TECHNOLOGY MASTER PLAN 2010 – 2015
LOS ANGELES MISSION COLLEGE
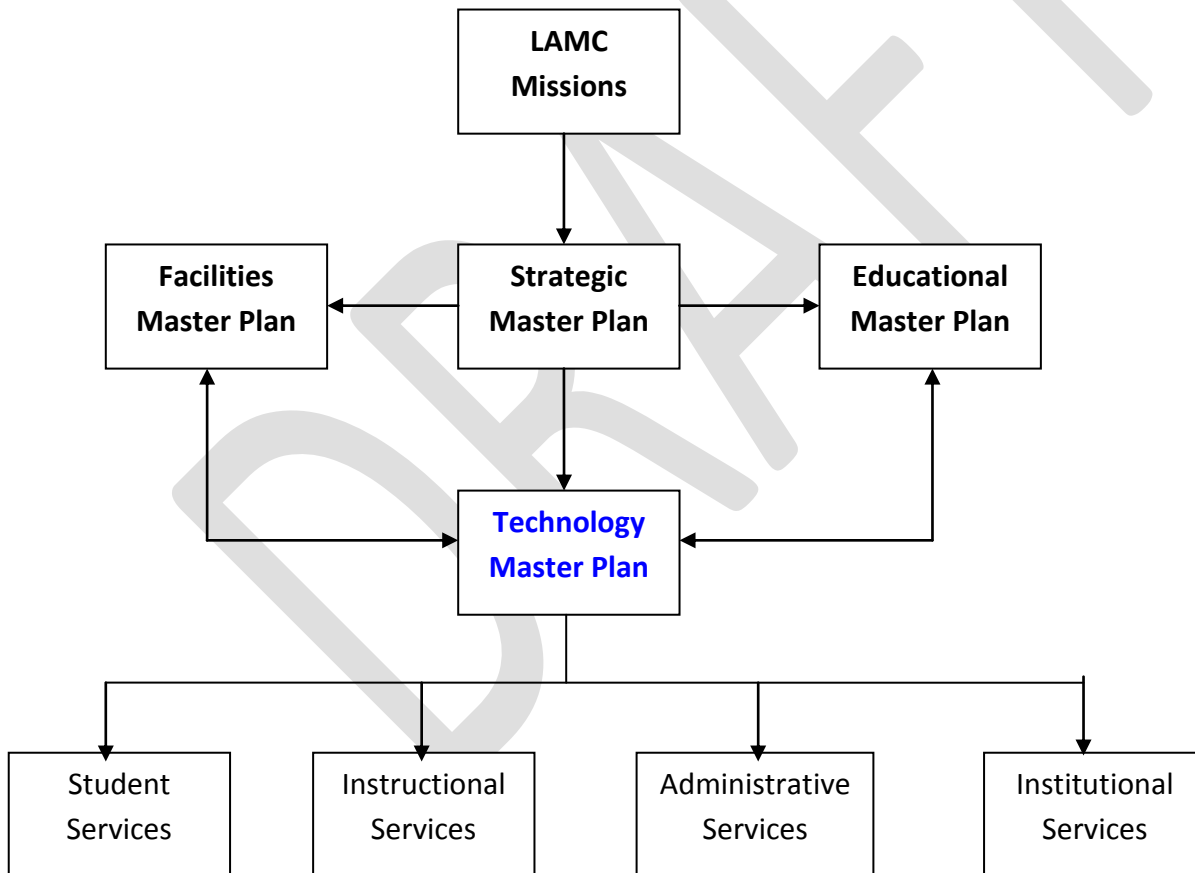
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Executive Summary

This plan is integrated with Strategic Master Plan, supports Educational Master Plan, consistent with Facilities Master Plan and aligns with financial planning initiatives at Mission college.

Technology Mission

- To ensure technology is available and improve teaching, learning.
- To ensure students, faculty and staff have the ability to use technology
- To insure environment are conducive to learning

This plan is not all inclusive. New technology will be discovered in the process of implementing and executing the plan. Technology is changing rapidly that the prediction of the five years or three years from now cannot be done. Thus, this plan provides a vision what is possible of the current knowledge and information of technology. The Technology Master Plan is not developed for Information Technology department or Technology committee. It is developed for students, faculty, and staff of Los Angeles Mission College.

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Technology Vision

Technology Master Plan goals focused on:
- Student Success
- Teaching and Learning Excellence
- Professional Development
- Infrastructure Improvement
- Resource Management

A. Assessment and Evaluation

Campus Infrastructure

Project name	Description	Completed	Fund(s)
Email and Network Operating System	Migrated faculty, staff email from CCmail to MS Exchange 2003. Migrated Novell network to MS network operating system in academic network and administrative network.	Winter 2006	College
Standards	Cabling standards, A/V standards	Spring 2006	Bond A/AA
Math Center	New math lab center in Campus Center housed 36 computers, two projectors and electronic projector screens.	Spring 2006	Title V
Smart Classroom	Converted 11 regular classrooms in the Instructional building into smart classrooms; these rooms equipped with mounting projector, electronic screen and computer. Rooms are 1001, 1002, 1012, 1013, 1017, 2003, 2004, 2006, 2009, 2018, 2021	Summer 2007	Perkin
Campus cabling	Upgraded of campus network cabling and data network switches. Installed multiple mode fiber backbone between buildings.	Summer 2007	Bond A/AA
Switches	Replaced all switches to CISCO	Summer 2007	Bond A/AA
Event Management System	A web-based facilities scheduling software to maximize resources and avoid conflicting in room booking.	Spring 2007	College
2nd MPOE	Secondary main point of entry was built entering from Hubbard to create a redundancy between telco and campus.	Spring 2007	BondA/AA
OmniUpdate	Converted campus web page to District standard Content Management System	Summer 2007	District & College
Voice over IP	Migrated the PBX Fujitsu phone system to CISCO Voice over Internet Protocol.	Summer 2008	Bond A/AA
Video over IP	Implemented High Definition Video Conferencing via Internet Protocol in Library Conference Room 330	Summer 2008	Bond A/AA (District)
Wireless Access	Implementation of a wireless network throughout all campus facilities.	Spring 2008	Bond A/AA
Tracking Computers	Implemented Computrace software to all new purchased desktops and laptops to tracking hardware.	Fall 2008	Bond A/AA & College
Electronic Message Board	Broadcast campus events via electronic board.	Spring 2009	Bond A/AA
Emergency phones	Implemented blue phones throughout all campus facilities	Spring 2009	Bond A/AA
Security Camera	Implemented security camera throughout all campus buildings	Spring 2009	Bond A/AA
Campus Payphones	Campus owned six payphones to accommodate the lack of cell site coverage on campus.	Spring 2009	Bond A/AA

AlertU	Implemented AlertU Notification for emergency broadcasting via text message.	Spring 2009	District
Video over IP	Implemented High Definition Video Conferencing via Internet Protocol in President office with mobile unit	Summer 2009	Bond A/AA

Student access technology

Project	Description	Completed	Fund(s)
Active Directory, LDAP implementation	Students log in the computers in Math Center and LRC using student Active Directory.	Winter 2006	None
LRC computer	Replaced 100 computers in LRC common	Spring 2006	Block Grant
Tracking software	Implemented NetTrack software to track computer usage in LRC	Spring 2006	Title V
SOCO	Implemented a dynamic search of classes	Summer 2006	Title V
Equitrac printing	Implemented a self serve printing in LRC and Library using Equitrac Card	Summer 2006	College
New Student ID	New student ID is District Project to replace student's SS number with the 88 formats	Fall 2006	District
Kiosk computers	Upgrade Kiosk computers to Pentium V	Spring 2007	Perkins
LRC 205/234	Replaced 42 computers in LRC 205 and 28 computers in LRC 234	Fall 2007	Title V
LRC 234	Replaced 28 computers in LRC 234	Spring 2009	Title V
MAC labs	Replaced 50 IMAC computers in LRC 233 and 126	Summer 2008	SFP and Title V Grant
Library computers	Replaced 27 student computers in Library	Summer 2008	Prop A/AA
SARS call/grid	Student appointments	Summer 2007	Title V
Student Portal	ASO online voting Student profile, referrals.	Summer 2007	Tile V

Faculty, staff access technology

Project	Description	Completed	Fund(s)
Web server	Brought main campus web sites back to campus to better provide support faculty web pages	Spring 2006	College
Online Curriculum	Curriculum centralized on the database server; faculty can view curricula any time and any where via Internet web browser	Spring 2006	None
Online Enrollment Report	Developed a web based enrollment report to check class status.	Spring 2006	Title V
Faculty computer	Replaced all full time, adjunct faculty's computers with Pentium IV (dx2000)	Summer 2006	College
Multiple Function Printers	Deployed 20 new multiple function printers in most buildings, offices	Summer 2006	College
Faculty/Staff portal with LDAP	Provide multiple online services by using campus portal.	Summer 2006	None
Staff computers	Replaced all staff computers in Admin services areas	Spring 2006	College
Document imaging	Deployed imaging documents using ImagNow in A&R office	Summer 2007	Title V
SARS grid	Implemented student appointments, scheduling software in counseling office.	Summer 2007	Title V
SARS call	Mass calling to students for registration and appointments	Summer 2007	Title V
Web-based developments	SLO, Program Reviews, Online Tutoring referral, faculty web pages	2007	NONE
Smart Copy	Submitted a copy, printing request on line	Spring 2008	College
Faculty Computer	Replaced all full time, adjunct faculty's computers with the latest Pentium IV (dc7900)	Spring 2009	Bond A/AA

Campus Resources
a. Physical Resources
Computer and printer inventories

        Student computers: 638
        Staff/Faculty computers: 306
        Students network printers: 16
        Staff/faculty network printers: 75

Network backbone inventory

Equipments	Quantities	Responsible Organization
Admin servers	30	LAMC Information Technology
Academic Servers	1 Blade server – 8 modules 3 single servers	LAMC Information Technology
SAN	6 LeftHand Network storages	LAMC Information Technology
Remote Backup server	1 LeftHand storage at Harbor college	LAMC Information Technology
Core switches	2 CISCO 6509	LAMC Information Technology
Distribution/Access switches	50 CISCO 3750G – 48 ports	LAMC Information Technology
Call Managers	2 CISCO servers	LAMC Information Technology
IP Phones	391 CISCO IP phones	LAMC Information Technology
Physical Access Control servers	4 servers	LAMC Information Technology
Wireless Controller	2 CISCO wireless controllers	LAMC Information Technology
Wireless Access Points	65 CISCO Wireless Access Points	LAMC Information Technology
Wireless Authentication servers	5 servers	LAMC Information Technology
Video Conference	4 LifeSize Video conference equipments	LAMC Information Technology
WAN devices	1 Internet router 1 gatekeeper 1 Mesh router 1 Sheriff router 2 Voice gateways 8 Analog gateways 2 ASA 5510 VPN applicances	CENIC.ORG CENIC.ORG District IT LA Police Department LAMC Information Technology LAMC Information Technology LAMC Information Technology

b. Financial Resources
Current funding sources
- Program 100 (college budget) of IT, LRC, CSIT, CAOT
- TTIP
- Staff Development
- VTEA
- Grants: Title V

c. Human Resources

Main Employee Group	Headcount
Classified and Admin	164
Faculty Adjunct	454
Faculty Regular	72
ToTal	**690**

Discipline labs have Instructional Assistant (IA) to assist students and faculty in the use of the labs. CAOT labs have a haft time IA, Informationation Technoloyg and a haft time IA, Computer Office Application. Computer Scien labs have one full time and one haft time IAs. The Learning Center has one Assistant Computer Network Specialist and a haft time IA. DSPS lab has one full time IA, Assistive Technology.

In addition, IT department filled several key positions in the past few years. College hired an IT Manager in spring 2005; replaced a vacant Computer Network Support Specialist with a Computer Technician in spring 2007; reclassified one Computer Network Specialist to Senior Computer Network support specialist and hired a Web designer in spring 2008. For the first time, Mission college has so much expertise been gathered together in service of the college technology goals and objectives.

B. Technology Goals, Objectives and Action Items

There are seven major goals, all of equal importance.

Goal #1: *To provide the best possible technology support and solutions within an institution.*

The goal is to provide state-of-the-art technology support for instruction, student services, administration, research and planning. In this new environment, the quality of instruction and learning is paramount and is based on solid information technology infrastructure, appropriate technology and user support.

Objectives:

1.1 Develop learning resources and use of innovative technologies

Action Items	Responsibility	Time line	Evidences/ Outcomes	Fund(s)
1.1.1 Provide students, faculty, staff and administration with hardware, software necessary for use of technology. 　　a. Upgrade latest patches, latest software version where it is applicable. 　　b. Upgrade computers for students, staff and faculty based on 3-4 year cycle.	IT department	On-going task		Grants, SPF, Bond A/AA
1.1.2 Coordinate and maintain college information technology standards for common resources. 　　a. Maintain uniformity of all share governance web pages. 　　b. Use Window Share Point service as collaborative tools within a share governance committees or any work groups. 　　c. Coordinate with District to maintain computer, printer, and laptop standards. 　　d. Coordinate with District to maintain campus audio/video, cabling standards.	a. All shared governances b. All shared governances and work groups c. IT department d. IT department	On-going task On-going task On-going task On-going task		None
1.1.3 Upgrade the operating system and Microsoft application of students, faculty and staff computers with the latest, proven technology. 　　a. Upgrade to Window 7 for student computer labs. 　　b. Upgrade to Window 7 for faculty and staff computers. 　　c. Upgrade MS 2003 to MS 2007 to all PCs on campus	IT department	a. Summer 2010 b. Spring 2011 c. Fall 2010		None

1.2 Facilitating communication among students, faculty, and staff and beyond campus through effective integration and use of appropriate technologies.

Action Items	Responsibility	Time line	Evidences/ Outcomes	Fund(s)

1.2.1 Promote the use of a college web based calendar of events.
    a. Provide training to department secretaries.
    b. Department secretaries submit events to Pres office for approval.
	a. IT department
	b. President Office
		a. As needed
		b. Ongoing task
				None

1.2.2 Continually improve the use the electronic message board.	President Office	On going task		None

1.2.3 Improve and reorganize academic department web pages.
    a. Convert academic department to Omniupdate.
    b. Each Academic department will maintain and update their web site after receiving OmniUpdate training.
	a. IT department
	b. IT department and all academic departments
		On going task
		On going task
				None

1.3 Define and implement technology necessity to support Student services, Academic Affairs and Administrative divisions.

Action Items	Responsibility	Time line	Evidences/ Outcomes	Fund(s)

1.3.1 Student Services
    a. Implement virtual counselor project
    b. Upgrade Kiosk station
    c. Coordinate with HigherOne to install two ATM machines.
	a. Campus and District IT
	b. IT, Student services
	c. IT and HigherOne
		a. Spring 2010
		b.
		c. Summer 2010
				a. District Office
				b. Bond A/AA
				c. None

1.3.2 Academic Affairs division
    a. Implement faculty printing
    b. Install video conference equipments
    c. Implement new POS and new inventory software Culinary Art program.
	a. IT department
	b. IT department / Plant Facilities
	c. IT department / Culinary Art pro.
		a. Spring 2010
		b. Spring 2010
		c. Spring 2011
				a. Bond A/AA
				b. Bond A/AA
				c. Bond A/AA

1.3.3 Administrative division
    a. Upgrade student ID software and hardware
    b. Automate budget operation planning
    c. Electronic indexing purchase orders in the Business Office
    d. Implement new POS and new inventory software Bookstore
    e. Implement access control to secure bldgs
    f. Implement campus interactive directories
	a. IT department
	b. IT department / Budget Office
	c. IT department / Business Office
	d. IT department / Bookstore
	e. IT department/Plant
	f. ITdepartment/Plant
		a. Spring 2010
		b. First quarter of 2011
		c. Fall 2011
		d. Spring 2011
		e. Spring 2011
		f. Summer 2011
				a. Bond A/AA
				b. Program 100
				c. Program 100 / Title V
				d. Bond A/AA
				e. Bond A/AA
				f. Bond A/AA

1.4 Promote deepening of information literacy and technology competency.

Information literacy and technology competency are frequently introduced to students when they are expected to access to available sources in the library. However, it has extended to the ability of recognizing when information is needed; ability to locate, evaluate, and use it effectively; ability to innovate and invent ways of applying technology in challenging new situations.

For this objective, Information Technology department serves as a supporting role only. This objective is included in the Technology Master Plan because it raises attention of academic of information technology and many institutions incorporate information literacy skills in the requirements for their general education curriculum

Goal #2: *To develop and maintain technology skills for faculty, and staff.*

Technology is a tool that is valuable only if faculty and staff are empowered to use it. Ongoing, relevant, and practical training is essential for the investment in technology to maximum its utilization.

Objectives:

2.1 Enhance the college professional development program to improve faculty and staff skill in the effective use of technology.

Action Items	Responsibility	Time line	Evidences/ Outcomes	Fund(s)
2.1.1 Develop orientation training when an employee is hired, some of which deals with technology issues e.g. SAP, Outlook, DEC, Web portal and technology in smart classrooms.	IT department, Admin Services	Fall 2011		None
2.1.2 Provide computer based training or onsite training of Microsoft Office Users Certifications.	IT department, Staff Dev.	Starting Fall 2010		
2.1.3 Provide ongoing training workshops in the use of Mission portal to deliver handouts, syllabi to their classes.	IT department, Staff Dev.	On-going task		
2.1.4 Perform faculty and staff surveys on a regular basis and use the feedback to prioritize the training course offerings.	IT department, Research office	Fall 2010		
2.1.5 Form a subcommittee to discuss a plan for developing online tutors or computer based learning for all topics.	IT department Staff Dev Tech Committee	Spring 2011		

2.2 Propose a Technology Resource Center shared by all faculty and staff. This center will provide ongoing workshops, self-paced and one-to-one instruction.

Action Items	Responsibility	Time line	Evidences/ Outcomes	Fund(s)
2.2.1 Item was proposed in the LRC renovation project	IT department	On going project		Bond A/AA

2.3 Strategies for increasing technology use in classrooms.

Action Items	Responsibility	Time line	Evidences/ Outcomes	Fund(s)
2.3.1 Increase support from administrators Schedule discussion sessions with administrators to make sure they understand and support the need for increased technology in classrooms. Invite experts who can support this assertion with statistics and research, if necessary.	President office Academic Affairs IT department	On going tasks		None

Goal #3: To enhance student success and readiness by providing Anytime, Anywhere and Always-on Technology.

Student educational needs will be met by creating a continuous learning environment that is always available. Today students expect "anywhere" access to classroom materials. Printed books will be supplemented by electronic media. The classroom will be transformed by mobile formats including distance learning, blended learning, interactive learning, teaching communities, cloud computing, and social networking.

Objectives:

3.1 Develop a transition plan for faculty from ETUDES to Moodle site

Action Items	Responsibility	Time line	Evidences/ Outcomes	Fund(s)
3.1.1 Establish a Course Management System Task Force with the charge of reviewing the current status of LAMC course management systems and of making a recommendation to College Council regarding the number and choice of course management systems to be available at LAMC.	Distance Learning Coordinator and Educational Planning Committee	Fall 2009	College Council recommended and approved.	None
3.1.2 Transfer classes from ETUDES database to Moodle database.	Distance Learning Coordinator	In progress		Student Worker (obtained through CalWorks at no cost to the college.

3.2 Digital content will be integrated into all instruction, as appropriate,and should be available before, during and after school to support teaching and learning.

Action Items	Responsibility	Time line	Evidences/ Outcomes	Fund(s)
3.2.1 Provide more opportunities and training for faculty to develop new course materials utilizing technology e.g. online syllabus, exams, power point presentation ...	IT department and all academic depts..	On-going task		None
3.2.2 Create incentives for those that are incorporating new technology into the curriculum.	Title V-LRC, Department Chairs	On-going task		

3.3 Create an official channel of Mission on Youtub.

Action Items	Responsibility	Time line	Evidences/ Outcomes	Fund(s)
3.3.1 Submitt application to Youtube to request for an official college channel.	IT department	Spring 2010		None
3.3.2 Design and maintain college Youtube channel	IT department	On-going tasks		None

3.4 Continually expand wireless wherever possible

Action Items	Responsibility	Time line	Evidences/ Outcomes	Fund(s)
3.4.1 Expand wireless access point in all new buildings	IT department , contractors	On-going tasks		Bond A/AA Measure J
3.4.2 Apply the latest wireless standard 802.11n technology to all wireless access point in the new buildings. The 802.11n significantly improve the speed and range.	IT department	On-going tasks		

Goal #4: *To improve technology resources to better address learning, services and to student success.*

Innovations in new technologies will enhance learning and student success and assist students in achieving their educational goals and provide greater access and convenience to the full spectrum of student services.

Objectives

4.1 Students will use technologies as a critical learning tool to further their college education.

Action Items	Responsibility	Time line	Evidences/ Outcomes	Fund(s)
4.1.1 Enhance the educational technologies available onlines, computer labs, library and other physical and virtual learning environments, discounted software/hardware for students	Title V-LRC, VPSS, IT, LAMC Foundation	On-Going Task		Block Grants, Title V grants, Corporate Sponsorships
4.1.2 Provide reliable and user friendly access to college services.				

4.2 Improve tutoring services to students in the use of technology in academic courses

Action Items	Responsibility	Time line	Evidences/ Outcomes	Fund(s)
4.2.1 Implement online tutoring service to assist students anytime.	VPSS, Title V-LRC, CTEA, Library	2010-2014		
4.2.2 Produce video tutoring on how to use services.	Title V-LRC, Library	2010-2014		

4.3 Implement online counseling services

Action Items	Responsibility	Time line	Evidences/ Outcomes	Fund(s)
4.3.1 Implement online meeting technology to include chat services and document sharing.	VPAA, VPSS, DE, CMS Portals	2010-2014		
4.3.2 Implement virtual advisement	Campus and District IT	Summer 2010		District – LAMC Verizon grant

4.4 Implement student email with edu domain.

Action Items	Responsibility	Time line	Evidences/ Outcomes	Fund(s)
4.4.1 Coordinate with District to implement student email to facilitate the implementation of future technologies.	Campus and District IT	Summer 2011		

4.5 Campus technologies will comply with Address Americans with Disabilities Act (ADA).

Action Items	Responsibility	Time line	Evidences/ Outcomes	Fund(s)
4.5.1 Raise disability awareness throughout campus by providing ADA technology workshops and training.	DSPS/Staff Development	On-Going Task		
4.5.3 DSP&S will provide consultation regarding any ADA technology compliance issue that might arise on campus.	DSPS/Staff Development	On-Going Task		
4.5.4 Increase the availability of disability software in computer labs throughout the campus.	DSPS/Staff Development	On-Going Task		
4.5.5 Address physical space, applicable technology, lighting, classroom layout and appropriate furniture.	DSPS/Staff Development	On-Going Task		

Action Items	Responsibility	Time line	Evidences/ Outcomes	Fund(s)
4.5.6 Monitor and Validate all web pages for ADA compliance using section 508 guidelines.	DSPS/Staff Development and IT	On-Going Task		
4.5.7 Create policies and guidelines that contain Section 504 and Section 508, and Title II.	DSPS/Staff Development and Tech Committee	On-Going Task		

4.6 Students in basic skills course will have access to current technology

Action Items	Responsibility	Time line	Evidences/ Outcomes	Fund(s)
4.6.1 Upgrade computers in writing and reading lab to support new software.	IT- Titlle V-LRC	On-Going Task		Title V
4.6.2 Increase tutors and technology to assist students in writing, reading using software in LRC (to also include bilingual options)	T- Titlle V-LRC, LRC	On-Going Task		

4.7 To utilize broadcast technology to improve communication with students and campus.

Action Items	Responsibility	Time line	Evidences/ Outcomes	Fund(s)
4.7.1 Installed two 52" LCDs in student break area, campus center	IT department, Contractor	Spring 2010		Bond A/AA
4.7.2 Broadcast TV chanels and campus announcements				

Goal #5: To continually update and maintain the technology infrastructure to improve the operation, services of the college with the aim to be a "carbon neutral" campus.

To meet the demands and challenges of educational technology, the network and college technology infrastructure will be strengthened and expanded to ensure a high capacity infrastructure available as a critical prerequisite for the use of new "environmentally friendly" technologies to support learning, teaching, research, and outreach services.

Objectives:

5.1 Satellite building connectivity

The Health Fitness Athletic Complex (HFAC) and East campus will be the two new satellite locations that the 2007 and 2009 Facility Master Plans have prepared the development of instructional and support facilities to accommodate enrollment up to 15,000 students. The IT project is to build the direct fiber connection from the main campus to the HFAC building. The dedicated fiber connection backbone provides much faster connection speed, and is able to carry multiple services that are critical in supporting the learning and teaching activities at Mission college.

Action Items	Responsibility	Time line	Evidences/ Outcomes	Fund(s)
5.1.1 Install new 96 single mode fiber strands connected the primary data center in LRC to the Building Distribution Facility (BDF) in HFAC building. - Extend dark fiber to East campus	IT department, contractors IT department, contractors	Fall 2009 Spring 2012		Bond A/AA Measure J
5.1.2 Install 100 copper pairs from Verizon local loop to the BDF of HFAC building. This serves as a main point of entry of the building.	IT department, contractors, Verizon	Fall 2009		Bond A/AA, Measure J
5.1.3 Extend the emergency phone lines, security				

Action Items	Responsibility	Time line	Evidences/ Outcomes	Fund(s)

camera, and video conferencing to the two satellite locations:
    a. HFAC building.
    b. East Campus
	IT department, contractors
	IT department, contractors
		Fall 2009
		Summer 2012
				Bond A/AA
				Measure J

5.2 Maintain and update the network convergence

The use of multiple communication modes such as Internet, telephone, streaming media and video conferencing in a single network offers convenience and flexibility. As network convergence evolves, learning and teaching in classrooms become sophisticated and the application delivery can be rich content.

Action Items	Responsibility	Time line	Evidences/ Outcomes	Fund(s)
5.2.1 Upgrade the core switch and distribution switch on campus to 10G. This will increase backbone bandwidth from 1Gigabit to 10Gigabit. a. Phase 1: Data Center to PE bldg b. Phase 2: Data center to FCSB c. Phase 3: All buildings	IT department	Spring 2010 Spring 2011 Fall 2011		Bond A/AA
5.2.2 Extend Cable TV to all classrooms in new buildings. - Health Fitness Athletic Complex - Family Consumer Studies Bldg - Media Art - Student Services bldg	IT department, contractors	Spring 2010 Fall 2010 Fall 2011 2014		Bond A/AA
5.2.3 Request training budget to hardware technical staff for training of maintaining the convergence network.	IT department	Summer 2011		College funds

5.3 Upgrade Network Operating System and Email Exchange server

Action Items	Responsibility	Time line	Evidences/ Outcomes	Fund(s)
5.3.1 Request a training budget to senior technical staff for training Exchange 2010 and server 2008 versions.	IT department	Spring 2011		College funds

5.3.2 Upgrade server hardware from single servers to blade servers.
    a. Academic servers
    b. Administrative servers
	IT department	Spring 2010
		Fall 2011
				Title V
				Bond A/AA

5.3.3 Upgrade all academic servers and admin servers from 2003 enterprise server version to 2008 version.
    - Database server
    - Academic servers
    - Administrative servers
	IT department	Spring 2010
		Summer 2011
		Fall 2011		

5.3.4 Upgrade Exchange server from 2003 to 2010.	IT department	Fall 2011		

5.4 Develop, test and update disaster recovery procedure, and contingency planning.

Information technology department manages and maintains a larger number of critical servers hosting databases, email, scheduling, documents, and student record imaging documents. To ensure the business continuity in the event of a disaster, off-site storage, ring topology and secondary data center are scheduled to implement in 2010, 2011 and 2013.

Action Items	Responsibility	Time line	Evidences/ Outcomes	Fund(s)
5.4.1 A physical storage or large server will be placed at Harbor college to daily backup campus critical data after hours.	IT department	Spring 2010		Bond A/AA
5.4.2 Creating a ring connectivity of the current star network topology.	IT department, contractors	Fall 2011		Bond A/AA
5.4.3 Relocate DS 3 Internet circuit to the Secondary Data Center.	IT department, Verizon	Spring 2013		Bond A/AA
5.4.4 Secondary Data Center in East campus will be a secondary feed of the main campus. The Primary Data Center in LRC will be secondary feed of East campus.	IT department, contractors	Spring 2013		Bond A/AA

5.5 Implement Virtual Desktop Infrastructure (VDI) with thin clients to reduce cost and provide faster technical support.

Thin client uses only 20 watts of power per PC, compared with 100 to 150 watts for desktop computers. When the server power is factored in, the data center will use 12,600 watts to run the virtual desktop systems, compared with 80,500 watts for the 500 student computers. VID also provides the reduction of operational cost and improves manageability.

Action Items	Responsibility	Time line	Evidences/ Outcomes	Fund(s)
5.5.1 Introduction VDI solution to IT staff and other technical IT personnel on campus. Invite vendor to Mission campus for VDI demo to all technical staff.	IT department	Spring 2010	GST vendor provided a VDI demo on 4/23/2010	NONE
5.5.2 VDI solution will be implemented in the following areas: - LRC bldg: Library, LRC 205, 208, 218, 218, 234 - Campus Center: Assessment, orientation, math center, outreach, ASO - IA bldg: Kiosks, Life sciences, Career Center, IA 2014 - Campus Services bldg: Transfer Center	IT department	Summer 2010 (LRC 209, 219 and Lib)		Bond A/AA Title V

5.6 New green campus initiatives will be explored and implemented.

Action Items	Responsibility	Time line	Evidences/ Outcomes	Fund(s)
5.6.1 In Data Center a. Rise the cooling in data center in between 68 – 78 degrees instead of 65 – 75. b. Reduce the numbers of underutilized servers by consolidation server solution to reduce power consumption and cooling costs. c. Adopt the blade server technology to reduce	IT department	Fall 2009 Spring 2010 Fall 2011		None None Bond A/AA

Action Items	Responsibility	Time line	Evidences/ Outcomes	Fund(s)
the foot print, and power consumption.				
5.6.2 Student computer labs a. Adopting Virtual Desktop Infrastructure solution (objective 5.5) b. Use the power management tool to shut down PCs at night.	IT department	See objective 5.5 Spring 2010		a. See objective 5.5 b. None
5.6.3 On campus a. All new purchase technology equipments must meet Energy Star requirements b. Reduce desktop printers; replace with multiple function printers. c. Desktop printer must support recycle paper and auto double-sided printing. d. Process paper/form online whenever possible.	IT department	On-going task On-going task On-going task On-going task		

Goal #6: To develop and implement a long-range budget plan for technology needs.

Funding resources are limited. The college must make critical decisions to best utilize its available resources. The goal is to provide a prioritization list that the college can utilize when making strategic technology and resource allocation decisions.

Objectives:

6.1 Establish and implement equipment replacement plan

Over the past few years, computers and printers replacement plans have been driven by various budget resources including Title V, VTEA, TTIP, block grant and Bond A/AA as well measure J. As result, 98% of computers of student labs and faculty, staff are Pentium 4 with LCD monitors.
Recently, college council has directed Information Technology to "Establish and Implement equipment replacement plan". This will 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. Some faculty and staff may require more powerful computers than others as well the student labs. The PC from the student computer lab can be cascading to the areas where the computers are less demand or occasionally used.
Equipment will be replaced at the rate of 25 – 30 % each year allowing for 100% replacement over a four year period. The PC replacement plan is based on the categories of computers to minimize the college's expense and be as efficient as possible.

Categories of Computers

Categories	Description
High usage	Used all day, every day, multiple and high demand applications – Staff and administration
Moderate usage	Tenured faculty
Low usage	Single application, occasionally used or basic used included Kiosks, counters, adjunct faculty offices
High end lab	Multiple and high demand applications
Low end lab	Low demand application. Examples: writing, reading labs.

Action Items	Responsibility	Time line	Evidences/ Outcomes	Fund(s)
6.1.1 Adopt the computer standard from District Technology Committee (Appendix E)..	IT department			None
6.1.2 Establish an inventory of old computers to be	IT department			Title V,

replaced based on categories of computers table. The replacement will be based on ratio of 25 – 30 % each year.				Bond A/AA

6.2 In order to avoid future struggles and dissatisfaction with technology, the college needs to consider the Total Cost of Ownership (TCO); this included total purchasing price, periodic upgrades, maintenance, personnel costs, training, support, etc. in the evaluation of prioritization of technology-related projects and other requirements e.g. security, performance, control.   This requires all project proposals to identify three budgeting components: (1) Cost for development/implementation, (2) Operation/maintenance costs, (3) Upgrade/renewal costs

Action Items	Responsibility	Time line	Evidences/ Outcomes	Fund(s)
6.2.1 Include a form that accounts for the development and implementation, operation and maintenance, and upgrade, renewal costs of all IT proposals before approving proposal.	IT department	On going task		None

Goal #7: *To develop, review, and revise technology master plan, and related policies and procedures.*

Since technology is constantly changing and rapidly evolving, the Technology Master Plan must be continually monitored, evaluated, and revised to achieve the technology goals, objectives, and action items supporting our vision of technology and the college mission. A process shall be developed and implemented by the Technology and other Shared Governance Committees to review and update the Technology Master Plan based on the results of measurements and in response to the changing needs and goals of the college.

Objective:

7.1 Review and revise as necessary the computer and network use policies included web policies.

Action Items	Responsibility	Time line	Evidences/ Outcomes	Fund(s)
7.1.1 Tech committee reviews and revises the policies of the use of network services on academic and admin networks – See appendix F.	Tech committee	Spring and Fall 2010		
7.1.2 Adopt network access policy from District IT which was approved from District Administrative Committee - – See appendix G.	IT department Tech committee	Spring and Fall 2010		
7.1.3 Implement the new login procedure applying new network access policy.	IT department	Spring 2011		

7.2 Annual review and revise Technology Master Plan (TMP) process

Action Items	Responsibility	Time line	Evidences/ Outcomes	Fund(s)
7.2.1 Develop faculty, staff and student surveys to measure and monitor institutional effectiveness.	Tech committee Research office	Spring semester		
7.2.2 The reviewing and revising of Technology Master Plan is based on data gaterhering from survey outcomes, and the approved program review.	IT department, Tech committee	August calendar year		
7.2.3 Results of the TMP review are then relayed to appropriate committees for approval.	IT department, Tech committee	September calendar year		

C. IT Challenges

IT Funding

In the last four years, many services include core LAN/WAN infrastructure, Voice over IP/Unified communications, security, wireless networks, data center systems integration, and the demand of fast transmission, larger bandwidth have driven the college to improve network performance, while budget constraints limit the ability to invest in new hardware. In addition, the numbers of enrollment is anticipating growth to 15,000 in 2015. Many questions challenge IT ahead including what technologies can be implemented to assist in cost saving from increasing operational effectiveness and efficiencies; how IT management can prove return on investment in either short term or the long term; there are cost saving in the adoption of open-source solutions. The need of IT support for additional classrooms, labs in new buildings is another major IT component of IT costs and that personnel costs represent ongoing, increasing annual expenditures.

Network Security

Protecting the assets of an institution – intellectual property, infrastructure, network, and computer resources - becoming more important and more difficult with the rise in the number and sophistication of cyber threats and as the network evolves to accommodate distance education, on-demand courses, social networking and global collaboration. IT staff face increasing challenges around security agendas. Institution needs to develop and implement security infrastructure; create a culture in which security roles and responbilities aare understood. Faculty/staff needs to understand how to prevent breaches and how to address breaches when they occur. Students need to educate about the risks of social networking services. Security is not strictly an IT matter; indeed, it is a foundation of any institution and is everybody's responsibility.

Infrastructure and Cyber-infrastructure

Web 2, cloud computing, Internet 2, social networking are a few items of advanced computing which combined to the current infrastructure to create cyber-infrastructure. Unlike physical infrastructure, cyber-infrastructure has a level of volatility and change that is unprecedented in human history. There are important concerns for the near future education:

- o Education and educational technology use must keep up with ever-changing economic, social, and cultural needs.
- o Basic skills include not just mathematics and English but social networking technology.
- o Learning will take place both inside and outside the classroom in the context of real-world environment, interactive virtual environments, virtual resource centers, digital libraries, games, simulations, models. Opportunities for learning can occur in any place and at any time and it does not suddenly stop when a school bell rings or the semester ends.

In sum, college technology vision must be merged to cyber-infrastructure which is a comprehensive digital environment in the 21st century.

APPENDICES

APPENDIX A –

Campus Strategic Master Plan 2008 -2009

http://www.lamission.edu/budget/SMP.aspx

Technology Strategic Master Plan 2008 – 2013

http://www.lamission.edu/it/docs/tech-strategicplan-aug2008.pdf

APPENDIX B – Educational Planning document

http://www.lamission.edu/eduplanning/planningdocuments.aspx

APPENDIX C – Facilities Master Plan 2007 and 2009

http://www.lamission.edu/community/construction/

APPENDIX D – Technology Master Plan 2003

http://www.lamission.edu/facstaff/technology/docs/LAMC-TMP-2003.pdf

APPENDIX E – District Computer Standards 2009

APPENDIX F –

APPENDIX G – Warning to Network Users

http://www.lamission.edu/it/docs/Warning_to_Network_User.pdf