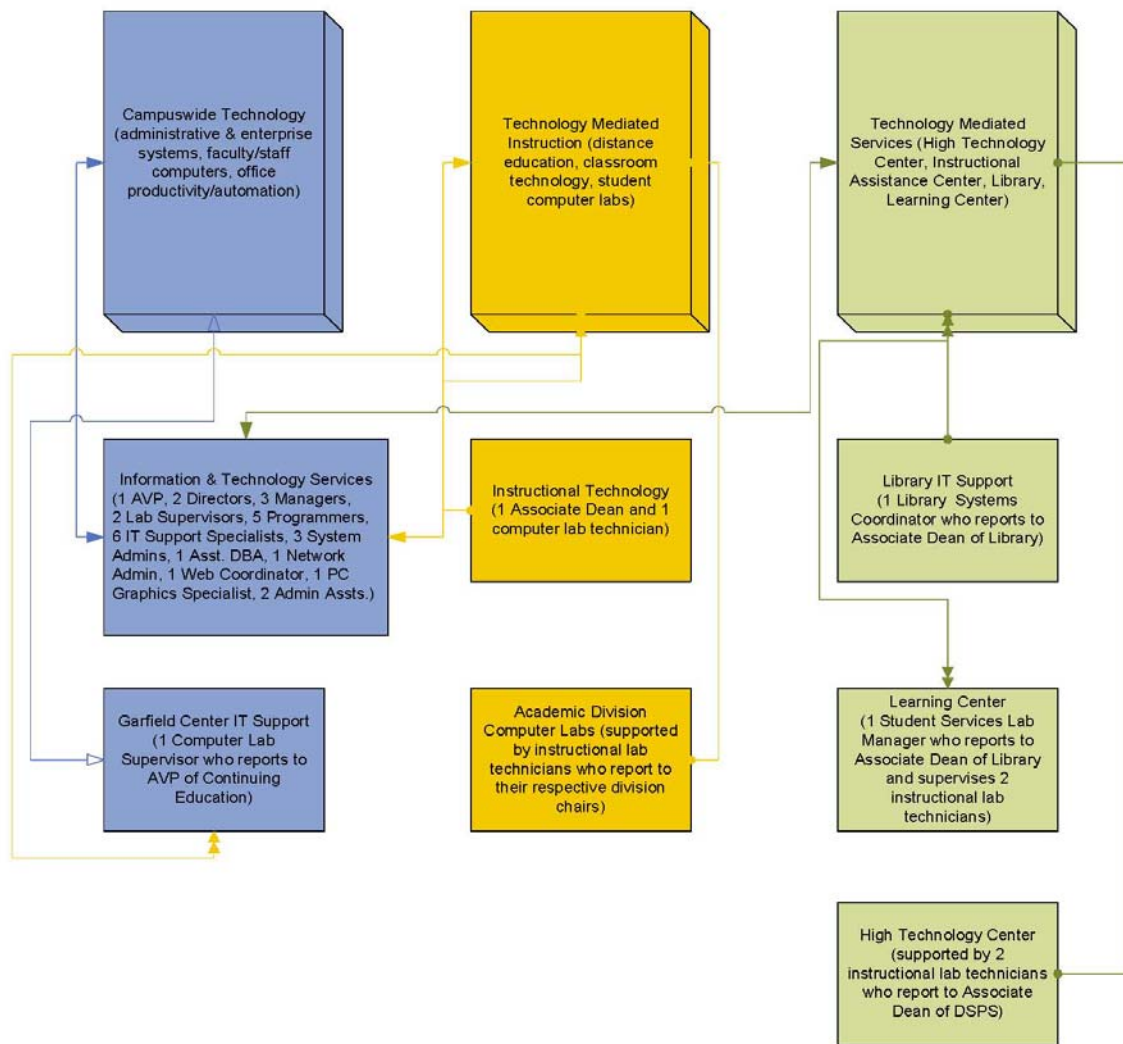
Information Technology Direction

Vision

Glendale Community College will keep pace with an evolving, interactive, student-centered and collaborative electronic learning environment, providing seamless access to data, information, and knowledge, in an effort to meet the academic, student services, and administrative needs and goals of the college community. The framework for this vision will be administered within a global, networked environment, providing bandwidth, and quality services for the campus of the future.

Strategic Goals

1. Provide direct, convenient, and easy access to information and instructional technologies by students, faculty, and staff to facilitate improved teaching and learning as well as enhance distance learning activities and instructional support (supports SMP Goal I, III, IV, V, VII, X)

2. Promote students' success in their educational and career goals using innovative technologies (supports SMP Goal III, IV, V)

3. Provide and maintain an efficient network for secure and high-speed internal and external transmission of video, voice, and data signals (supports SMP Goal X)

4. Improve communication, collaboration and coordination among those who enable students, faculty, and staff to make the most effective use of technology resources (supports SMP Goal I, II, III, IV, V, VII)

5. Promote alternative methods of education that integrate technology into instruction (supports SMP Goal III)

6. Develop an organizational framework that is responsive to the growing technological needs of the college (supports SMP Goal VII, VIII)

7. Improve services to support the administrative functions and business operations of the college and promote compatibility among information technology systems (supports SMP Goal VII, VIII, X)

8. Provide the financial structure to maintain and support technology initiatives (supports SMP Goal VIII, X)

9. Expand training opportunities for faculty, staff, and students (supports SMP Goal II, III, VII)

10. Consult on all technology solutions (supports SMP Goal III, IV, V, VII, X)

Current Information Technology Situation

Information Technology Structure at GCC

Campuswide Technology (administrative & enterprise systems, faculty/staff computers, office productivity/automation)

Technology Mediated Instruction (distance education, classroom technology, student computer labs)

Technology Mediated Services (High Technology Center, Instructional Assistance Center, Library, Learning Center)

Information & Technology Services (1 AVP, 2 Directors, 3 Managers, 2 Lab Supervisors, 5 Programmers, 6 IT Support Specialists, 3 System Admins, 1 Asst. DBA, 1 Network Admin, 1 Web Coordinator, 1 PC Graphics Specialist, 2 Admin Assts.)

Instructional Technology (1 Associate Dean and 1 computer lab technician)

Library IT Support (1 Library Systems Coordinator who reports to Associate Dean of Library)

Garfield Center IT Support (1 Computer Lab Supervisor who reports to AVP of Continuing Education)

Academic Division Computer Labs (supported by instructional lab technicians who report to their respective division chairs)

Learning Center (1 Student Services Lab Manager who reports to Associate Dean of Library and supervises 2 instructional lab technicians)

High Technology Center (supported by 2 instructional lab technicians who report to Associate Dean of DSPS)

IT Support in Academic Computer Labs

Academic Division	Lab Location	Number of Computers	IT Support Personnel
Biology (see Physical Science)			
Business, Credit	SG 129 SR 318	70 50	5
Business & Life Skills, Non Credit	GC 118 GC 223 GC 224 GC 225 GC 226	32 25 31 30 13	7
Child Development			
English	AD 238 AD 247 AT 107A SG 139	37 30 30	2
ESL, Credit (see Language Arts)			
ESL, Non Credit	GC 121	26	2
Health Sciences/Nursing	HS 122 HS 343	8 20	
Language Arts	SG 135	30	2
Mathematics	SB 162 SG 379 AS 103	30 30 20	2

Physical Science
  Desktop Lab
  Mobile Lab
	CR 146	13
		94
			2

Physical Education			
Social Sciences	SB 161	29	1
Technology & Aviation	AT 208 AT 220 AT 213	25 25 25	1
Visual & Performing Arts	HS 117 HS 118 HS 119 HS 120 HS 124 SG 328 AU 213	50 50 50 50 29 23 21	2

Overall Support Staffing for Information Technology

To summarize, the support for information technology in terms of staffing is shown below.

Current Support Staff for Campuswide Technology (includes only IT support specialists & computer lab supervisors)	9
Current Support Staff for Technology Mediated Services (including Library, High Technology Center, Instructional Assistance Center, Learning Center)	7
Current Support Staff for Technology Mediated Instruction (includes only instructional computer lab techs and computer lab techs)	26
Total IT Staffing	43

For the purpose of determining the best scenario for IT support staffing, Glendale Community College looked at two different models.

Model 1 - Staffing dependent upon the general characteristic of end users supported as recommended by Gartner

Model 2 - Staffing based on total cost of ownership as recommended by the State Chancellor's Office

The first model uses the general criteria that the ratio of IT support staff to technology end users depends on the general characteristic of end users supported. This model was recommended in 2003 by Gartner, an independent technology research group. The following are examples of a general characteristic.

1. Power users – those who develop their own applications and always need the newest and fastest.

2. "Middle-of-the-road" users - those who use a common suite of applications or use servers for database decision-support or work-group support.

3. General office workers - those who use a standardized suite of applications, need access to file and print servers, and use host-based legacy applications.

Based on the general characteristic of the end users, Gartner recommends the following ratios.

Category of Technology User	Ratio of IT Support Staff per User
Power User	1:50
"Middle-of-the-road" User	1:100
General office workers	1:300

In this analysis, the ratio of 1:300 is used as a measure of need because of the range of abilities, access needs, and application uses among all GCC users. A reasonable level of staff support to meet student, faculty, staff, and administrative demand can be based on Full-Time Equivalent Student (FTES) for students and Full-Time Equivalent (FTE) for faculty, staff, and administration. For this model, the employee and student data for the 2007-2008 reporting year was used. The source of this data is the State Chancellor's Office data mart. The Gartner model shows that the college will need an additional of 6 IT support staff members.

Technology User	FTES for Students/FTE for Employees
Students	15,840
Faculty (tenured and temporary)	437
Classified Staff & Professional	314
Management (certificated and classified)	69
Total	16,660
Recommended IT staffing per the Gartner model = 16,660 divided by 300 = 55.53	

Another measure of a college's ability to provide technology services and resource technology support is a tool called the Total Cost of Ownership (TCO) that was first developed for California community colleges in the Chancellor's Office's Technology Plan II and which has been updated several times by the Systemwide Architecture Committee (SAC). This model of providing IT support has become a benchmark for the California Community Colleges. The CCC Technology Center at Butte College collected information regarding California community colleges' readiness in meeting these Total Cost of Ownership (TCO) standards. Twenty-nine (29) community college districts including GCC responded to the survey. In terms of staffing, 90.32% of the respondents (including GCC) reported that they are understaffed based on a ratio of 1 computer technician per 100 computers for all college/district computers excluding labs. Furthermore, 67.74% of the respondents (including GCC) stated that they are understaffed based on a ratio of 1 technical assistant per 75 computers for all computers in labs, smart classrooms, and classrooms, including mobile labs.

Based on the TCO model, GCC meets the number of computer technicians who support the faculty and staff computers. On the other hand, the support staffing for the computer labs and classrooms seem to be more than adequate at the present time.

Student computers (in labs)	1435
Classroom computers	99
Recommended IT staffing per TCO model = (1435+99) divided by 75 = 20.45	
Faculty computers	255
Administrative & staff computers	559 (includes shared office computers)
Servers	116
Recommended IT staffing per TCO model = (255+559+116) divided by 100 = 9.30	

IT Budget and Expenditures

| 2007-2008 FUNDING SOURCES FOR TECHNOLOGY		
General Fund - Unrestricted (01)	$	**4,917,934.00**
Information and Technology Services (Dept. Total)	$	3,958,269.00
Salaries & Benefits - ITS Staff		
Salaries & Benefits - Computer Lab Staff		
Contracts - software support, hardware maintenance, prof. svcs.		
Telecommunications		
Supplies & Equipment		
Academic Technology (Dept. Total)	$	339,732.00
Salaries & Benefits		
Non-salary budget		
Library & Learning Resources (Technology Budget)	$	319,403.00
Salaries & Benefits		
Non-salary budget		
Garfield Continuing Education Center (Technology Budget)	$	300,530.00
Salaries & Benefits		
Non-salary budget		
General Fund - Restricted (03)	$	**294,258.00**
State Instructional Equipment Funds	$	45,075.00
Basic Skills Block Grant (Level 3 Classroom Upgrades)	$	104,000.00
Title V Grant (Web Site Redesign)	$	100,000.00
Telecommunications Technology Infrastructure Project (TTIP)	$	45,183.00
Library Automation		
Total Cost of Ownership (TCO)		
Vocational Technology Education Act (VTEA)		
Go Bond Series D (73)	$	**1,483,699.00**
Other Funding Sources		**variable**
Specially Funded Programs		
Grants		
Donations		
Foundation		
Total Funding for Technology	$	**6,695,891.00**
Total College Budget - All Funds	**$**	**167,765,535.00**
Percentage of Technology Budget		**3.99%**
Additional Amount Needed to Meet Goal of 5%	$	**1,692,385.75**

Funding for computers, infrastructure and training is supported in several different cost centers which include individual instructional departments, Information and Technology Services, Academic Technology, and Library. Additionally, money in the form of a grant, special programs, or district project has been made available sporadically for computing equipment and software systems. These programs include Measure G bond funds, TTIP (Telecommunications Technology Infrastructure Program), SIEF (State Instructional Equipment Funds), and VTEA (Vocational Technology Education Act). The college has made a significant financial commitment to information technology in order to improve services to faculty, students, staff, in the area of information technology.

Recurring expenditures are already part of the college's annual budget such as expenditures of staffing, equipment and supplies, and maintenance and service. The approximate additional amount necessary to fund the list of prioritized projects for each of the next three years is $ 2,570,037.   To the extent that this amount is available from sources other than Program 100, the college budget will not be impacted. The gap between what is funded through other sources and what is recommended as necessary to accomplish this plan's objectives should be met by the General Fund.

As of fiscal year 2007-2008, the budget for technology represents 3.99% of the total college budget. This budget includes Measure G bond funds allocated for the PeopleSoft implementation. Consequently, to meet the budget goal of 5% of the total college budget, approximate $1.7 million is needed as a line item for technology expenditures and to be funded annually.

Current IT Environment

The college made significant gains in upgrading its technology infrastructure in 2005. The existing infrastructure supports the transmission of data, voice and video also known as a converged infrastructure. The college's converged network provides many advantages and benefits. First, it provides an infrastructure that minimizes cabling requirements and enables the college to transmit voice, video and data over the same wire. Second, it is capable of adding new technology as the needs dictate, while integrating existing systems and equipment. Third, the installed infrastructure allows the system to evolve without the need to install a completely new system. Due to the converged network infrastructure, the college now has a telecommunications system that uses the same wire to transmit data and video. This technology is popularly known as voice over IP.
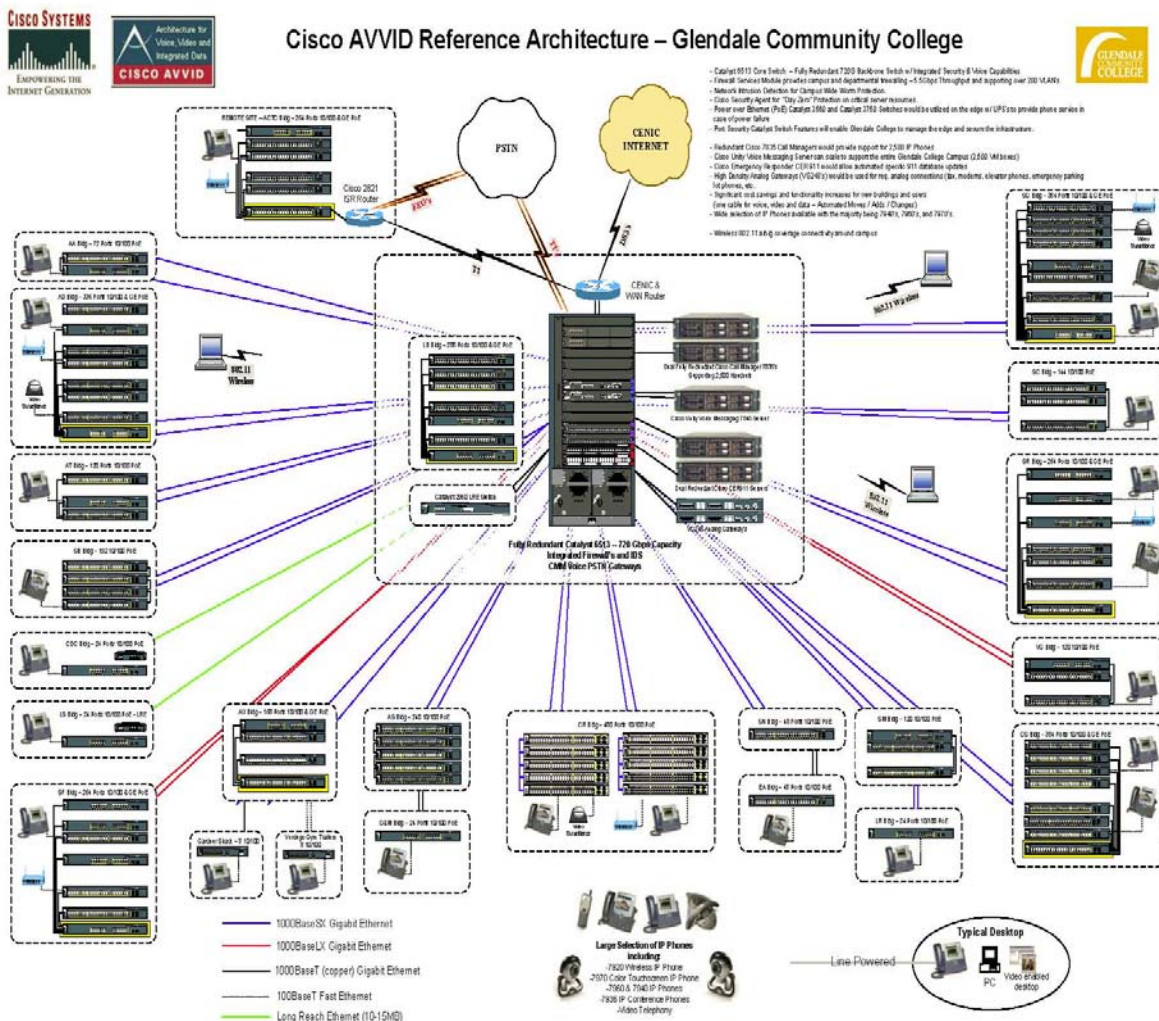
The college also has a robust and secure intranet thereby providing access to online data, office productivity tools and applications that improve workflow. Online applications have been developed or acquired with a web browser "look and feel." For example, electronic mail can now be accessed using a web browser from home or anywhere in the world. There are also administrative applications such as those used for procurement and recruitment which are accessible via a web browser from any computer on campus.

Learning Resource Facilities and Hardware

There are 36 computer labs on the main campus and 10 on the Garfield campus with a current inventory total of 1,435 computers. There are 23 computers with assistive technology in the High Technology Center that include ergonomic furniture and chairs, scanners, trackballs, Maltron keyboards, headphones, and software such as Dragon NaturallySpeaking. The High Technology Center in San Gabriel provides access to adaptive computer modifications and computer training allowing full participation in all college programs on campus. Its services include providing students with adaptive computer program access, adaptive computer equipment access and alternative text format access.

Faculty and Staff Computers

There are 255 computers assigned to full-time faculty members, 66 computers assigned to management employees, and 493 computers (including shared office computers) assigned to classified staff.

Technology Services and Applications

A. Legacy (VAX)
The legacy system consists of a VAX cluster and a local area cluster. There are two VAX machines in the cluster that communicate only through DECNET. They are both connected to and share the storage devices. There are three DEC ALPHA servers that speak both TCP/IP and DECNET. They manage connection between the VAX cluster and the outside world via ODBC, FTP, and telnet. They are part of the "local area cluster".

B. Oracle e-Business Suite System
The Oracle system houses the Human Resources and Finance management systems. It consists of application servers, database servers, and an EMC/SANS device for storage. It currently uses Oracle 10g for the database, Oracle 11.5.9 for the application, and all run on Red Hat Linux based servers. There are interfaces to the VAX using FTP for warrants and ODBC for reporting.

C. PeopleSoft Campus Solutions System
The PeopleSoft student administration system includes application servers, database servers, and an EMC/SANS for storage. The college is currently implementing the Campus Solutions 9.0 student system to replace the legacy VAX system. Student Center self-service is one key feature in Campus Solutions that students will use to access the following information from a single web page.
- Apply online for admission as well as federal financial aid.
- View class and exam schedules, check enrollment appointments, and enroll or change enrollment in classes.
- Request transcripts, view course and grade history, and evaluate transfer credit.
- Manage accounts for charges, payments, financial aid, and admission deposit activity.

- Make online credit card payments.
- View financial aid details, including the cost of attendance, expected family contribution, accepted and net loan amounts, and loan fees.

The faculty will have access to the Campus Solutions Faculty Center page. Below are examples of what faculty can do in Faculty Center.

- See a complete calendar of assigned classes.
- View a list of students who are enrolled or wait-listed for a class, plus those who dropped.
- Send email to one student, a select group, or all students in a class—with just one click.
- Access class information, such as start and end date, days and times, and location.
- Enter final grades for each student.

D. Telephone Registration System and Web Registration System

The EPOS IVR system and web registration system interface with the VAX system via terminal emulators. EPOS provides telephone registration services to students. The college will discontinue telephone registration when the PeopleSoft Campus Solutions student system is implemented.

E. MyGCC Student Portal

The student portal provides access to class registration system, current class schedule, financial aid information, and unofficial transcript--grades, units and GPA. The page is customizable by the student.

F. Web and Email Services

The college web servers host the GCC home page as well as web sites for instructors, departments and offices. The college email servers provide college faculty and staff with email accounts.   Google provides free email accounts to all GCC students.

G. Voice Mail and Phone System

Voice mail and phone services are available for most faculty and staff. The phone system uses voice over IP technology that allows the phone to share the wire with a computer.

H. Student Service Kiosks

The GCC Intranet is in place to support kiosks and student-accessible stations for general information, admissions, guidance, and locations of resources.

I. Library Automation

The Library card catalog information is now in computer form using the Voyager software. The Library also provides access to select journal citation indexes as well as online databases and periodicals ranging from Lexis-Nexis to databases that provide health and medical resources.

J. Blackboard/WebCT

WebCT is course management software adopted by the GCC in 1998. GCC faculty use WebCT to create entire courses online or to complement a classroom-based course. WebCT resides on a server that is administered by GCC IT staff. Blackboard will replace WebCT as the college upgrades its course management software to Blackboard version 9.

K. SARS Grid and Trak System

To assist counselors in scheduling counseling, assessment and orientation appointments, the college implemented the SARS grid system. The software will provide the ability to schedule and monitor

appointments easily as well as to generate statistical reports. On the other hand, SARS Trak is used to collect data on student use of a computer lab

L. CCCSAT Satellite Downlink
CCCSAT is a statewide initiative established by the California Community College Chancellor's Office to advance distance learning and support the mission of the California Community College system. CCCSAT is physically domiciled at Palomar College - Educational Television. GCC is able to access CCCSAT programming for live or archived broadcasts.

M. Media Services
Media Services is housed in the ITS offices in Library 113 and provides the faculty of GCC with multimedia services ranging from video and audio equipment to portable computers and sound systems. Instructional equipment and materials are available to faculty and staff for presentation or classroom usage. These include a video and film library, video players, monitors and projectors, and audio systems.

N. Videoconferencing and Teleconferencing
The college has a videoconferencing system that is comprised of one (1) Tandberg 2500 codec, two (2) 32- inch color TV sets, one (1) Samsung video presenter, and one (1) Cisco 3725 multiservice access router.   The equipment is currently housed in the Health Sciences building room 126.   The teleconferencing device is available for use from Information and Technology Services (ITS).

IT Policies and Guidelines

IT Computer and Communications Use Policy (BP2240)
Glendale Community College encourages the use of computer and communications technology, including computer networking, in order to enhance both the District's operation and the learning environment for students, faculty, and staff. In order to prevent the misuse of such technology, the College shall develop and regularly update procedures related to campus computing, networks, dial-up access, and all other such electronic communication systems.

The administrative procedures or regulations are in AR2240 "Using Information Technology Resources at Glendale Community College" and the link to the whole document is:
http://www.glendale.edu/index.aspx?page=1784.

The student guidelines for the use of IT resources can be found at
http://www.glendale.edu/index.aspx?page=1782.

IT Standards and Purchasing Guidelines
The Campuswide Computer Coordination Committee (4C) has developed the Information Technology Standards and Purchasing Guidelines to serve as a framework for technology purchasing and use decisions. The primary goals of developing and implementing such a policy are:

- To standardize information technologies purchased, resulting in better pricing, and improved delivery of technical support to end-users.
- To ease purchasing decisions by pre-evaluating and pre-approving technology solutions.
- To reduce training and support costs and create economies of scale by narrowing the number of technologies and products used.
- To ensure integration and interoperability between technologies.
- To set parameters for future technology innovation and development.

The whole document is available via the following link: **http://www.glendale.edu/it/cccc.htm**

IT Disaster Recovery Plan
The 4C also approved an IT Disaster Recovery Plan to establish defined responsibilities, actions, and procedures to recover the GCCD computer, communication, and network environment in the event of an unexpected and unscheduled interruption.   The whole document is available via the following link, **http://www.glendale.edu/it/cccc.htm**

Computer Cascade Plan
Glendale Community College through the 4C developed a plan for replacing lab, faculty, staff, and administrator computers on a regular cycle. Instituting such a plan would help ensure that all technology on campus is kept up-to-date, and that the funding for this plan is clearly established across multiple years. The plan can be found in Appendix C.

Security Policy
The current security policy can be found at http://www.glendale.edu/it/security.htm. This policy will be reviewed by 4C in Spring 2010.

Web Policy
The web policy and regulations are still being developed by the Web Oversight Committee.

Information Technology Strategies

Accreditation Planning Agenda

In the most recent accreditation self study of standard IIIC (Technology Resources), the college has identified the following agenda to ensure that the college meets the accreditation standards related to technology resources.

1. Standard III C 1:

    a. The college will seek additional technology funding and identify ongoing funds to address the increasing demand for technology, training and support.

    b. Current coordination of student computer labs will be improved with the appointment of a faculty coordinator at 60% released time position.

2. Standard III C 1.c: The Information & Technology Services department would like to automate the computer inventory collection process by implementing Microsoft Active Directory and System Center Configuration Manager.

3. Standard III C 2:

    a. The college will perform an annual review of the 2007-2012 technology master plan through the Campuswide Computer Coordinating Committee to ensure that it is integrated with institutional planning. Every year, the committee will also review the progress on the accomplishment of the technology goals and strategies under the strategic master plan as well as under the technology plan itself.

    b. The college will complete the implementation of the PeopleSoft Campus Solutions student information system in summer 2010.

    c. The college will implement the IT standards and procurement guidelines to address many of the hardware and software needs as well as the support that will be provided by the ITS department. To ensure consistent and reliable support, the ITS managers will develop a training plan for their employees during the performance evaluation process.

    d. The computer cascade policy will continue to be implemented. ITS will update the computer inventory annually and establish a "pecking" order for computer cascade to ensure equal distribution of resources.

Information & Technology Services Program Review

The ITS department conducted its program review in spring 2009. In the executive summary section, the following goals and strategies were identified as a result of broad-based input from students, faculty and staff.

Upgrade the college's information technology infrastructure and its management information system	1. Upgrade and improve enterprise applications including but not limited to the ERP systems that support the mission and goals of the college
	2. Upgrade and improve system availability and uptime of the enterprise applications including but not limited to the ERP systems
	3. Upgrade, improve and secure the network infrastructure that provide the transport for data and applications
	4. Develop and implement comprehensive plan to replace computer equipment
	5. Develop and implement comprehensive plan to implement or upgrade classroom technology (level III)
Increase focus on training of IT staff to enhance their skills and decrease reliance on vendor support	1. Cross train staff members on various systems and technologies with a primary person as a specialist and a secondary person as a backup
	2. Remain current with information about the implementation of the PeopleSoft student system
	3. Attend more campus and off-campus workshops focusing on technology and use in academic environments
	4. Attend conferences and symposiums on emerging trends in technology
Improve communications and service to end users	1. Communicate via a web site (community portal), email, newsletters, and special events (IT forums)
	2. Implement a web-based work request system
	3. Improve the computerized equipment checkout and inventory systems
	4. Work with Staff Development to develop and provide instructions/training manuals on use of applications and systems and conduct training as necessary
	5. Develop a plan for additional IT staffing to include the replacement of staff who plan to retire on or before 2014
	6. Improve software deployment and management of all desktop and lab computers
	7. Develop and implement process for program/system testing and quality assurance
Improve communications among ITS personnel	1. Inform IT personnel of any developments that might affect them via the ITS staff website
	2. Provide wireless communication devices to IT personnel

Strategies Identified by 4C Governance Committee in 2007

I.   Campus Wide Information Technology Strategies
       A.   Implement and maintain an ERP solution that will integrate all data and processes of the college's organization (i.e., Student Information Systems, Human Resources, and Financial Services) into a unified system.
       B.   Provide a computer on the desks of all full-time faculty members.
       C.   Provide part-time faculty members access to computers with an internet connection, email, and necessary software.
       D.   Expand and upgrade the wireless access on campus to support laptops, PDAs and other technologies.
       E.   Proactively maintain, upgrade, and expand networking systems to meet the college's ever growing technological demands.
       F.   Create a computer café on campus incorporating both wired and wireless network access.
       G.   Create and test a recovery plan* that will return service to normal operations within a specified period of time after experiencing a major disaster.
       H.   Establish a method for users to sign-on to all applications using a single sign-on by utilizing a common directory services approach.
       I.   Involve IT in the planning of buildings and remodels to ensure adequate technology infrastructure for communication and networking.
       J.   Provide centralized and secure backups for administrative and desktop documents and data.
       K.   Secure and protect the college's information assets including:
             1.   Environmental Control including Air Conditioning, Humidifiers, UPS, etc.
             2.   Surveillance and Security Cameras
             3.   Locks
             4.   Access
       L.   Dedicate a room solely for the purpose of videoconferencing.
       M.   Develop an electronic calendaring system that would allow individuals to easily share calendar, contact, and task information with other users.
       N.   Completely redesign the college's website so that it is easy to navigate and presents a more straightforward, consistent, and enhanced experience of GCC.
       O.   Assist in maximizing the use of technology as a means of connecting minds and building community by supporting communication tools such as wikis and blogs.
       P.   Create a method which would allow individuals to store, access, organize, and share documents or multiple folders through one central location.
       Q.   Continue to provide a reliable and efficient telephone system by exploring its current and future features as well as upgrading any necessary software or equipment as needed.
       R.   Train faculty and staff as new technology is adopted and implemented via the staff development program or a train-the-trainer program.
       S.   Implement a cost-effective, shared multifunctional device in every department that will provide copying, printing, scanning and faxing capabilities.
II.   Academic Technology Strategies
       A.   Review current standards for hardware and software
       B.   Continue to provide classrooms with multimedia capabilities as well as wired or wireless network connection.
       C.   Maintain online resources (e.g. Intelecom), DVDs, CDs, and other media collections for teaching and learning.
       D.   Provide faculty with a means to borrow various technology such as laptops, DVD/VCR players, digital cameras, etc.
III.   Library and Learning Resources Strategies
       A.   Provide students access to computers at several open and specialized labs.
       B.   Coordinate all student computer labs
IV.   Student Services Technology Strategies
       A.   Provide web access to student records including online registration, application, grades, orientation, financial aid records, and others.

     B.   Work closely with student services and other departments to assist them in the use of technology to help students achieve their goals.

     C.   Continue upgrades and maintenance of existing systems which promote student success such as SARS, Early Alert, Assessment, etc.

     D.   Implement a student email system as an additional method for contacting students with official Glendale College business.

     E.   Implement an electronic student educational plan system.

V.   Governance of Information Technology Strategies

     A.   The college needs to have the flexibility to adjust its IT support organization as the times change. This includes but is not limited to the creation of new positions, reorganizations, and the hiring of additional staff.

     B.   All IT support personnel will be provided in-depth training which may require off-site classes, virtual classes, on-site workshops, and/or the employment of consultants.

     C.   The college will set and enforce policies, procedures and guidelines for technology.

     D.   The college will develop hardware and software standards to reduce training and support costs and create economies of scale by narrowing the number of technologies and products used.

Matrix of 2007-2012 IT Goals and Strategies

2007-2012 Technology Master Plan	Strategy Recommended by		
IT Goals & Strategies	**Accreditation**	**ITS Program Review**	**4C**
I. Campus Wide Information Technology Strategies			
A. Implement and maintain an ERP solution that will integrate all data and processes of the college's organization (i.e., Student Information Systems, Human Resources, and Financial Services) into a unified system.	Yes	Yes	Yes
B. Provide a computer on the desks of all full-time faculty members.	Yes	Yes	Yes
C. Provide part-time faculty members access to computers with an internet connection, email, and necessary software.	Yes	Yes	Yes
D. Expand and upgrade the wireless access on campus to support laptops, PDAs and other technologies.	No	Yes	Yes
E. Proactively maintain, upgrade, and expand networking systems to meet the college's ever growing technological demands.	Yes	Yes	Yes
F. Create a computer café on campus incorporating both wired and wireless network access.	No	No	Yes
G. Create and test an IT disaster recovery plan that will return service to normal operations within a specified period of time after experiencing a major disaster.	Yes	No	Yes
H. Establish a method for users to sign-on to all applications using a single sign-on by utilizing a common directory services approach.	No	Yes	Yes
I. Involve IT in the planning of buildings and remodels to ensure adequate technology infrastructure for communication and networking.	Yes	No	Yes
J. Provide centralized and secure backups for administrative and desktop documents and data.	Yes	Yes	Yes
K. Secure and protect the college's information assets including:	No	Yes	Yes
1. Environmental Control including Air Conditioning, Humidifiers, UPS, etc.			
2. Surveillance and Security Cameras			
3. Locks			
4. Access			
L. Dedicate a room solely for the purpose of videoconferencing.	Yes	No	Yes
M. Develop an electronic calendaring system that would allow individuals to easily share calendar, contact, and task information with other users.	No	Yes	Yes

N. Completely redesign the college's website so that it is easy to navigate and presents a more straightforward, consistent, and enhanced experience of GCC.	Yes	No	Yes
O. Assist in maximizing the use of technology as a means of connecting minds and building community by supporting communication tools such as wikis and blogs.	No	Yes	Yes
P. Create a method which would allow individuals to store, access, organize, and share documents or multiple folders through one central location.	No	Yes	Yes
Q. Continue to provide a reliable and efficient telephone system by exploring its current and future features as well as upgrading any necessary software or equipment as needed.	No	Yes	Yes
R. Train faculty and staff as new technology is adopted and implemented via the staff development program or a train-the-trainer program.	Yes	Yes	Yes
S. Implement a cost-effective, shared multifunctional device in every department that will provide copying, printing, scanning and faxing capabilities.	No	No	Yes
II. Academic Technology Strategies			
A. Review current standards for hardware and software	Yes	Yes	Yes
B. Continue to provide classrooms with multimedia capabilities as well as wired or wireless network connection.	Yes	Yes	Yes
C. Maintain online resources (e.g. Intelecom), DVDs, CDs, and other media collections for teaching and learning.	Yes	No	Yes
D. Provide faculty with a means to borrow various technology such as laptops, DVD/VCR players, digital cameras, etc.	Yes	Yes	Yes
III. Library and Learning Resources Strategies			
A. Provide students access to computers at several open and specialized labs.	Yes	Yes	Yes
B. Coordinate all student computer labs	Yes	No	Yes
IV. Student Services Technology Strategies			
A. Provide web access to student records including online registration, application, grades, orientation, financial aid records, and others.	Yes	Yes	Yes
B. Work closely with student services and other departments to assist them in the use of technology to help students achieve their goals.	Yes	Yes	Yes
C. Continue upgrades and maintenance of existing systems which promote student success such as SARS, Early Alert, Assessment, etc.	Yes	No	Yes

D. Implement a student email system as an additional method for contacting students with official Glendale College business.	Yes	Yes	Yes
E. Implement an electronic student educational plan system.	Yes	No	Yes
V. Governance of Information Technology Strategies			
A. The college needs to have the flexibility to adjust its IT support organization as the times change. This includes but is not limited to the creation of new positions, reorganizations, and the hiring of additional staff.	Yes	Yes	Yes
B. All IT support personnel will be provided in-depth training which may require off-site classes, virtual classes, on-site workshops, and/or the employment of consultants.	Yes	Yes	Yes
C. The college will set and enforce policies, procedures and guidelines for technology.	Yes	Yes	Yes
D. The college will develop hardware and software standards to reduce training and support costs and create economies of scale by narrowing the number of technologies and products used.	Yes	Yes	Yes

Prioritized IT Projects

2007-2008

Project Description	Total Cost	Status
Implementation of the rosters system for instruction	None	Done
Re-write of the non-credit system (registration, application & hours accounting)	None	Done
Implementation of SARS Call to remind students of counselor appointments	$13,130	Done
Created process to upgrade desktops	None	Done
Upgrade to WebCT 6.0 (distance education)	$29,000 (annual licensing cost)	Done
Implementation of Cynosure (student orientation software in Spanish, Korean and Armenian)	$43,475	Done

2008-2009

Project Description	Total Cost	Status
Start the implementation of PeopleSoft Campus Solutions 9 student system	$4.3 million	Kicked off December 2009
Upgrade Oracle E-Business Suite database to 10g	$2,025	Done
Implementation of eLumen (SLO software)	$27,000	Done
Automation of the instructor absence reporting system	None	Done
Upgrade to WebCT 8.0 (online course/distance education management system)	$29,000 (annual licensing cost)	Done
Develop plan for IT disaster recovery	None	Done
Reorganize the ITS department to better utilize resources and increase effectiveness	None	Done
Redesign of the college web sites	$100,000	To be launched fall 2009

2009-2010

	Projects	Estimated Costs							
No.	Five-Year Plan	Staffing Needs	Facilities & Space Needs	Equipment & Support	Technology (consulting services)	Software & Support	Training	Others (supplies, materials, etc.)	Total
	2009-2010								
1	Improve communications to the college on new applications and technology via the web site (community portal), email & newsletters (announcements), and special events (IT forums/brainstorming sessions)								ITS internal project
2	Improve training and efficiency of staff through cross training and assigning primary and backup persons for a critical role								ITS internal project
3	Implement a user-initiated, web-based help desk system with adequate technician licenses and that provides better feedback to users regarding status of help desk calls/tickets								ITS internal project
4	Support the implementation of PeopleSoft Campus Solutions (student administration system) with interfaces to various systems that are automated and fully functional								Funded by Measure G
5	Increase main campus internet bandwidth from 45 Mbps to 1 Gbps								ITS internal project

Projects		Estimated Costs							
No.	Five-Year Plan	Staffing Needs	Facilities & Space Needs	Equipment & Support	Technology (consulting services)	Software & Support	Training	Others (supplies, materials, etc.)	Total
6	Updating all classrooms to level 3 (no level 1) except computer labs and standardizing level 3 classrooms with consistent wall plate			$161,500					$161,500
7	Training on the maintenance and support of the document imaging system								ITS internal project
8	Explore the feasibility of using Cisco security agent as an endpoint security solution to replace the McAfee AV software								ITS internal project
9	Improve the computerized equipment checkout system								ITS internal project
10	Provide up-to-date data on equipment stored in Resource 25								ITS internal project

Projects		Estimated Costs							
No.	*Five-Year Plan*	*Staffing Needs*	*Facilities & Space Needs*	*Equipment & Support*	*Technology (consulting services)*	*Software & Support*	*Training*	*Others (supplies, materials, etc.)*	*Total*
11	Implement student email system and single sign on			$30,000		$36,000			$66,000
12	Explore the feasibility of an internship program to provide support for students (help desk/level 1 support)								ITS internal project
13	Improve USS website with FAQ's, tips and other self help for both users and support staff; showcase Media Services and how it serves the faculty								ITS internal project
14	Fully implement disk defragmentation as a background process on all faculty/staff computers								ITS internal project
15	Develop comprehensive plan to replace computer equipment in a timely manner; includes maintaining and updating computer inventory and establishing a replacement priority order								ITS internal project
16	Upgrade the Garfield Center internet circuit to 45 Mbps and the circuit between main campus and Garfield Center to 45 Mbps			$60,000					$ 60,000

2010-2011

Projects		Estimated Costs							
No.	Five-Year Plan	Staffing Needs	Facilities & Space Needs	Equipment & Support	Technology (consulting services)	Software & Support	Training	Others (supplies, materials, etc.)	Total
	2010-2011								
1	Consolidation of servers to reduce physical footprint, power/cooling requirements and total cost of ownership for server room			$ 170,000	$ 12,500	$35,000			$ 217,500
2	Migrate all faculty/staff to Microsoft Exchange email			$ 10,000		$ 5,000			$ 15,000
3	Provide AppleCare Technician Training to IT support specialists to improve support for MacIntosh computers								ITS internal project
4	Create a user group in training and supporting new or current employees in the use of certain applications; Explore other training options (utilize technical education tools) and make recommendations to the appropriate office on how to provide training; Collaborate with Staff Development								ITS internal project

	Projects	Estimated Costs							
No.	Five-Year Plan	Staffing Needs	Facilities & Space Needs	Equipment & Support	Technology (consulting services)	Software & Support	Training	Others (supplies, materials, etc.)	Total
5	Train functional users to generate their own ad hoc reports and do simple queries and produce complex reports that are auto-scheduled for online access								ITS internal project
6	Develop and/or implement version control of source codes and enhance developers' skills in troubleshooting application problems through shared documentation/knowledgebase and the use of development tools								ITS internal project
7	Plan, prepare and upgrade Oracle e-Business Suite to release 12 and Oracle DB to 11g				$700,000.00				$700,000.00
8	Upgrade to Legato Networker 7.4 and improve the capabilities of the data backup system for all servers in the server room			$ 20,000		$30,000			$ 50,000
9	Upgrade to SAN Flare 19 and improve the capabilities of the networked data storage system					$25,000			$ 25,000

	Projects	Estimated Costs							
No.	Five-Year Plan	Staffing Needs	Facilities & Space Needs	Equipment & Support	Technology (consulting services)	Software & Support	Training	Others (supplies, materials, etc.)	Total
10	Upgrade to Cisco LAN Manager Solution (LMS) v3.1 with Health & Utilization Monitor, Cisco Unified Operations Manager (CUOM) v2.0, and Cisco Security Manager (CSM) v3.2 and corresponding software prior to 7/2011. LMS monitors all network devices for availability and usage levels. CUOM presents current operational status of all elements of the IP telephony environment. CSM is a comprehensive solution for provisioning, management, and policy administration of Cisco firewalls, VPNs, and intrusion preventions systems.			$ 66,153					$ 66,153
11	Upgrade to Cisco Unified Communications Manager 7.0 prior to 5/2011, to Unity 7.0 prior to 7/2011, to IP Contact Center (IPCC) 7.0 prior to 9/2010, and to Emergency Responder 7.0 prior to 4/2010 (includes hardware and software)			$108,500					$108,500
12	Implement faculty/staff single sign on								ITS internal project

Projects		Estimated Costs							
No.	*Five-Year Plan*	*Staffing Needs*	*Facilities & Space Needs*	*Equipment & Support*	*Technology (consulting services)*	*Software & Support*	*Training*	*Others (supplies, materials, etc.)*	*Total*
13	Develop a network and information security policy								ITS internal project
14	Protect investment in voice over IP telephones by procuring a maintenance contract			$ 75,000					$ 75,000

2011-2012

No.	Projects Five-Year Plan	Estimated Costs							
		Staffing Needs	Facilities & Space Needs	Equipment & Support	Technology (consulting services)	Software & Support	Training	Others (supplies, materials, etc.)	Total
	2011-2012								
1	Plan and prepare for retirement of the VAX legacy system								ITS internal project
2	Explore data warehousing and business intelligence for research and planning								ITS internal project
3	Hire a database design specialist to design, create and maintain databases according to data standards as well as to develop and maintain procedures and definitions for a data dictionary (metadata)	$ 75,000							$ 75,000
4	Hire a backup network administrator to support the network infrastructure at the main campus and Garfield center	$ 75,000							$ 75,000
5	Hire two (2) computer system administrators to support and maintain the PeopleSoft applications and servers	$160,000							$160,000

	Projects	Estimated Costs							
No.	*Five-Year Plan*	*Staffing Needs*	*Facilities & Space Needs*	*Equipment & Support*	*Technology (consulting services)*	*Software & Support*	*Training*	*Others (supplies, materials, etc.)*	*Total*
6	Expand capabilities of wireless network to include wireless, secure voice communications and support for other wireless devices (PDA, smart phones, wireless IP phones, etc.)			$143,010					$143,010
7	Implement Cisco Network Admission Control (NAC) to authenticate, authorize, evaluate, and remediate wired, wireless, and remote users and their machines prior to permitting access to the network			$148,813					$148,813
8	Install Cisco Secure Access Control Server (ACS) for Windows to integrate access control and enforce network access policies			$ 15,561					$ 15,561

Projects		Estimated Costs							
No.	Five-Year Plan	Staffing Needs	Facilities & Space Needs	Equipment & Support	Technology (consulting services)	Software & Support	Training	Others (supplies, materials, etc.)	Total
9	Improve load balancing and failover capabilities for PeopleSoft servers			$100,000					$100,000
10	Implement an automated inventory and management of hardware and software inventory using Microsoft System Center Configuration Manager; includes other features such as OS deployment, software distribution, software update management and configuration management			$ 18,000					$ 18,000
11	Replace all projectors that are not networkable and adding the network connection								$280,000
12	Participate in the HP printer cartridge recycling program								ITS internal project
13	Train IT support specialists in the repair and maintenance of printers						$10,000		$ 10,000

Appendix A: IT Scope and Activities as Identified in 1998-2003 EMP/ IT Plan

GCC's first formal statement of strategies for the campus in the context of the new technologies that emerged over the past decade were initially articulated in 1998 as part of the College's *Educational Master Plan, 1998-2003.*

Scope 1: Software

Activities	Description	Implementation Responsibility	Status	Self-Assessment Measures	Monitoring Oversight
1.1	Software will be available to promote student technological literacy that includes word processing, electronic mail, and web browser software.	ITS	All computers in labs for student use have word processing, web-based electronic mail, and web browser software as a standard.	Library & Learning Resources Plan	Campuswide Computer Coordination Committee
1.2	a. All faculty, administrators and staff will have office suites installed on their computers. b. All computers for student use will have spreadsheet, database, graphing and other appropriate software to meet their needs. c. Faculty computers will have instructional management software installed. d. Software will be installed and supported on three platforms – Mac, PC and thin client.	ITS	a. All computers for student, faculty, administrator, and staff use have the Microsoft Office Suite installed. b. Presently, the Mac and PC platforms are supported. The college will continue to explore the use of thin clients. c. Blackboard course management software is now being used for distance education.	Hardware & Software Guidelines/Standards	Campuswide Computer Coordination Committee
1.3	a. Use the Intranet and the Internet for E-mail. b. Provide E-mail, scheduling, and virtual meeting software for faculty and staff desktops. c. Provide each student with an E-mail address, and make E-mail accessible from, and only from, all campus computers. d. Provide full remote E-mail and Internet access through the college but limit it, for cost and security reasons, to faculty and staff only.	ITS	a. Faculty, staff and administrators have access to E-mail via the Intranet and the Internet. b. The student E-mail system is in its pilot phase with EOPS students as the targeted population. It is anticipated that all students will have access to this E-mail system by Spring 2009. c. Internet access is available on all faculty, staff and administrator computers.	a. Board Policy 2240: Computer and Communications Technology Use b. Administrative Regulation 2240: Using IT Resources at GCC c. GCC Student Email Policy	Campuswide Computer Coordination Committee
1.4	Purchase a fully integrated ERP system (student, financial, and human resources packages) with features including but not limited to online transaction processing and workflow, online analytical processing, object framework, and rules-based architecture.	ERP Steering Committee	Oracle E-Business Suite was purchased in 2004 and the financial and human resources modules are implemented. The PeopleSoft student module implementation kicked off on 12/2/2008.	Target go-live date for the PeopleSoft student module is summer 2010. This module will be integrated with the Oracle E-Business Suite.	Dean of ITS

| 1.5 | a. Give each division an adequate software budget to be used according to its own selections (subject to general software selection guidelines).
b. Provide all support services centrally (purchasing, installation, maintenance).
c. Put the software on computers and servers linked to the network. | Divisions | a. Each division has an adequate software budget. (check with Ron)
b. Guidelines have been developed for the procurement, installation and maintenance of instructional software.
c. Software licensing is centrally managed by the ITS department. | Software Inventory & Request Form/Guidelines | Campuswide Computer Coordination Committee |

Scope 2: Hardware

Activities	Description	Implementation Responsibility	Status	Self-Assessment Measures	Monitoring Oversight
2.1	a. Hardware should be of sufficient quality to run the software for which it is intended and in sufficient quantity to provide adequate access to all members of the college community. b. Information technology equipment must be considered as having a very limited life cycle, and appropriate monies must be set aside each year in the college budget for its orderly upgrade.	ITS	a. Faculty (?) and staff (?) have computers. b. The college adopted a 5-year life cycle for budgetary purposes and developed a computer cascade plan.	a. Computer Inventory b. Computer Cascade Plan c. Hardware & Software Guidelines/Standards	Dean of ITS
2.2	a. Put a full-featured computer on every faculty and administrator desk, and a full-featured computer or a network computer on every clerical staff desk. b. Keep investigating the possibilities of network computers for clerical staff and use them rather than full PCs to minimize costs if there is appropriate software. c. Recycle all faculty computers by giving the more advanced models to the "power" users and giving the latter's previous models to the general users.	ITS	a. Faculty (?) and staff (?) have computers. b. The college adopted a 5-year life cycle for budgetary purposes and developed a computer cascade plan.	a. Computer Inventory b. Computer Cascade Plan	Dean of ITS

2.3	a. Provide a mix of:
	  1. open computer labs for any student to use on a drop-in basis,
	  2. specialized labs/classrooms, in various divisions, for use primarily by students of those divisions in division related work, and
	  3. computer equipped classrooms for general use
	
	b. Connect all student computers to the network, with all software usable from anywhere, so that all PCs are equivalent and can be used for general work, even those in specialized labs when not required for division work.
		ITS, Divisions	The college makes available to students a guide to all the learning resources (includes computer labs) and the library.	Library & Learning Resources Guide	Campuswide Computer Coordination Committee

2.4	a. Install video projection equipment in all new classrooms and retrofit older classrooms. b. Develop specially equipped classrooms for full routine use of multimedia technology. c. Fully equip at least one video-conferencing station on campus, and one TV production facility for live transmission of instructional presentations to remote Glendale sites.	ITS, Divisions	a. There are ? level I classrooms, ? level II classrooms, and ? level III classrooms at the main and Garfield campuses. b. The college has one video-conferencing station currently housed in HS ? and the TV	List of level I, II and III classrooms	Dean of ITS

Activities	Description	Implementation Responsibility	Status	Self-Assessment Measures	Monitoring Oversight
			production facility is housed in ??.		
2.5	a. Put on Internet general college information such as catalog, class schedule, financial aid information, etc… b. Put on a kiosk system all the above information plus confidential personal information such as transcripts and financial aid records and make the latter accessible only through the use of an ID card/password system to assure confidentiality.	ITS, Student Services	There are 7 kiosks at the main and Garfield campuses combined. For FERPA compliance and security reasons, access to official transcripts and financial aid records are not available on the kiosks.	Locations of kiosks	Dean of ITS
2.6	a. Deploy a three-tiered client-server architecture for the implementation of the ERP system. b. Provide appropriate equipment (computers and networking) for system monitoring and program development.	ITS	The implementation of the Oracle E-Business Suite called for a three-tiered architecture. The production, development and test environments have one application server and one database server at a minimum.	Server diagram for Oracle E-Business Suite	Dean of ITS

Scope 3: Network

Activities	Description	Implementation Responsibility	Status	Self-Assessment Measures	Monitoring Oversight
3.1	a. Connect all college buildings, and all appropriate rooms and offices inside buildings, to a backbone fiber optic network. b. Connect the network to the Internet. c. Arrange lab and classroom computers, as well as computer in certain administrative areas, into local area networks (LANs) with decentralized servers, all connected to the backbone. d. Keep upgrading the backbone network hardware to keep with the traffic. e. Monitor the operation of the network to provide preventive maintenance, and detect and repair problems as they occur.	ITS	The college made significant progress in upgrading the network infrastructure in 2005. This upgrade paved the way for the implementation of the Oracle E-Business Suite ERP and the voice over IP telephone system.	Network Infrastructure Diagram	Dean of ITS

Scope 4: Facilities

Activities	Description	Implementation Responsibility	Status	Self-Assessment Measures	Monitoring Oversight

4.1	a. Support one large facility for IT management and staff, and three groups of facilities for faculty/student computer use:
	  1. large general purpose labs open to all students during extended hours
	  2. small specialized labs/classrooms geared to the need of individual divisions or departments
	  3. computer equipped classrooms open to any division for teaching/learning purposes
		ITS, Divisions	a. San Rafael and San Gabriel open labs are open from 8 am to 10 pm M-F and from 8 am to 5 pm Sa.
			b. There are ? divisions with specialized labs/classrooms (see guide).
			c. ?
				Library & Learning Resources Guide	Campuswide Computer Coordination Committee

Scope 5: User Assistance

Activities	Description	Implementation Responsibility	Status	Self-Assessment Measures	Monitoring Oversight
5.1	For faculty and staff: a. Provide staff development programs b. Encourage peer mentoring among faculty c. Provide drop-in assistance at certain hours For students: a. Require word processed papers in English and other classes and provide appropriate training b. Offer IT literacy training in English, ESL, and Business classes and through the Library c. Leave training for specialized labs to the division involved	Staff Development Divisions	a. The Staff Development Coordinator is responsible for scheduling and promoting technology training classes for faculty and staff. b. Students have access to open access and specialized division computer labs. All lab computers have the Microsoft Office Suite (Word, Excel, Access, PowerPoint) installed. The instructional lab technicians assist the students in the use of the specialized software as well as the MS Office Suite.	a. Staff Development Plan and List of Technology Workshops b. Library & Learning Resources Guide	Staff Development Committee Academic Senate

5.2	a. Offer 4 levels of help at the college:
	  Level 1: student and/or staff and/or faculty assistants in labs
	  Level 2: centralized help-desk staffed by trained personnel
	  Level 3: specialized on-campus technical support staff
	  Level 4: outside vendors
	b. Train staff in specialized labs/classrooms to enable them to offer Level 1 assistance and make technical support for these facilities the object of formalized arrangements (service level agreements) between the IT staff and the divisions involved so that all parties know what their responsibilities are.
	c. Examine the possibility of lowering college costs through a joint help desk operation with the Unified District or with the Glendale
		ITS	The college has ?? computer labs at the main campus and Garfield campus combined. The centralized help desk is staffed by ITS technical personnel on a rotating basis between the hours of 7 am and 10 pm. The ITS technical personnel, therefore, provide level 2 and level 3 support. ITS has several support contracts with outside vendors.	a. List of Instructional Lab Technicians and Assigned Labs
				b. Training Program for Instructional Lab Technicians (???)
				c. ITS Organization Chart
				d. ITS Support Contracts
					Campuswide Computer Coordination Committee

Activities	Description	Implementation Responsibility	Status	Self-Assessment Measures	Monitoring Oversight
	Library or by accepting individual outside subscribers for a fee.				
5.3	Make site licensing agreements for all software used at the college.	ITS	Through the Community College Foundation, the college participates in the Microsoft Campus Agreement for the site licensing of Microsoft software. The college also has a three-year licensing agreement for the McAfee anti-virus software. There are numerous licensed software that cannot be site licensed due to volume requirements.	List of software licensing agreements	Dean of ITS

Scope 6: Auxiliary Technical Services

Activities	Description	Implementation Responsibility	Status	Self-Assessment Measures	Monitoring Oversight
6.1	a. Put under the responsibility of the IT staff, and purchase network management software. b. Monitor the system on an ongoing basis: use, response time, database activity, network traffic, condition of equipment, software and network. c. Have technicians on-duty, during all system operating hours, to control operations and respond to troubles or emergencies. d. Conduct user surveys to determine satisfaction and future needs.	ITS	???	User Surveys	Dean of ITS
6.2	a. Limit access to the MIS database, use passwords and change them periodically. b. Make sure kiosks and Website are read only and have no input access to the database. c. Use system-wide anti-virus software. d. Use other specific security measures as required by the ERP system. e. Make sure IT facilities are properly supervised during operating hours and adequately protected when not in use. f. Secure equipment to furniture to prevent thefts.	ITS	a.The college does not have a password expiration policy, but access to the MIS database is limited to employees who require it in the performance of their jobs. b. Access to the kiosks and Website are read only. c. The college has a three-year licensing agreement with McAfee for its anti-virus software. d. Security measures are in place for the Oracle ERP system. e. The IT facilities are properly supervised during operating hours. The future installation of electronic access control systems will tighten the physical security in the IT	a.Policy on User Privileges and Expiry b. Security Plan	Dean of ITS

			facilities. f. All computers in the labs are locked down to prevent theft, however, faculty and staff computers are not.		
6.3	a. Have a tested recovery plan in case of major failure. b. Provide centralized or server-based back-up system for all IT systems. c. Develop cooperative arrangement with another institution at a distant site for mutual disaster recovery assistance. d. Provide centralized back-up for individual faculty and staff files.	ITS	The college still has to develop and test a disaster recovery plan.	Disaster Recovery Plan	Dean of ITS
6.4	a. Train IT staff in development and implementation of rules and other customization possibilities on the ERP system. b. Train IT staff in customization possibilities of other college software.	ITS	ITS programmers have attended Oracle training classes. As the PeopleSoft student module is being implemented, Ciber will conduct knowledge transfer to ITS technical staff.	List of Training Classes for IT staff	Dean of ITS

Scope 7: Managerial and Administrative Services

Activities	Description	Implementation Responsibility	Status	Self-Assessment Measures	Monitoring Oversight

7.1	Provide services in 3 key areas:
	a. Planning:
	  1. Keep pace of developments in IT.
	  2. Prepare annual revisions to the IT master plan in collaboration with the Master Plan Steering Committee.
	  3. Prepare annual budget and operation plan.
	  4. Help prepare project plans for specific tasks.
	b. IT department management:
	  1. Provide for recruitment and/or training of appropriate personnel.
	  2. Organize and supervise personnel, budgets and task performance.
		ITS	a. The 1998-2002 IT plan articulates the college's goals for IT.
			b. The above mentioned plan was reviewed and updated in 2003 to include a new phone system and new Enterprise Resource Planning (ERP) system.
			c. The plan included cost estimates of identified projects.
			d. The ITS organization chart shows the current staffing.
				a. 1998-2002 IT Plan
				b. ITS Organization Chart
				c. ITS Budget Printout
					Campuswide Computer Coordination Committee

7.2	Hire an outside reengineering professional and start a program focusing first on administrative services	ITS	The college hired an outside reengineering professional in ? to lead the process engineering program (PEP) focusing on administrative services.	Process Engineering Program Plan	Dean of ITS
7.3	a. Continue using the governance structure for consultation and decision making. b. Organize user groups for information exchange and feedback on system performance. c. Provide technical assistance to faculty and staff involved in IT related purchasing and grant writing. d. Organize presentations on IT issues by and for college personnel.	ITS	a. The 4C is the governance committee that acts as central focal point for input from all campus constituencies on computer and IT related issues. b. An HR user group is active for info exchange and feedback on the Oracle HR software system.	a. Mission of the 4C and membership b. Minutes of the HR user group meetings	Campuswide Computer Coordination Committee (4C)

Appendix B: 2007-2012 Technology Master Plan Implementation Matrix

As part of the Shared Governance Process, the Campuswide Computer Coordination Committee will review and determine both the institutional priority and implementation timeline for the key IT scope and strategies outlined below.

Scope 1: Campus Wide Information Technology

Activities	Description	Implementation Responsibility	Status	Self-Assessment Measures	Monitoring Oversight
1.1	Implement and maintain an ERP solution that will integrate all data and processes of the college's organization (i.e., Student Information Systems, Human Resources, and Financial Services) into a unified system.	ERP Steering Committee	a. Oracle E-Business finance and human resources software systems were implemented. b. Oracle merged with PeopleSoft and licensed the PeopleSoft student information system to the college. c. CIBER was chosen as the implementation partner for the PeopleSoft student information system and the project kicked off on 12/2/2008.	Tentative go-live date is summer 2010	Associate VP of ITS
1.2	Provide a computer on the desks of all full-time faculty members.	ITS		Computer Inventory	Associate VP of ITS
1.3	Provide part-time faculty members access to computers with an internet connection, email, and necessary software.	ITS		Locations for computer access	Associate VP of ITS
1.4	Expand and upgrade the wireless access on campus to support laptops, PDAs and other technologies.	ITS		Network Assessment	Associate VP of ITS
1.5	Proactively maintain, upgrade, and expand networking systems to meet the college's ever growing technological demands.	ITS		Network Assessment	Associate VP of ITS
1.6	Create a computer café on campus incorporating both wired and wireless network access.	ITS, Facilities		Facilities Master Plan	Associate VP of ITS

1.7	Create and test a recovery plan that will return service to normal operations within a specified period of time after experiencing a major disaster.	ITS		Disaster Recovery Plan	Associate VP of ITS
1.8	Establish a method for users to sign-on to all applications using a single sign-on by utilizing a common directory services approach.	ITS		Implementation scheduled for 2009-2010	Associate VP of ITS
1.9	Involve IT in the planning of buildings and remodels to ensure adequate technology infrastructure for communication and networking.	Facilities		Facilities Master Plan and Construction Plans	Associate VP of ITS
1.10	Provide centralized and secure backups for administrative and desktop documents and data.	ITS		Disaster Recovery Plan	Associate VP of ITS
1.11	Secure and protect the college's information assets including: a. Environmental Control including Air Conditioning, Humidifiers, UPS, etc. b. Surveillance and Security Cameras c. Locks d. Access	ITS, Facilities		a. Security Policy b. Facilities Master Plan	Associate VP of ITS
1.12	Dedicate a room solely for the purpose of videoconferencing.	ITS		?	Associate VP of ITS
1.13	Develop/implement an electronic calendaring system that would allow individuals to easily share calendar, contact, and task information with other users.	ITS		?	Campuswide Computer Coordination Committee
1.14	Completely redesign the college's website so that it is easy to navigate and presents a more straightforward, consistent, and enhanced experience of GCC.	ITS, Divisions, Departments		Completion in 2008-2009	Web Oversight Committee
1.15	Assist in maximizing the use of technology as a means of connecting minds and building community by supporting communication tools such as wikis and blogs.	ITS		?	Campuswide Computer Coordination Committee
1.16	Create a method which would allow individuals to store, access, organize, and share documents or multiple folders through one central location.	ITS		?	Associate VP of ITS
1.17	Continue to provide a reliable and efficient telephone system by exploring its current and future features as well as upgrading any necessary software or equipment as needed.	ITS		?	Associate VP of ITS

| 1.18 | Train faculty and staff as new technology is adopted and implemented via the staff development program or a train-the-trainer program. | Staff Development | | Staff Development Plan | Staff Development Committee |
| 1.19 | Implement a cost-effective, shared multifunctional device in every department that will provide copying, printing, scanning and faxing capabilities. | ITS, Business Services | | ? | Associate VP of ITS |

Scope 2: Academic Technology

Activities	Description	Implementation Responsibility	Status	Self-Assessment Measures	Monitoring Oversight
2.1	Review current standards for hardware and software				
2.2	Continue to provide all classrooms with multimedia capabilities as well as wired or wireless network connection.	ITS		?	Campuswide Computer Coordination Committee
2.3	Maintain DVDs, CDs, and other media collections for teaching and learning.	ITS		?	Campuswide Computer Coordination Committee
2.4	Provide faculty with a means to borrow various technology such as laptops, DVD/VCR players, digital cameras, etc.				

Scope 3: Library & Learning Resource Technology

Activities	Description	Implementation Responsibility	Status	Self-Assessment Measures	Monitoring Oversight
3.1	Provide students access to computers at several open and specialized labs.	ITS		Library & Learning Resources Guide	Campuswide Computer Coordination Committee
3.2	Coordinate all student computer labs	?		?	Campuswide Computer Coordination Committee

Scope 4: Student Services Technology

Activities	Description	Implementation Responsibility	Status	Self-Assessment Measures	Monitoring Oversight
4.1	Provide web access to student records including online registration, application, grades, orientation, financial aid records, and others.	ERP Steering Committee		Tentative go-live date for PeopleSoft student information system is summer 2010	Campuswide Computer Coordination Committee
4.2	Work closely with student services and other departments to assist them in the use of technology to help students achieve their goals.	ITS	ITS will seek to be represented in the Technology Mediated Services Committee.	Meeting minutes of Technology Mediated Services Committee	Technology Mediated Services
4.3	Continue upgrades and maintenance of existing systems which promote student success such as SARS, Early Alert, Assessment, etc.	ITS, Counseling		?	Technology Mediated Services
4.4	Implement a student email system as an additional method for contacting students with official Glendale College business.	ITS	A pilot with EOPS students was launched on 11/30/08. After a successful pilot, the system will be rolled out to all students in spring 2009.	Student Survey	Technology Mediated Services
4.5	Implement an electronic student educational plan system.	ITS, Counseling	Three products have been evaluated – Action Planit, homegrown application at Palomar College, and homegrown application at SOCCCD.	Student Survey	Technology Mediated Services

Scope 5: Governance of Information Technology

Activities	Description	Implementation Responsibility	Status	Self-Assessment Measures	Monitoring Oversight
5.1	The college needs to have the flexibility to adjust its IT support organization as the times change. This includes but is not limited to the creation of new positions, reorganizations, and the hiring of additional staff.	ITS	Organizational structure and staffing are adequate at the present time.	Total Cost of Ownership Tool	Campuswide Computer Coordination Committee
5.2	All IT support personnel will be provided in-depth training which may require off-site classes, virtual classes, on-site workshops, and/or the employment of consultants.	ITS	Funding is required and a plan needs to be developed.	IT Training Plan	Campuswide Computer Coordination Committee
5.3	The college will set and enforce policies, procedures and guidelines for technology.	ITS	Security policy needs to be reviewed.	a. Using IT Resources at GCC (Administrative Regulation 2240) b. Security Policy c. Disaster Recovery Plan d. Student Email Policy	Campuswide Computer Coordination Committee
5.4	The college will develop hardware and software standards to reduce training and support costs and create economies of scale by narrowing the number of technologies and products used.	ITS	Guidelines were approved by 4C in fall 2009	Hardware/Software Procurement Guidelines	Campuswide Computer Coordination Committee

Appendix C: Computer Cascade Plan

It is the goal of Glendale Community College to develop a plan for replacing lab, faculty, staff, and administrator computers on a regular cycle. Instituting such a plan would help ensure that all technology on campus is kept up-to-date, and that the funding for this plan is clearly established across multiple years.

This Computer Cascading Plan aims to:

1. Centralize resource, financial planning and forecast the funding requirements to implement a five year replacement cycle for computers.

2. Assure that appropriate computing resources are available in department/division facilities, classrooms, and offices to support the college's mission.

3. Implement the minimum standards for computing equipment on campus and promote uniformity of technology.

4. Assure that each faculty and staff member who uses computing resources in his or her position has a computer of sufficient capability to fulfill their job related duties.

5. Support the use of technology by faculty, administration, and staff in using computers to promote student success.

6. Provide for the cost effective, timely purchasing, and installation of new equipment while decreasing the deployment time.

7. Maintain a currently supported operating system from Microsoft or Apple.

8. Replace all CRT's with LCD monitors to maximize electricity and air conditioning benefits/savings, understanding that there will be a few exceptions based upon needs.

In order to meet these goals, all computers across the campus should be placed on a regularly scheduled replacement cycle based upon our current information technology standards. Typically, a computer has a life span of between 3-5 years before it needs to be replaced. Currently, computers are purchased with a 3 year warranty which protects the college's investment for the minimum life span of the computer. The recommendation of this Plan is to cascade every four or five years with 20 to 25% of the computers being replaced each year, on a rotating basis. At the maximum, the oldest computer should be no more than 5 years of age.

In order to promote student success, Computing Labs should have their computers replaced at the minimum life span. It is further recommended that whenever feasible, the college replace as many computers as possible, in order to ensure that all labs have consistent hardware. Student computing labs may have different needs than faculty or staff, however, there should be no problem in rotating lab computers to faculty and staff after their usefulness in the labs is over. At 4 years of age, a computer might not be

state of the art, but its functionality should meet the needs of most employee users on campus.

In some situations users may be required to run special software or perform unique tasks as part of their assigned job duties, and may need a computer with more memory, a faster processor, a larger monitor, or a larger hard disk than the one they are using or will be assigned. Users in this situation may request that their workstation be evaluated to determine an appropriate upgrade path. IT may recommend additional memory, larger hard drive, or possibly, a newer workstation. The user's division/department may be required to fund these upgrades if there are not adequate funds within the replacement budget.

While the majority of requests are expected to come at the beginning of the fiscal year, requests will be reviewed throughout the year to handle unforeseen changes in job duties, etc.

In order for this Computer Cascading Policy to be effective, ITS will need to have a comprehensive inventory which will be part of the cascading policy. This inventory should include the age of the computer, as well as the makeup of the system, i.e. memory, hard drive size, processor, etc.

Before implementing the cascading of computers, the District should take the total cost of such a process into consideration, including the cost of technical staff time to perform these operations and the cost of maintaining older equipment/software.