

## Academic Affairs Units

### Technology Resources Identified In Education Master Plan 2006 Revised Fall 2008

#### General Comments for All Schools and Campuses

- All new remodeled classrooms should be smart classrooms equipped with appropriate connectivity to allow for AV and computer projections. All remodeled facilities should be equipped for wireless access.
- A stable funding source must be identified to allow for continuous upgrade of computer software and hardware that support instructional programs.

#### SCHOOL OF APPLIED SCIENCE AND TECHNOLOGY

- Staffing Resources
- Increase technology support for student labs and instructional support units.
- Provide staffing for department and programs to develop and maintain websites and online communication
- Assistance w/ website creation and regular updating
  
- Equipment and Software Needs
- New equipment based upon DACUM results for emerging programs
- Upgraded technology for Automotive and Fashion Departments, and Fire Science and Forensics Programs at Ocean and Mission Campuses
- Implement regular upgrade of student computer labs and staff computers.
- Provide portable LCD projector and laptop units for use in classrooms.
- Provide document projectors in classrooms to replace overhead projectors where appropriate.
- Expand use of interactive white boards.

#### SCHOOL OF BEHAVIORAL and SOCIAL SCIENCES

- Staffing Resources
- Classified staff/faculty time to develop a system to ensure that closed captioning is made available for telecourses and videotapes.
- Classified staff/ faculty time to ensure that all college web sites are accessible.
- Classified staff needed to support current and future Multimedia labs.
- Additional classified staff hours needed for secretarial support for smaller departments.
- Staff development funds needed for a variety of projects and travel to conferences to help faculty keep up with developments in their field.
  
- Equipment and Software Needs

- Funding to ensure that all District computer labs are made fully accessible with appropriate computer hardware and software adaptations.
- Funding to ensure that the equipment in the Multimedia Program is always current.
- Funding to provide computers allowing all faculty convenient access.
- Funding to provide classroom technology such as computers and projectors now that increase numbers of faculty using technology in class.

## SCHOOL OF BUSINESS

- Equipment and Software Needs
- Up-to-date software and hardware used in today's workplace
- Labs must be capable of running high-level software programs that require faster processors, increasingly more hard drive space, and more RAM with each new version. In order to increase the offerings of web-related courses, we must update hardware and software on an ongoing basis.
- TV/video equipment in all classrooms
- New chairs in lecture classrooms
- All classrooms should have wireless access.

## SCHOOL OF HEALTH & PE

- Staffing Resources
- Additional technical staff is needed by the Nursing, Vocational and Health Care Technology Departments to assist with the operation of the human patient simulators and other new technologies. The present staffing for the Nursing Department is grant funded and will end in Spring of 2010. It is essential that this Technical Instructional Assistant position be retained beyond this date and that a similar position be created for the LVN and HCT Departments. This Technical Instructional Assistant could be shared by both programs, because they are housed at the John Adams Campus.
- The Nursing and Radiologic Technology Departments will be adding a computer lab and will need assistance with transitioning testing to computers, maintaining the equipment and upgrading computer programs.
- Technical assistance is needed for several departments in the School of Health & PE to develop and manage on-line courses. What is now holding back departments is the lack of technical support and equipment for on-line courses.
- Additionally, as new faculty are hired for new programs technical assistance will be needed for development of web sites, online courses, and assistance with new technologies.
- Equipment and Software Needs
- Provide new furniture for JAD renovated computer labs.
- Provide JAD Business, ESL and LVN computer labs with up-to-date equipment.

- Provide smart classrooms for the following programs at JAD: Vocational Nursing, Child Development and Family Studies, ESL, Transitional Studies, DSPS and Consumer Education.
- Provide document cameras for each JAD smart classroom.
- Provide a wireless connection in JAD cafeteria for students wanting to use their laptops.
- Provide Physical Education Department with online tutorial programs to help with basic skills and the matriculation of our student athletes to four year institutions.
- Provide the Health Care Interpreter Program with a Videoconferencing Medical Interpretation (VMI) system in order to train students to use this new technology.
- Provide an additional five computers to the Peer Activity/Resource Room in C405.

## SCHOOL OF INTERNATIONAL EDUCATION AND ESL

### ESL

- Staffing Resources
  - Increase technology support for student labs and instructional support units.
  - Provide staffing for department and programs to develop and maintain websites and online communication.
  - Continue work of ESL Department Tech Committee in areas of equipment, software, course outlines, and staff development.
  - Standardize and continue work of ESL Tech Assistants at the Campuses.
  - Seek funding to support the successful Summer Tech Camp '08 conducted by volunteers.
  - Develop a technology-training plan to improve faculty and staff computer skills. Provide on-going staff development opportunities at all campuses including classroom management techniques in computer lab environments.
  - Increase staffing for the Rosenberg ESL Computer Lab that has more students than it can handle.
  - Develop broader and more effective use of labs for ESL students. Include regular review and update of course outlines for technological applications.
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- Equipment and Software Needs
  - Implement regular upgrade of student computer labs and staff computers.
  - Provide portable LCD projector and laptop units for use in classrooms.
  - Provide digital camcorders at each campus.
  - Provide document projectors in classrooms to replace overhead projectors where appropriate.
  - Expand use of interactive white boards.
  - Internationalize computers for staff.
  - Increase workstations in the Rosenberg ESL Computer Lab to meet student demand. The current lab is at capacity.
  - Acquire software license for updated ESL software as recommended by ESL Tech Committee, such as Pronunciation Power Levels 1 & 2, and Focus on Grammar. Also, work toward standardization of available software at all campus locations.

- **International Education**
- Plan for upgrade of lab computers
- Increase information on the web for students
- Regularly update website
- Improve use of email as a regular form of communication with students

#### **Institute for International Students**

- Plan for upgrade of lab computers and internationalize computers for program staff and student lab
- Increase information on the web for students
- Regularly update website
- Improve use of email as a regular form of communication with students

#### **Credit International Students**

- Increase information on the web for students
- Plan for use of email as a regular form of communication with students
- Upgrade computers and internationalize computers of program staff and student lab
- Regularly update website

### SCHOOL OF LIBERAL ARTS

#### Staffing Resources

- School programs at the Phelan campus currently have 8 full classroom labs and two classroom labs that are “computer dependent.” In addition, there are two full classroom labs at the Mission campus directly serving programs within the School. Seven of the twelve labs have dedicated lab technician support. Several of the labs supported by the technician are extremely complicated and require more specialized support than one person can provide. As the conversion to digital technologies proceeds across the curriculum, these problems will only become more challenging. In a community college environment, where students frequently do not have the resources to purchase their own technology, access to College laboratories are essential to student learning outcomes.
- Broadcast Electronic Media Arts supports thirteen technology intensive labs at Ocean and Mission campuses. These labs are supported by 2.5 FTE Broadcast Media Services technical staff. This staffing is inadequate because BMS technical staff also provides technical support for video services throughout the District and for two educational access television channels that cablecast 24/7. Staffing needs to be increased to 3.0 FTE.
- There are computer labs at other sites used by School programs that are supported by site technicians and partially by the departmental technicians. As these facilities expand their offerings, additional technical support will be needed.

#### Equipment and Software Needs

- The College Technology Master Plan should address, and funding resources be made available to systematically add, upgrade, and replace computers and other high technology equipment and software to maintain relevant and up-to-date training for

students in technology-based programs as well as programs that use technology for instruction. Departmental budgets should support the regular upgrade of software. Since the development of the last Technology Plan, the need for systematic, on-going funding has become more significant. Changes in Perkins Act funding and the increased reliance on computer-based technologies for core instructional activities have increased the need for regular upgrades of equipment and software, neither of which can be adequately accommodated in the current departmental and institutional budgets.

- Several non-computer-based departments have initiated the use of computer-supported teaching technology for regular classrooms (e.g., Art and Foreign Language). Funding for equipment has been grant based, but maintaining that equipment will depend on departmental supply and repair budgets which have remained at the same level for several years.
- The School has developed extremely effective processes for jointly addressing computer replacement and upgrades among several departments by “cascading” older equipment to programs that can use older equipment with less “computer power.” This has provided much needed upgrades at the lowest possible expense. However, even this economically efficient cascading system is undermined if there are not adequate resources to fund the equipment at the top of the cascading chain. In addition, the regular need for high-end technology in several departments limits the extent to which upgrades can be adequately met by cascading older models to other programs.

#### Specific Department Needs over the Next Two to Four Years

- Art: The Art Department is implementing the use of its online image library across its curriculum. While the Department does not have any computer labs, it has a need to upgrade very old Mac computers that faculty use for organizing their curriculum and demonstrations in class.
- Broadcast Electronic Media Arts: The BEMA Department supports 13 technology-based laboratories. At Ocean campus these include Sound Recording Arts Studio, Sound Recording Arts Control Room, Television Production Studio, Television Production Control Room, Radio Station Airbooth, Three Radio Station Production booths, and Digital Media Production Lab. At Mission campus these include Digital Media Production Lab (shared with Journalism), Television Production Studio (not yet equipped), Television Production Control Room (not yet equipped), Video Post-Production Booth (not yet equipped), Radio Station Airbooth (in the process of being equipped), and Radio Station Production Lab (in the process of being equipped).
- The Department needs to upgrade its equipment and software to address HD technologies in the industry. HD cameras and software upgrade are essential to program viability. Upgrades of Pro Tools and digital sound software are needed. The Department does not have adequate space for a computer lab, a ProTools HD Foley and Sound for Picture recording studio.
- *Note*: Broadcast Media Services and EAtv have been addressed in other sections of this technology plan.
- English: Under Title 3 grant funds, the English Department established a classroom computer lab dedicated primarily to the improvement of student outcomes in basic skills English classes. Initially, this lab was set up as an open lab for students completing required lab assignments. However, in an effort to improve those outcomes, the use of

the lab has evolved into a combination of class sessions conducted in the lab plus open lab times. The combination “class time” labs and open lab has proven to have a positive impact on student success. However, there is more demand for class time lab use than can be currently supported. Based on tracking of class and open lab times, it is clear that the student outcomes would be significantly improved if a second lab could be created so that there would be a “classroom” lab and an open lab.

- Foreign Languages: The Department needs to expand the number of DVD player/projection set ups for its classes at all sites. In addition, faculty computers distributed during the college-wide roll out need to be replaced over the next two-four years.
- Cinema: The Cinema Department is also heavily impacted by the rapidly changing technology in the industry it serves. As with BEMA, Cinema computer needs generally require the highest level of technology, placing the Department at the top of any cascading equipment strategy. In addition, the amount of traditional processes that have been converted to computer-based technologies has caused the two existing computer labs to be heavily impacted and there will be a need for an additional computer lab within the next two-four years. In addition, cameras, sound recording, lighting, editing, mastering and projection equipment, and instructional software need regular upgrading. Upgrades of DVD/computer projection/screens, playback equipment, and Smartboard interactive whiteboards are needed for classrooms. To maintain consistency with the industry, there is a need to purchase, install and maintain a telecine film to digital transfer machine for post-production.
- Graphic Communications: Five faculty computers need to be upgraded so that they can run software that is currently being upgraded for classroom use. In addition, two of the ceiling mounted projectors in classrooms need replacement. The Graphics Department is another department that relies on the development of an effective, ongoing method for replacing and upgrading computer equipment and software.
- Journalism: The Journalism Department has grossly inadequate facilities at the Ocean campus. If the facilities problem is resolved, there will be a need to adequately equip dedicated laboratory facilities with computers, printers, and software needed for core instructional activities.
- Music: Most of the long-range technology needs of the Music Department relate to adequately equipping the Performing Arts Center when that building is complete.
- Photography: With the addition of a dedicated photography computer lab this year, the Photography Department’s lab needs are adequately met for the next two to four years. However, the regular upgrade of software and equipment in the lab they share with Graphics is an ongoing concern.
- Theatre Arts: Recent FCC regulations and changes in frequency allocations have rendered the Department’s wireless microphone system inoperable. Currently the Department must rent wireless microphones to support instructional production activities. This is neither cost efficient nor educationally sound and a new system is needed.

## SCHOOL OF MATH AND SCIENCE

Staffing Resources – All Departments:

- Hire an Instructional Designer who has skills in the demonstration of science and mathematics concepts in distance education courses.
- Provide assistance with the maintenance of department and instructor web sites

#### Equipment – All Departments

- Implement a continuous upgrade cycle for faculty and staff computers and peripherals.
- Implement a continuous upgrade cycle for computers in laboratory classroom facilities and other resource areas (e.g., the Biology Resource Center).
- Install ceiling-mounted LCD projectors in all major classrooms.
- Implement a continuous upgrade cycle for all LCD projectors.
- Establish stable funding for demonstration and laboratory supplies and equipment at outlying campuses. This includes overhead projectors, computers, and LCD projectors in the continuous upgrade cycles mentioned above.
- Extend CCSF wifi coverage to all classrooms.
- Improve security hardware
- Implement servers that satisfy the file and application sharing needs of departments, while maintaining the security of data.

#### Software Needs – All Departments

- Improve security software
- Implement phone-home capability on laptops
- Implement stable (non-grant) funding source for software licenses

#### Inter-Departmental Needs

Astronomy, Biology, Earth Science	<ul style="list-style-type: none"> <li>• Create a dedicated shared computer lab room with 20-35 computer stations, and establish a continuous upgrade cycle for the equipment in that lab. This lab would be used for online courses and computer lab curricula (e.g., image processing, astrophysics modeling, GIS, Ecology).</li> </ul>
Biology, Chemistry, Engineering, Earth Science	<ul style="list-style-type: none"> <li>• Purchase or lease a bus or van to enable students to visit industry, participate in community service, participate in class field trips and to bus students from high schools for special projects at City College.</li> </ul>

#### Department-Specific Needs

Architecture	<ul style="list-style-type: none"> <li>• Request new equipment jointly with other design departments to create a greater synergy for the students.</li> </ul>
Astronomy	<ul style="list-style-type: none"> <li>• Replace the main optical telescope with a modern digital telescope for better access by students and add a radio telescope with Internet capabilities</li> <li>• A new Digital Visualization Unit/Projector for use in the Planetarium for Scientific Visualization and replacing the old sky projector.</li> </ul>

Biology	<ul style="list-style-type: none"> <li>• Expand instrumental analysis equipment in Cellular and Molecular Biology.</li> <li>• Upgrade projection equipment, models, and biological study materials in the Biology Resource Center .</li> <li>• Purchase new equipment (primarily microscopes) for basic laboratories at the outlying campuses.</li> </ul>
CNIT	<ul style="list-style-type: none"> <li>• Create a Service Center to help students with computer problems, including support for wireless connections at CCSF.</li> </ul>
Earth Science	<ul style="list-style-type: none"> <li>• Add GIS charting/mapping equipment and upgrade computers to handle the volume of GIS data.</li> <li>• Continue installation of the “Life through Time” display, including a DVD player and flat-panel display</li> <li>• Improve the computer and software for the CCSF weather station</li> </ul>
Engineering	<ul style="list-style-type: none"> <li>• General fund line item budget for the annual maintenance cost of stem cell equipment initially funded by a grant and currently with no maintenance budget.</li> </ul>
Mathematics	<ul style="list-style-type: none"> <li>• Purchase equipment required to establish "Smart Board" classrooms</li> <li>• Continue to purchase document camera technology for classroom use</li> <li>• Expand the Title III Basic Skills Math Computer Lab</li> <li>• Lay the groundwork for a new state-of-the-art Calculus level computer classroom shared with other departments of Science and Mathematics</li> </ul>

## ALEMANY CAMPUS

### Staffing Resources

Faculty is in need of technical support regarding the latest developments and innovation in the computer field. Hands-on, individualized training is also needed to instruct teaching on group teaching techniques and lab work.

### Equipment and Software Needs

- The Computer Lab in Room 102 has 31 bulky computers that are 14 years-old and badly in need of replacement. The lab also needs a new printer, LCD projector, scanner and student headsets.
- The former MAC lab, Room 205, was replaced by a PC lab in Fall 2007. However, it is still not a “smart” lab that would accommodate the linguistic needs of our international student population. Continuous funding is also necessary for future maintenance, repair and upgrade.
- Our students are from 70 different countries worldwide. A multi-lingual language lab is needed to assist our student population which consists of the following: Spanish-speaking (50%), Chinese-speaking (14%), Vietnamese-speaking (13%), Russian-speaking (5%) and Farsi-speaking (1%).

### Library and Learning Resource Needs

- Alemany Campus does not have a library. To compensate, the campus needs an alternative method for informational delivery and reference. There needs to be computers that are dedicated as library resources. On-line workshops and training programs would also be helpful.
- A mobile library would help our students gain access to books and other materials. It could simply be a rented van with bookshelves on wheels. It is unfair for our ESL students to be deprived of library resources.
- Books and software in our students’ native languages are needed. The library collection should not be viewed as “English-Only.”

## CASTRO/VALENCIA CAMPUS

### Staffing Resources

Since the CEV campus has no technology resources beyond the usual array of audio-visual equipment, three laptops and a few open access computers used by faculty and students for official business, the existing support staff who come to the campus provide adequate support. As part of the MOU with the Community Center, the Center has agreed to provide technical support for the computer lab in that facility.

### Equipment and Software Needs

Language lab equipment will be needed if an accessible and manageable space for this equipment can be identified. Computer equipment will be needed if an accessible and manageable space for this equipment can be identified.

#### Library and Learning Resource Needs

- The campus does not have computer labs for students to access electronic resources, although student can use office computers for limited online access.
- The library provides regular workshops at the campus. At the time of the last technology plan, the library has plans for including the campus in the inter-library loan program when funds are available.

### CHINATOWN/NORTH BEACH

#### Staffing Resources

- More technical support to provide services to students, faculty and administration
- Technologically trained faculty in all departments
- Increase technology support for student labs and instructional support units.
- Provide staffing for campus and programs to develop and maintain websites and online communication.

#### Equipment and Software Needs

- Professional kitchen
- Computer labs
- Health Care training equipment in dedicated classrooms
- Teleconference capabilities
- Hardware and software upgrades on regular basis
- Expanded labs
- Internet access and networked access to all CCSF campus resources
- AV inputs and outputs
- Computers in all classrooms and offices linked around the world
- Language Labs
- Increased computer stations for faculty use

#### Library and Learning Resource Needs

- Students will have access to all the Library's electronic resources and services either in the campus library and/or in a campus computer lab so that access and retrieval of online information and materials is available district-wide.
- Student will have physical access to non-electronic information resources (e.g. books) at all campuses by means of an expended Inter-Campus Loan Service. To accommodate this expansion, fiscal support may be needed for costs associated with delivery.
- Develop library with collection of proprietary database and other resources

## DOWNTOWN CAMPUS

Revised Fall 2008

### Equipment and Software Needs

- Update computer labs with appropriate equipment, software, and technical support
- Labs must be capable of running high-level software programs that require faster processors, increasingly more hard drive space, and more RAM with each new version. In order to increase the offerings of web-related courses, the campus must update hardware and software on an ongoing basis.
- Computers with Internet access in instructors' offices Closed circuit television to provide the ability to broadcast to all classrooms at the same time.
- Renovation of the 5th floor computer labs should be a high priority of the college and a short-term goal of the campus.
- All classrooms should have wireless access.

### Library and Learning Resource Needs

- Students will have access to all the library's electronics resources and services either in the campus library and/or in a computer lab so that access and retrieval of online information and materials is available district-wide.
- Students will have physical access to non-electronic information resources, e.g., books, at all campuses by means of an expanded Inter-Campus Loan Service. To accommodate this expansion, fiscal support may be needed for costs associated with delivery.

## EVANS CAMPUS

Revised Fall 2008

### Staffing Resources

- Increase technology support for student labs and instructional support units.
- Provide faculty training in instructional technology
- Provide staffing for department and programs to develop and maintain websites and online communication

### Equipment and Software Needs

- Computer Laboratory at the Evans Campus needs regular hardware and software upgrade
- Provide smart classrooms at Evans Campus, including TV/Video and wireless connection
- Provide portable LCD projector and laptop units for use in classrooms
- Provide document projectors in classrooms to replace overhead projectors where appropriate.
- Expand use of interactive white boards.

### Library and Learning Resource Needs

- Need a Library based upon DACUM results for emerging programs

## JOHN ADAMS CAMPUS

Revised Fall 2008

### Technology Resources

- On-line and telephone registration for non-credit courses
- Electronic collection of positive attendance data
- Student access to textbooks and other resources information at all campuses by means of an expanded Inter-Campus Loan Service. To accommodate this expansion, fiscal support may be needed for costs associated with delivery.
- Need to add smart classrooms to renovation of JAD

## MISSION CAMPUS

Revised Fall 2008

### Technology Resources

- Faculty training in instructional technology.
- Staff to keep the Student Computer Lab open.
- Sufficient staff to support laboratories and library equipment.
- Upgrade computers with appropriate RAM to support new program applications.
- Funds to update program software.
- Electronic collection of positive attendance date.
- Online and telephone registration for noncredit courses.
- Sufficient AV equipment to meet teachers' needs.

## SOUTHEAST CAMPUS

Revised Fall 2008

### Technology Resources

- We need to upgrade all the computers in rooms 402, 407, and 313. We need up-to-date hardware that is capable of running high-level software programs.
- Our campus should be equipped with wireless access points which allow students to access on-line courses and other college information. Instructors' offices should be included in this request.
- We need to upgrade the sewing machines in our fashion class. Most of the machines are outdated, worn out, and in need of frequent repair. There are classes that need to have the chairs replaced. The existing chairs are old and ready to breakdown. We need a computer in this class as well.
- All classrooms should be equipped with up-to-date TV/video equipment for instructional purposes. We need to replace classroom furniture that is old and poses a threat of injury to students and handicapped students.
- Our satellite programs at Visitacion Valley and San Bruno which offer ESL should be equipped with TV/video equipment for instructional purposes, and teachers should have access to computers (laptop) in their teaching areas equipped with wireless access and instructional software.

## RETENTION CENTERS

African American Scholastic Program, Asian Pacific American Student Success Program, AND Latina/o Services Network

**Added in Fall 2008**

### **Technology Resources**

- All Centers: Upgrade or replace computers for labs, faculty and staff every five years.
- LSN and AASP: Install wireless system.
- All Centers: Expand computer stations with laptop accessibility to adequately support classroom student load (range from 30 to 35).
- All Centers: Provide one overhead projector, and LCD projector to each center to provide support to our academic classes and workshops and presentations.
- All Centers: Increase information on the web for students and regularly update website.
- All Centers: Install and update educational software to further support access to diverse student populations.
- AASP: Need to install a media access system in their study area
- All Centers: Training in Technology opportunities for faculty and staff to facilitate and strengthen the services to our diverse student populations.