

CRC Recommendation: 2001-2002
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A. Introduction

This is clearly a pivotal year for the future of computer technology at Glendale Community College.

It may be the most critical year yet.

Indeed, a special situation exists this year with respect to the future: bond revenue, which has funded the bulk of the existing computer infrastructure, has ended, and the final funds will be expended during the next fiscal year. This special situation -- involving loss of basic funding -- is unique to computer technology. Thus, funding decisions made during the current budget cycle have the additional burden, along with recommending and prioritizing current requests, of pre-positioning for the uncertain, but likely financially lean, future. In addition, however, it is equally important to protect existing computer technology and its accompanying support that together are integral parts of vital ongoing educational class, program, and training needs. Finally, all that is part of an environment of unprecedented physical plant growth both on the main campus and at its new GCC North location; this physical growth brings with it greater than normal expectations of concomitant computer technology growth.

To review, the task for the CRC has been to plan, prioritize, and present for approval, a recommendation that takes into consideration:

- Meeting the growing needs for instructional technology
- Extending the life of aging equipment

- Providing adequate support for the existing network infrastructure
- Addressing the technology expectations of new construction and remodeling
- Planning with concern for funding uncertainties

The recommendations for computer capital allocations, as represented in annual versions of this report, are always made by attempting to best integrate a vast number of variables. Yearly planning and “maintenance” work on the always growing, increasingly complex and academically critical technology structure at Glendale Community College is much like tending to a stack of building blocks: adding blocks to the top and rearranging blocks near the bottom.

The trick, as everyone knows, is to keep the stack of blocks from falling.

In fact, the analogy may be a far easier scenario than the reality since it doesn't begin to enumerate, let alone evaluate, the large number of variables that affect the “stack of blocks” which make up the GCC academic and administrative computer structure.

The special budget conditions present this year precipitated an early meeting with the CTC and resulted in a mandate to spread the burdens and the benefits, to share within departments and across campus, and to encourage a better and more efficient use of existing resources. Armed with this mandate, the CRC has chosen to take a strikingly bold and different approach to meet campus-wide computer technology needs – a carefully orchestrated holistic technology plan. Experience of the past five years has confirmed our belief that when the college as a whole has articulated plans and set strategic directions, individual members of the college community make decisions about technology consistent with those plans.

The historical successes of the five-year lab plan have taught us that a plan is critical especially for departments, so they can anticipate and make choices about how they grow and develop; the new plan recognizes that regularly scheduled academic labs cannot easily use fifth-year machines, although there may be uses for them on campus. A second identifiable and related factor is the cost of support necessary to maintain fifth-year machines at a level to meet the needs of academic labs. This cost was evident in both technician time and computer memory and other upgrades. Another historical acknowledgement is that the five-year plan was begun as a rather complicated, although effective, scheme; over its life it has become even more difficult to follow. Additionally, over time, several labs were added as necessities, but were not able to be added to a rather fixed five-year plan. As a result, no obvious method for updating these labs existed. Given those historical truths, the heart of the new proposal is a Quad Plan (a four-year plan) that promises to build on the success of the five-year plan, while removing those negatives identified over time.

Due to the decreasing price of computers, the fiscal acumen of smart purchasing, and the greater-than-anticipated life span of projection units, the \$625,000 recommended for the Quad Plan will not result in any additional budget increase, as it combines funding previously divided between the five-year plans and presentation system allocations.

However, the CRC recognizes several other realities:

- A one-year only allocation of \$75,000 is necessary to “prime” the Quad Plan by putting the right equipment into various labs to provide the initial baseline equality that will allow the plan to work. This could include upgraded processors, hard drives and memory as well as a minimal number of computers as needed.
- An effective domino strategy depends on a reliable and consistent stream of new equipment that will eventually provide refurbished machines to the pipeline.
- A campus computer technology infrastructure exists now, and its protection is paramount.

But . . .

- A conservative, unresponsive approach to campus requests this year by the CRC as a way to gird for possible lean years is counterproductive, serving only to erode the existing infrastructure.
- Pilot projects, such as laptop labs and wireless services, are too new to be evaluated, and cannot be accommodated in these recommendations.
- Necessary, justifiable and useful purposes for computers will continue to grow, and funding requests will always outstrip funding realities.

The Quad Plan and the other strategies offered by the CRC for this special year are explained below, followed by the summary of recommendations.

B. The Quad Plan

The CRC strongly recommends the Budget Development Committee place the highest priority on funding student computers in accordance with the Quad Plan. Student computing is the cornerstone of GCC’s efforts to support teaching and learning with technology.

The Quad plan organizes student computers into four quadrants across a four-year period. The plan places computer labs/classrooms into a Tier One or Tier Two division according to instructional needs for faster processors, increased memory, or more robust software. Each Tier One location will retain its machines for two years, after which time its machines will be transitioned to Tier Two locations and Tier Two computers will be put into service on campus outside of the Quad Plan or eliminated. New computers will be purchased for one-half of Tier One locations every year, thus creating a system where each location is updated every other year. Thus, new computers will push the two-year-old computers into the Tier Two lab/classrooms for an additional two years of service. The pairings of Tier One and Tier Two locations have been carefully orchestrated to allow for a minimal amount of actual computer relocation. The labs/classrooms have been paired within departments where possible so that instructors rather than machines can move every two years. The following model demonstrates the movement of student computers through the plan:

Tier One		Tier Two	
Computers purchased for Group A	Existing machines continue to be used	Group A computers transitioned to Tier Two locations	Existing machines continue to be used
Existing machines continue to be used	Computers purchased for Group B	Existing machines continue to be used	Group B computers transitioned to Tier Two locations
Year 1	Year 2	Year 3	Year 4

C. Desktop Project

The CRC strongly recommends the Budget Development Committee place a high priority on maintaining adequate funding for the desktop project.

Since July 1996, GCC has deployed new hardware, managed upgrades to software applications, and provided technology training for board-approved college employees through the Desktop Project. This ongoing initiative has provided a planning framework and a management strategy for the college's administrative computing resources, including a means for making effective use of "refurbished" computers, still serviceable hardware that can be used for various purposes by college employees not eligible for the Desktop Project itself.

During the past four years, GCC has come to appreciate the many and varied benefits of strategic planning for technology. We have endeavored to set a recognizable course with general goals, clear policies, and continuously improved procedures. The IS Group has been able to speak with one voice to the college community, and we have enjoyed the continued support of our fellow employees, who have been able to participate in the Desktop Project on their own schedule to address the demands of their jobs and to meet their own learning needs. We have been able to make adjustments to accommodate the influx of new faculty each August as well as those employees hired at various times throughout the year; we continue to be sensitive to the pacing of the academic calendar and the needs of department managers.

The continued success of the Desktop Project and its aligned activities depend upon funding that allows us to integrate 100 new desktop computers each year into the college supply, enough to replace about 22 percent of our administrative workstations each year over a five-year period. This level of funding allows some employees to get new workstations every 24-36 months, other employees to get new workstations every 3-4 years, others to stretch the usefulness of their workstations by adding storage or memory over time, and still others to benefit from still powerful workstations made available through the refurbished process. Meeting the various needs of our employees in creative

ways depends upon the regular and full funding of this project each year. Reduced funding of course has an immediate impact on those who need the most powerful workstations, but, we have learned, it also has a significant and perhaps more serious impact on those who are elsewhere in the chain, not the direct recipients of new workstations but the beneficiaries of dominoed equipment over time.

D. Critical strategies (not involving capital funding)

While the charge to the CRC is to recommend capital technology purchases, we recognize that our strategies can have much greater impact if they are aligned with and supported by other activities.

1. Instructional Development

The CRC firmly believes that the college's technology facilities can be used more effectively. The committee highly recommends a significant effort to develop training initiatives and encourages vigorous promotion of the possibilities and capabilities of our electronic learning environment to the college community.

The CRC recommendations are designed to support instruction with capital expenditures for current needs and allow for continued development of future instructional needs. But capital is not the only resource that needs to be used more effectively. Instructional needs can only be met if we can work together to fully use our current and anticipated facilities in creative, effective ways. Open labs continue to serve the greatest numbers of students for the greatest number of hours per week. Additional staffing for these open labs needs to include faculty from a variety of departments, particularly from areas that do not have access to computer labs on a regular basis, to provide more discipline-specific support.

While sharing of classrooms and labs is a critical component to our success, additional training sessions should be designed and scheduled to help faculty learn more effective ways to use the technology that is available through Universal Access. There is strong evidence that current facilities are not being used to capacity. Even when not in a computer classroom, faculty can employ many innovative instructional strategies. Teacher stations and classroom presentation systems could be used more efficiently to help instructors develop creative curriculum that engages students in their own learning.

Supporting documentation can build faculty confidence in technology. Peer-to-peer faculty support groups and departmental web facilitators can help faculty develop materials and effective teaching strategies. Faculty-developed course web pages that include syllabus materials, specific assignments, and other resources in a variety of media encourage learning outside the confines of a classroom. Student email and more effective use of voice mail can improve student-faculty communication and enhance student success.

Orientations in the use of network resources, both local and remote, will encourage all faculty to expand the use of these electronic services to enhance learning.

2. Sharing

The CRC recognizes sharing of resources as a way to meet the demand for limited or restricted computer resources while at the same time opening the doors for more faculty and students to gain educationally through the use of computer assisted and enhanced classes. Thus, the committee endorses, urges, and will assist innovative and sincere sharing ideas and practices.

As with any organization, GCC has limited resources, so employees must make the best use of them. However, this is particularly true with the end of the bond that has funded the bulk of the computer technology growth. The burden of efficiently using resources falls most heavily on the faculty and their department chairs. Currently, most departments schedule each class in a single location. That simplifies scheduling and offers maximum convenience for faculty and students. However, the need for new approaches to scheduling classrooms has become apparent as demand has outgrown availability. Maximizing the use of existing computer resources through innovative sharing offers a practical solution that remains educationally sound and opens technology access to more students and faculty.

Among the possibilities, a department could:

- Schedule pairs of rooms, such as a computer lab classroom with a presentation classroom. These classes could swap rooms either during a break (for longer classes) or on alternating days of the week.
- Match a presentation classroom with a standard lecture classroom, allowing more faculty opportunities to incorporate technology into their instruction.
- Link a computer lab classroom with a standard lecture classroom.
- Rethink the standard class meeting times and days per week.

All these methods would require instructors to make some changes in their class structure, but presumably ideas for such changes are driving the increasing demand for more technology. In a creative environment such as exists at GCC, other innovative strategies would soon be commonplace as the benefits of sharing practices became apparent.

The CRC also is convinced that further benefits are possible through inter-departmental sharing of computer labs and presentation classrooms -- especially with assurances that departments would not lose control over the scheduling of the resources. A simplified central database, which could be developed for tracking computer lab and presentation classrooms, would allow departments to update the database with class cancellations so other departments could shuffle classes to take advantage of the available technology.

The spirit and culture of sharing, the CRC believes, will bring benefits to all academic areas, thus providing obvious incentives for departments to develop sharing practices. As funds become available for new computer labs, new presentation systems or other kinds

of computer requests, higher priorities could be accorded departments that have encouraged and implemented successful sharing through innovation and collegiality.

3. Adequate support staff

The CRC strongly recommends the Budget Development Committee place a high priority on expanding the technology support staff to meet the needs of the college to support, maintain, and repair our technology resources.

For the past several years, the CRC has recommended the re-evaluation of the technical support staff necessary to adequately support computer-related technology on campus. The number of computers on campus has grown by more than 40 percent since the adoption of the five-year plan and desktop project. These computers are much more complex than they were five years ago, and are now completely dependent upon network-based resources. The number of servers and the demands for network-based disk storage have increased dramatically during this same time period. It is more important than ever that the college employ the technology professionals necessary to maintain this significant and critical investment.

The need for adequate staffing will become increasingly important as the bond dollars disappear and we struggle to find new funding sources. Shifting from replacement to upgrade and repair is a strategy that will rely heavily on qualified office and lab technicians. Use of network resources will continue to increase, making it imperative that we have the appropriate professionals to maintain the high level of availability the users have come to expect.

Acting upon the CRC's recommendation from 1999, the Information Services group, in conjunction with multiple departments, has submitted again this year a staffing plan that will adequately provide for the technical support needs of the college for the coming fiscal year. The CRC strongly recommends the Budget Development Committee place a high priority on the requested technical support positions.

F. Summary of recommendations

1. Quad Plan: Labs and Pods including 8 presentation systems	\$625,000
2. Desktop Project	\$200,000 firm
3. One-time allocation to “prime” the Quad Plan to make it work (includes processors, hard drives and memory upgrades and possibly some computers)	\$75,000
4. Special Projects and Initiatives	
a. Miscellaneous	\$99,600
b. Presentation Systems	\$100,000
First priority (first 5 systems)	
Second priority (second 5 systems)	
c. Other Projects (not recommended for funding this year)	\$104,200

G. Appendices
1. Quad Plan

Tier I - New				Tier II				Extended Use	
Year 1 - 2001				2001					
HT2-152	97	English	25	HT2-150	96	English	25		
HT2-156	99	Business	25	B-109	96	Business	25		
HT1-144		Graphics	10	Pod			10		
L-138	99	Library	25	LAC	97	LAC	25		
LS-147	97	Life Sciences	36	Various	97	Electra/HPER/Other (9)	36		
T2-105A	98	Technology/ Business	25	HT2-153	97	English	25		
T1-132	98	Technology	25	HT2-155	98	English	25		
HT2-158	99	Mathematics	29	HT2-159	98	Mathematics	29		
HT1-143	98	Testing	25	HT2-151	97	English	25		
Pods (7)			90	Pods (7)			90		
<i>Student Services</i>			12	<i>Student Services</i>			12	<i>Student Services</i>	
			327				327		
Tier I - New				Tier II					
Year 2 - 2002				2002					
HT1-139	00	Business	25	HT1-141	98	Business	25		
HT1-142	00	Business	25	B-106	98	Business	25		
CL-103	00	GCC North	25	CL-104		GCC North	25		
MA-100	00	Mathematics	37	New		FL/Comm	37		
MU-105	00	Music (Mac)	25	L-100		Electra (Mac)	25		
HT1-140	00	Technology	25	LAC	99	LAC	25	T1-109/T1-101	99Tech.
HT2-157	00	Business	25	T1-127	99	Technology	25		
Pods (7)	00		90	Pods (7)			90		
Various	00	Science-4 year	25	Various	97	Sciences-4 year	25		
HT1-144		Graphics	10	Pod			10		
<i>Student Services</i>			12	<i>Student Services</i>			12	<i>Student Services</i>	
			324				324		
Boldface = Mac or some Mac machines									

**Presentation Systems
in Quad Plan**

	Location	No.	Cost
Tech-Electronics / ECE	T1-129	1	\$10,000
Art & Photography	To be determined	2	\$20,000
Social Science	HU-101	1	\$10,000
Business	B-209	1	\$10,000
FL/Comm	To be determined	1	\$10,000
Social Science	HU-112	1	\$10,000
Tech-Adm. of Justice	AG101	1	\$10,000

2. Special Projects and Initiatives (requests prioritized)

a. Miscellaneous Recommended

Department	Equipment	No.	Cost	Comments	Rank
Buildings & Grounds	Lap Top Personal Computer M&O	1	\$2,000		1
Tech-Drafting/CAD	D size scanner to convert raster to vector formats	1	\$1,000		2
Financial Aid	Heavy duty multi user printer for financial aid office. For spring 2002 new building	1	\$3,000	OK	3
Tech-Electronics / ECE	Computers for E-commerce and wireless technology courses T1-129 - servers	4	\$7,500	No monitors, keyboards, mice.	4
Chemistry	Laptop Computers for Chemistry Labs	13	\$30,000	If probes approved.	5
Performing Arts	Digi Design 001 Pro Tool Modules \$800 each	8	\$6,400		6
Tech-Electronics / ECE	Computers for E-commerce and wireless technology courses T1-129 - servers (wireless)	1	\$1,500	Wireless component only	7
Innovation Center	Additions to the loaner equipment (laptops and digital cameras) 4 laptops, 2 cameras	6	\$10,000		8
Performing Arts	Digidesign 888 module with 24 bit Analog/Digital converter	1	\$3,200		9
Tech-Electronics / ECE	2 Ethernet Port Router 2514	1	\$2,500	One only	10
Tech-VPT	Avid Xpress DV Computers Shared w/Graphics Tech. -Multimedia Pgm.	3	\$30,000		10
Mathematics	Academic Systems software item	1	\$1,000		11
Mathematics	Thirty (30) graphing calculators with overhead projection system	30	\$1,500	15 calculators firm	13

b. Presentation Systems Recommended

First Priority	Location	Cost	Rank
Tech-Electronics / ECE	T1-103	\$10,000	1
Business	B-216	\$10,000	2
Mathematics	MA 102	\$10,000	3
English/Rdg/Jrn	LA 104	\$10,000	4
English/Rdg/Jrn	LA 106	\$10,000	5
Second Priority			
Tech-Fire Science	Fire Station Classroom B	\$10,000	6
Tech-Electronics / ECE	T1-101	\$10,000	7
Tech-VPT	VPT area	\$10,000	8
Tech-Fashion & Sewing	T2-102	\$10,000	9
Tech-Graphics Technology	Multimedia Cart	\$10,000	10
Other			
Tech-Drafting/CAD	GCCN - in DV lab. [Needs to be in long-range plans for GCCN]		11
Tech-Fire Science	Fire Station Classroom A [Approved and done in 2000-01]		X

c. Other projects (not recommended for funding this year)

Tech-VPT	Audio Editing & multi-channel mixing computer.	1	\$6,900
Tech-VPT	Avid xpress DV Computers Shared w/Graphics Tech. -Multimedia Pgm.	3	\$30,000
Library Media Center	Computer video tuner cards	8	\$1,500
Tech-Electronics / ECE	Ethernet Switches (VLAN capable)	1	\$1,000
GCC North	Scanner for Asset testing [Maybe Compass instead?]	1	\$6,500
Mathematics	Computer Science (CSC 225) cables, power connections, LED lights	37	\$1,300
Tech-Electronics / ECE	Equipment needed to support training for Cisco CCNP	1	\$55,000
Social Science (scanner only)	Computer and Scanner - Replaces 486; scanner is new. Quad Plan – extended use for computer, low cost scanner from supplies.	1	\$100

3. Requests set aside for resolution through innovation and creative planning

Communication	32 Student/Faculty Desktop computers. Language Lab. Quad Plan
Admissions & Records	HP 4050 Printer. Request through Help Desk.
Art & Photography	2 computers for new residential faculty. Desktop Project.
Art & Photography	Macintosh Digital Imaging Computer Lab of 25. Pods in HT1 will be equipped to best meet needs of request
Applied Science	2 Classroom projector presentation systems with computer. Request withdrawn.
Assessment Center	15 P-100+ desktop computers for Compass Testing Center. Also dedicated server. Quad Plan/Student Services.
Business	Commerce Server package for CIS258 and related classes. Met through work with Innovation Center
Career Services	Laser Printer for student use computers. Request through Help Desk.
Chemistry	LaserJet Printer for lab PS-149 and stockroom. Request through Help Desk.
Chemistry	Computer for adjunct faculty. Quad Plan – extended plan.
Chemistry	Windows Pentium Computer -- one for Infrared Spectrometer; one for Scantron. Quad Plan – extended use.
Communication	32 Student/Faculty Desktop computers Language Lab. Quad Plan
Communication	Office Desktop Project Computer for Replacement. Desktop Project.
Counseling	Desktop computer for appointments, tracking, and assessment. Quad Plan/Special Services or extended use.
Counseling	Software for appointment scheduling and tracking
Counseling	Desktop computer for Counselor - Satellite office in One-Stop Center (separate building). Quad Plan/Special Services or extended use.
EMT	Laser Jet Printer HP4050 for TPS 103. Request through Help Desk.
Financial Aid	5 system computers for spring 2002. Quad Plan/Special Services or extended use
GCC North	Presentation system for 2nd lab – Already completed.

GCC North	24 computers/2 nd lab. Quad Plan.
HPER	Pentium III, Color monitor, keyboard, mouse, monitor. Quad Plan – extended use.
HPER	4 Pentium III computers for Fitness Ctr., weight room and for logging workout mileage. Quad Plan – extended use.
Literacy Center	HP Laserjet Printer. Request through Help Desk.
Mathematics	Nine Palette compatible student computers for Math Solution. Quad Plan – extended use.
Mathematics	Seven (7) Palette compatible desktop computers for new faculty. Desktop Project.
Mathematics	Twelve (12) Palette compatible student computers for the Math lab. In process of completion, Dec. 2000.
Mathematics	One (1) laser color printer for Math office/Workroom- Dept. Budget
Multicultural Affairs	2 Office Work Stations, one for AZTEC Program and one for Multicultural Affairs. Quad Plan/Special Services or extended use.
Social Science (computer only)	Computer and Scanner - Replaces 486; scanner is new. Quad Plan – extended use for computer, low cost scanner from supplies.
Social Science	Epson Perfection 1200S, with request for new computer. Request through Help Desk.
Tech-Adm. of Justice	VCR with cabinet, data video projector, large screen -- Completed on presentation system request (part of Quad Plan request).
Tech-Child & Family Studies	Windows-based computer completes projection system - T1-134. Portable – Already completed.
Tech-Electronics / ECE	17 Window-based Computers to support Cisco Program Quad Plan – extended use.
Tech-Electronics / ECE	Upgrade 10 computers 5 in T1-109 and 5 in T1-129 -replace donated machines - Request withdrawn.
Tech-EMT	PC platform computer-TPS102, replace 200mhz. Quad Plan – extended use.
Tech-Fire Science	PC platform computer. Quad Plan – extended use.
Tech-Fire Science	Laser Jet Printer for faculty office. Request through Help Desk.
Tech-Food & Nutrition	1 standard desktop unit for new hire. Desktop Project
Tech-Food & Nutrition	1 multi media computer. Replaces Pentium I computer – Already completed.
Tech-Graphics Technology	15 Pentium III/800 (minimum) 130gig HD. Shared with VPT - new Multimedia Program (10 are replacement). Quad Plan.
Tech-Graphics Technology	4 Macintosh G4 with 17" monitor Replaces 3 G3's in HT1-144. Quad Plan
Tech-VPT	Premier Editing & animation computers. Shared with Graphics -15 total- Duplicates request by Graphics. Complete.