

# West Los Angeles College

## 2009 – 2016 Technology Master Plan

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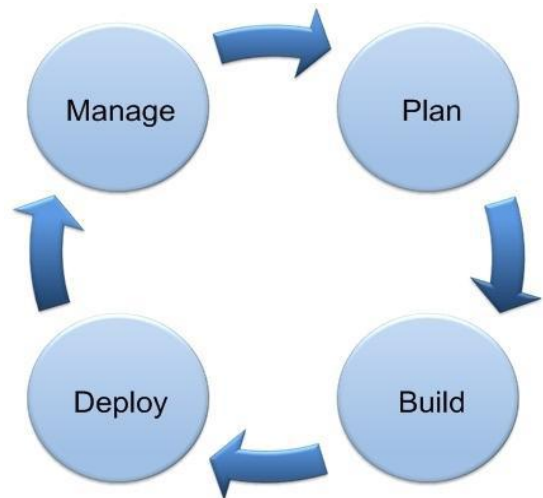
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# West Los Angeles College 2009 – 2016 Technology Master Plan

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## Technology Master Plan Committee Charge

The College charged the TMPC to deliver a Technology Master Plan based on the following central principles:

1. The TMP must use as its main guide and premise the current approved Educational Master Plan (EMP). The two plans must connect. The essence of the TMP is how it will advance the explicit goals of the EMP.
2. The TMP must therefore emphasize *academic computing*. That is, how will technology serve the achievement of our SLOs [Student Learning Outcomes]. The current organizational and administrative model for IT therefore needs to be reexamined.
3. The TMP will not be a series of abstract “state of the art” platitudes but a concrete identification of academic objectives and the technology required to achieve them.

(October 13 2008 Memo from the College President to the Academic Senate and AFT Faculty Guild President)

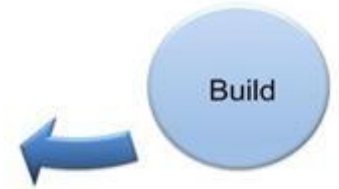
The requirements to support the five EMP objectives resulted in a goal-based TMP. The committee identified seven goals to satisfy those objectives. Each goal addressed a specific EMP objective from a technology perspective and then, the committee solicited recommendations to support those goals.

The TMP embraces the Internet and Web 2.0 technology. The need to inform, share, and collaborate is inherent to the college’s desire to enhance academic computing and Student Learning Outcomes. The college will continue its migration and dependency on Internet-based solutions. Clearly, the future of academic computing will be Web-centric.

The TMPC sought to satisfy the EMP objectives by providing discrete recommendations and solutions. Ideally, the college’s technology strategy should be to pursue a seamless, integrated environment of solutions. Such an approach will support growth, integrate workflows, and enhance recruiting and retention.

## TMP Core Goals

**Goal-1:** Identify and implement technology that can be used to improve student learning and preparedness for higher education and the workforce, focusing on assessment and orientation, study skills and access.



**Goal-2:** Plan, design, and implement technology to support Basic Skills initiatives, focusing on learning communities, effective registration, and computer-assisted instruction.

**Goal-3:** Identify and implement technologies to enhance the effectiveness of Vocational Education and Training Programs, focusing on supporting counselors, reaching pre-collegiate students, leveraging our existing technological strengths.

**Goal-4:** Identify and implement technologies to support various online instructional delivery methods, focusing on delivery of student services, supporting student communities, and enhancing the capabilities of our course management system.

**Goal-5:** Identify and implement technologies to support various on-campus delivery methods, focusing on the use of a campus-wide portal and standard “smart” classrooms.

**Goal-6:** Identify and implement technologies to support campus services and facilities.

**Goal-7:** Determine a standard technology configuration for Measure J-funded classrooms.

## TMP Core Strategies

### Strategies for Goal-1:

Identify and implement technology that can be used to improve student learning and preparedness for higher education and the workforce, focusing on assessment and orientation, study skills and access:



- **Strategy - 1.1:** Design and deploy technology to support required comprehensive orientation and assessment for all students by fall 2010.
- **Strategy - 1.2:** Develop technology-based solutions to enhance students study skills through tutoring, classes, and workshops.
- **Strategy - 1.3:** Deploy technology which encourages students to increase problem-solving skills by analyzing information.
- **Strategy - 1.4:** Address differentiated learning styles through the delivery of video, voice and written content.
- **Strategy - 1.5:** Encourage respect for the rights of others and highlight ethical issues in using technology assets.
- **Strategy - 1.6:** Expand student access to instructional resources and tools outside regular school hours and locations.

## Strategies for Goal-2:

Identify and implement technology that can be used to improve student learning and preparedness for higher education and the workforce, focusing on assessment and orientation, study skills and access.:

- **Strategy - 2.1:** Develop and implement technological solutions to manage basic skills enrollments.
- **Strategy - 2.2:** Determine and implement technology-based solutions to establish and support learning communities.
- **Strategy - 2.3:** Devise technology-based solutions to identify and recruit students who would benefit from Basic Skills enrollment.
- **Strategy - 2.4:** Expand computer-assisted instruction (including simulations) for basic skills and concepts.

## Strategies for Goal-3:

Identify and implement technologies to enhance the effectiveness of Vocational Education and Training Programs, focusing on supporting counselors, reaching pre-collegiate students, leveraging our existing technological strengths:

- **Strategy - 3.1:** Develop technology-based solutions to support counselors affiliated with vocational programs.
- **Strategy - 3.2:** Determine ways in which technology can be used to reach pre-collegiate students who may have an interest in a particular vocational career or who are considering vocational career options.
- **Strategy - 3.3:** Determine how our current technology can be leveraged to support new vocational programs.
- **Strategy - 3.4:** Determine, develop, and implement other technology-based solutions that will strengthen the effectiveness of various vocational programs.

## Strategies for Goal-4:

Identify and implement technologies to support various online instructional delivery methods, focusing on delivery of student services, supporting student communities, and enhancing the capabilities of our course management system:

- **Strategy - 4.1:** Provide technological resources students and faculty need in a robust online program.
- **Strategy - 4.2:** Determine ways technology can be used to support students with common interests or common educational objectives in electronic communities.
- **Strategy - 4.3:** Design and implement ways to offer student assessments, student counseling, library and financial aid services on line.

## Strategies for Goal-5:

Identify and implement technologies to support various on-campus delivery methods, focusing on the use of a campus-wide portal and standard “smart” classrooms.:

- **Strategy - 5.1:** Establish an infrastructure standard for “*smart*” classrooms.
- **Strategy - 5.2:** Train faculty to use classroom instructional technologies.
- **Strategy – 5.3:** Train students to use supplemental technologies to create class documents, presentations and assignments, and to learn collaboratively (e.g., ePortfolios, PowerPoint, Word, Online Research, GoogleDocs, wikis).
- **Strategy – 5.4:** Provide continuous technology-focused training programs for all employees.
- **Strategy – 5.5:** Improve technologies to assist disabled student learning. (e.g., closed captioning, large screens, voice recognition software).
- **Strategy – 5.6:** Create and maintain a campus-wide portal for faculty, staff, and students, which directs the users to specific, custom resources.

## Strategies for Goal-6:

Identify and implement technologies to support campus services and facilities:

- **Strategy – 6.1:** Establish a technology standard for departments and programs to support a multimedia, state-of-the-art campus environment that is flexible and adaptable as more effective technologies emerge.

## Strategies for Goal-7:

Determine a standard technology configuration for Measure J-funded classrooms:

- **Strategy – 7.1:** Implement classroom technology standards.



## Appendix-1: Suggestions & Recommendations

In producing the Technology Master Plan for West Los Angeles College, the Technology Master Plan Committee drew on expertise across the entire campus in an inclusive process that aggressively sought out wide-ranging feedback.

This process involved the following major elements:

- Established meeting schedule
  - To assure constituents participation and input from committee members.
  - Six meetings were scheduled from October to December of 2008.
- Decided approach to creating/developing the TMP
  - Based on EMP objectives
- Decided collaboration approach and tools
  - All committee members had the ability to make electronic contributions to the TMP draft in real-time use Google Docs.
  - All committee members used Google Discussion to facilitate TMP development.
- Established input and research sources
  - Electronic survey focused on faculty and staff was conducted
- Developed TMP template
  - The TMP template was revised over nine times.

Over 30 individuals offered suggestions and recommendations, often stemming from special expertise, specific technologies, and representing various professional points of view. These ideas are presented as Appendix-1 to the plan, grouped by goals and their corresponding recommendations. They are a resource to the college in implementing the Technology Master Plan over the next 7 years, providing starting points for further research and decision-making.

In addition, the recommendations also reflect responses from the 138 eSurvey participants.

**Goal-1: Identify technology that can be used to improve student learning and preparedness for higher education and the workforce:**

**Background/Overview -**

Well over 50% of West students take classes in basic mathematical and English skills. Many such students can benefit from additional basic skills instruction. This instruction needs to be flexible in time and location. Computer Aided Instruction (CAI) has been used to support basic skills courses in language arts and mathematics. Calculus instruction has been enhanced by the purchase of calculators through a grant. We should acquire more calculators. Online instruction and tutoring have used computer technologies to enhance and exercise core concepts.

- **Recommendation for Strategy 1.1: Determine ways that technology that can be used to deploy required comprehensive orientation and assessment for all students by 2010.**
  - Computer management Systems (CMS), (WebCT, Etudes, ADX, Aleks, MyMathLab, Eduspace, Moodle, etc.) allow individual delivery and personalized content at a time and place convenient for the student. The professor can keep in touch with the student (and vice-versa) almost 24/7 (at least in a BlackBoard based CMS) if so desired by both student and professor. Examples and algorithmically developed problems help students understanding of educational materials outside of the classroom.
  - Computer Aided Systems (CAS) like Maple and Mathematica, allow professors and students as well as professionals in the field graphs of complicated functions and solve tricky problems in calculus. Almost every field of mathematics can be queried in Mathematica. The graphing calculator is a poor student's limited CAS.
  - A system of clickers and a smart whiteboard can be used during class delivery to gauge student understanding of class content. A word of warning applies here. Students who become dependent on a CAS can reduce their learning capabilities to the detriment of intellectual advancement.
  - Desktop projection systems can deliver quick detailed examples and allow the professor to emphasize critical points instead of taking time writing on the board and erasing. A professor's lecture can be downloaded to a student's flash drive. Students can concentrate on understanding rather than focusing on taking notes. A professor's lecture can be channeled to special equipment for visually or hearing-impaired students. A system of individual student computers reporting to the professor's main station will duplicate the function of the clickers, but allow more functionality by permitting responses more sophisticated than mere true/false or multiple choice questions.

- **Recommendation for Strategy 1.2: Develop technology-based solutions to enhance students study skills through tutoring, classes, and workshops.**
  - Make use of the new Math building for tutoring through individual tutors, CMS programs (about three bought by the college), faculty office hours in the labs or tutoring centers. Content can be delivered on individual iPods, phones, blackberries, blogs, wikis, RSS, etc.
- **Recommendation for Strategy 1.3: Deploy technology tools to increase thinking and problem-solving skills by analyzing information.**
  - In medicine, programs are available to simulate diseases and test a student's medical acuity,
  - Make use of clickers or a system of student-to-professor computer software to gauge and strengthen the caliber of training and educational delivery.
- **Recommendation for Strategy 1.4: Address differentiated learning styles through the delivery of video, voice and written content.**
  - MyMathLab delivers through video/voice delivery of a lecture. The student can bring up a pertinent section of the textbook (the entire textbook is available electronically with additional buttons for audio/exercise/additional examples). Reworking similar examples (developed algorithmically) with immediate feedback enhances the creation of new neurons in the brain.
- **Recommendation for Strategy 1.5: Encourage respect of rights of others and ethical issues in using school technology assets.**
  - Responses through clickers or CMS are anonymous as far as other students are concerned.
- **Recommendation for Strategy 1.6: Expand student access to instructional resources and tools outside the regular school hours and locations.**
  - Allow faculty to hold office hours outside of the college walls. Grant flex credit for extra office hours outside of the college. Faculty can be on call through the telephone, through FAX, or e-mails, or instant chat. Faculty can respond to messages on discussion boards for the benefit of the whole class.
  - Websites like Hotmail, Yahoo, and Google allow for groups to be set up with individualized options like chatting.

## **Goal-2: Plan, design, and implement technology solutions to support Basic Skills initiatives:**

### **Background/Overview -**

The entering student population of West Los Angeles College includes a majority of students who need to improve in one or more areas of basic academic skills. Any impediments to accessing services are particularly frustrating for such students. Efficient, creative, and attractive curriculum delivery and support services such as enrollment and tutoring are vital to the energetic success, retention, and persistence of students who are in need of basic skills improvement. Since the majority of West's students fall into that category, the budget implications for the college are very significant. The more students West can attract, and then retain, the better the budget picture becomes. Investments in technology to support Basic Skills initiatives is a fiscally, and otherwise, wise strategy.

- **Recommendation for Strategy 2.1: Develop and implement technological solutions to manage basic skills class sizes.**
  - Auto-enrollment at the Learning Center or from any other access site via intra/internet portals makes it possible for students to sign up instantly for basic skills classes, be they Learning Center classes or others. Furthermore, faculty with laptops in regular classes could, once the wireless network gets built out, identify students who could benefit from basic skills coursework, whether they are credit or noncredit courses, and assist students enrollment into appropriate offerings on-the-spot in the classroom.
  - Expand online offerings of basic skills coursework to make the coursework more easily accessible. Students could work on their basic skills from anywhere, including anywhere on campus once the wireless network blankets, at any time, thereby removing transportation and time-conflict obstacles.
  - Expand noncredit basic skills offerings so that students could work on basic skills without incurring further fees, thereby removing any financial obstacle. Also, since no further fees are involved, faculty of any discipline could make basic skills work a required assignment, as long as the faculty has built in such a provision in the syllabus for the course.
  
- **Recommendation for Strategy 2.2: Determine and implement technology-based solutions to establish and support learning communities.**
  - Develop portal for intranet Plato CAI access to enable learning community students to access the existing credit and noncredit basic skills curriculum from classrooms, the library, or any place on campus that has wi-fi or intranet capabilities.

- Provide computer equipment to facilitate workshops/lab-style instruction. Some of the most powerful basic skills learning occurs in non-traditional environments, be it a supportive laboratory setting where students can work at their own pace under guidance from faculty and other assistants and other students, or be it a workshop focused on a single skill or a series of such workshops progressively developing student skills.
  - Expand online tutoring program and staff. As remote access to basic skills curriculum grows, so too must grow vital tutorial support accessible from wherever the learning community students happen to be. A further benefit will be that students who are not members of formal learning communities could still access tutorial support remotely. Pilot programs are currently in place through the Learning Center to support general subjects such as basic- and non-basic skills levels of math, Spanish, political science, and writing (OWL – Online Writing Lab). However, the pilot programs have limited staff and hours, and will need to be expanded to support what will be growing demand.
  - Provide support technology such as projectors, smart boards, symposiums, mobile laptop carts, etc. Cutting-edge, creative curriculum delivery as envisioned and practiced by the learning communities requires an adequate variety and quality of equipment, carefully selected to be able to be reconfigured to accommodate emerging methodologies and the evolution of co-partnered technology.
  - Provide wi-fi access campus-wide. This is a fundamentally important technological infrastructure improvement for the campus overall as well as for the learning communities.
- **Recommendation for Strategy 2.3: Devise technology-based solutions to recruit and increase student enrollment during the registration period.**
    - Utilize campus technology to facilitate Basic Skills registration: use web auto-tracking system to monitor enrollment in basic skills courses, implement a student referral system to recommend enrollment in basic skills courses (counseling, assessment department, or faculty referrals), implement card swipe system to facilitate enrollment process in basic skills labs.
    - Advertise current courses and services through Basic Skills college webpage, podcasts through iTunes U site, and student-oriented, social networking sites. Create and use multimedia presentations in key student contact areas, offsite at high schools, malls, etc., that inform and educate students on what Basic Skills are and why they are necessary to be successful in college. Provide electronic link to enrollment website.

- Implement student campus email system. Use email marketing to faculty, staff, and students. Provide Basic Skills email address as managed point of contact.
  
- **Recommendation for Strategy 2.4: Basic skills and concepts developed through simulations and computer-assisted instruction.**
  - Develop and support current CAI Program (Purchase additional student computers and furniture for Learning Resource Center, purchase additional Plato CAI licenses with updated software, develop portal for intranet Plato CAI access, implement re-configuration of Learning Resource Center facilities to support expanded student use and course offerings, including a Basic Skills computer classroom.)
  - Develop and support current use of simulation technologies to deliver Basic Skills instruction (purchase Smartboards and accessories for classroom and campus tutoring sites, purchase technologies to support online instruction and online tutoring simulation, utilize flat panel TVs and projectors to deliver multimedia presentations)
  - Develop additional credit and noncredit and online offerings of basic skills curriculum (develop and implement lab/courses/staffing focusing on Reading and ESL deficiencies, develop and offer noncredit and online options to access Basic Skills supplementary instruction, expand Basic Skills offerings across the curriculum and create discipline-specific basic skills supplementary material.)
  - Develop and implement a Basic skills Instructional Technology plan to guide and evaluate ongoing Basic Skills Technology use on campus.

### **Goal-3: Identify technologies to enhance the effectiveness of Vocational Education and Training Programs:**

#### **Background/Overview -**

- The EMP outlined several objectives related to the college's vocational training programs. Those objectives were articulated in Goal-3. Although vocational training at the college is various and diverse, the TMP attempted to find common improvements, when feasible, that could be applied to all vocational programs. Benefits derived from this approach would be:
  - Leveraging the development and implementation cost of such improvements
  - Web-based solutions for training programs would be seamless
  - End-user training would be standardized

The TMP does not address the unique equipment requirements within a vocational program. It is clear that unique requirements shall be addressed at the division level.

- **Recommendation for Strategy 3.1: Determine, develop, and implement technology-based solutions that will improve the effectiveness of the various vocational programs.**
  - Incorporate the use of technology wherever it proves to be efficient and cost-effective. Over 90% (CDW Government study) of vocational and technical students expect technology to be used in their training or support of their training. The study documents the direct relationship between student retention and loyalty when the vocational program meets students' technology expectations.
  - Specific recommendations are:
    - Utilize web-seminars, webcasting and podcasting tied to technical presentations:
      - Allow students to view experts in the field in real-time
      - Keep students current with latest industry trends
      - Create podcasted lectures that can be replayed multiple times
    - Incorporate computer-based training and simulation technology
    - Establish technology-based student services from a student perspective
    - Foster a sense of community:
      - Consider e-newsletters to enhance the student experience
      - Implement "Twitter-like" technology to push out relevant announcements and updates to mobile devices
    - Conduct e-surveys to monitor student satisfaction and to solicit feedback
    - Establish RSS feeds from related industry web-sites to maintain currency

- **Recommendation for Strategy 3.2: Develop technology-based solutions to support counselors affiliated with vocational programs.**
  - Specific recommendations are:
    - Create a Wiki (a page or collection of Web pages designed to enable anyone who accesses it to contribute or modify content, using a simplified markup language) to support vocational programs
      - Wiki will provide current curriculum information
      - Individual programs can assure content reflects their curriculum
      - Self-supported environment can assure content is updated and accurate
    - Consider the creation of student portals at program or college level
      - Portals track student's intended and completed course work
      - Counselor can monitor, view, and advise based on progress-to-date
  
- **Recommendation for Strategy 3.3: Determine ways in which technology can be used to reach pre-collegiate students who may have an interest a particular vocational career or who are considering vocational career options, in general.**
  - Specific recommendations are:
    - Used targeted electronic mailing lists
    - Participate in related chat rooms
    - Post entries on all major social networking websites
      - MySpace, Facebook, etc.
    - Develop multi-media promotional material on CD/DVD



- **Recommendation for Strategy 3.4: Determine how technology can be used to create new vocational programs.**
  - The Cisco networking vocational program previously purchased hardware technology to prepared students for Cisco Certified Network Associate (CCNA) certification. It has been determined that this existing equipment could be upgraded to facilitate training students for the Cisco Certified Network Professional (CCNP). The CCNP certification is one of the most in-demand industry certification. Benefits derived from this upgrade would be:
    - Creation of four new training courses
    - Expansion would occur without additional instructors
    - Increased enrollment from 62 to 185 students annually
    - Uniqueness of program creates marketing opportunity
  - Specific recommendations are:
    - Purchase/upgrade to support Cuatro Router Pod (CRP)
    - Purchase/upgrade to support Cuatro Switch Pod (CSP)

#### **Goal-4: Identify technologies to support various online instructional delivery methods:**

##### **Background/Overview -**

Educational technologies allow us to improve our ability to teach students successfully and to reach students who might otherwise go unserved. We need to leverage technology effectively in terms of both our instructors' ability to teach with it and our students' success in learning from it. The many educational technologies which we use in the traditional classroom setting are addressed elsewhere in this document. Here we focus on the tools we can use to ensure that online course delivery is just as, if not more, successful than its face-to-face counterpart.

- **Recommendation for Strategy 4.1: Provide technological resources students and faculty need in a robust online program.**
  - To support the unique needs of students we must have ubiquitous computing here on campus. This means sufficient computer labs accessible to students with fast Internet connections and which are up-to-date with the latest software. We must also have wireless access throughout the entire campus. These are prerequisites for our growing online learning programs.
  - The foundation of our online courses is the ETUDES learning management system platform. The course management system; ETUDES provides us with the basic tools necessary to deliver online courses. To be truly successful we must go above and beyond the basics of a purely text-based delivery approach to create courses that also include images and audio files whenever possible. As bandwidth permits we will also incorporate video files. These multimedia methods of delivery are integral to creating a robust student learning experience. We must encourage and provide support for our instructors to learn the skills needed to create courses of this caliber. We must also provide sufficient orientation to students so that they may succeed in utilizing these online course materials.
- **Recommendation for Strategy 4.2: Determine ways technology can be used to support students with common interests or common educational objectives in electronic communities.**
  - To support students with common interests or educational objectives we will catalyze the ways that technology can be used to support students with common interests and common educational objectives. Most of these fall under the umbrella of technologies called “Web. 2.0.”

- Technologies which we will utilize towards the goal of creating communities of practice and facilitating communication amongst students include:
  - Instant Messaging (IM) and Internet Relay Chat (IRC)
  - Blogs – Web logs
  - Vlogs - Video web logs
  - Wikis
  - Webcasting
  - ePortfolios
  - Social Networking (e.g. MySpace, Facebook)
  - Social Bookmarking
  - Virtual Reality Environments (e.g. Second Life)
  - Podcasting
  
- **Recommendation for Strategy 4.3: Design and implement ways to offer student assessments, student counseling, library and financial aid services on line.**
  - Develop and offer online assessment services with proctored exams.
  - Expand online counseling services to include online chat and electronic student education planning.
  - Provide online library reference service. Create additional online tutorial modules on the use of library resources and research papers. Develop federated searching in which all of the library's resources (online databases, eLibrary, regular library catalog) can be searched through a single unified interface. Expand online matriculation and financial aid services to include online discussion boards and scheduled hours for online chat.

## **Goal-5: Identify technologies to support various on-campus delivery methods:**

### **Background/Overview -**

- **Problem: How do we integrate technology into classroom-based instruction to increase access to information and enhance student learning while maintaining a technology standard?**

Historically, only a core group of interested faculty has made use of instructional technology resources and training in order to enhance their teaching. Many faculties, in fact, make no use of these technologies at all, as indicated by the November 2008 Technology Survey implemented by the TMP Committee. To date, there are less than five Smart Classrooms on a campus that serves over 12,000 students. There is no established technology standard for classrooms, nor maintenance plans for existing equipment. Finally, there is no standard for instructional delivery technologies or for student learning technologies.

- **Recommendation for Strategy 5.1: Establish an infrastructure standard for “smart” classrooms.**
  - Encourage collaboration between faculty, administrators, and library personnel to ensure that all students have access to the same instructional technologies.
  - Experiment with emerging technologies by means of trial memberships/licenses and partnerships with agencies, vendors, and colleges.
  - Establish physical classroom space that facilitates all pedagogical styles and instructional delivery methods.
  - Develop a program and budget plan for upgrading/replacing technology and other equipment on a regular cycle.
- **Recommendation for Strategy 5.2: Train faculty to use classroom instructional technologies.**
  - Encourage, support, and eventually require all faculty to maintain a course website (through ADX or other web-based tools) to benefit students and reduce teacher paperwork.
  - Train faculty to use computer-assisted instructional technologies (e.g., PLATO, Course Compass.)
  - Identify and implement technologies to facilitate individualized instruction and monitoring assessment (e.g., ETUDES or other course management system.)
  - Develop an “Orientation to Instructional Technology and Resources” for new faculty and staff.
  - Train faculty in legal and ethical awareness of sharing intellectual property and other digital content among students, faculty, and staff.

- **Recommendation for Strategy 5.3: Train students to use supplemental technologies to create class documents, presentations and assignments, and to learn collaboratively (e.g., ePortfolios, PowerPoint, Word, Online Research, GoogleDocs, wikis).**
  - Develop an “Orientation to Instructional Technology and Resources” for new students.
  - Develop classes for students such as “ePortfolio Creation,” “Graphing Calculator Technologies,” etc. (Math, Science)
  - Require all students to enroll in CS901 and similar classes for application proficiency in Microsoft Word, Excel, PowerPoint, etc.
  - Survey students to identify priority needs for additional technology training.
- **Recommendation for Strategy 5.4: Provide continuous technology-focused training programs for all employees.**
  - Familiarize faculty with online resources for curriculum development (e.g., LACCD’s Electronic Curriculum Development System, MERLOT).
  - Communicate with faculty to determine curriculum needs and offer workshops that address the needs.
  - Support collaborative sharing of curriculum ideas through social networking tools such as GoogleDocs, GoogleGroups, etc.
  - Survey faculty and staff to identify priority needs for technology training to enhance professional development.
  - Support release time and tuition incentives for employees to benefit from available technology training opportunities.
- **Recommendation for Strategy 5.5: Improve technologies to assist disabled student learning. (e.g., closed captioning, large screens, voice recognition software).**
  - Provide at least a minimum set of assistive technologies for disabled students.

- **Recommendation for Strategy 5.6: Create and maintain campus-wide portal for faculty, staff, and students, which directs the users to specific, custom resources.**
  - Develop a portal system where faculty can log-in and access department-specific syllabi, course outlines, SLOs, sample assignments, computer software, online resources (e.g. Course Compass, MERLOT)
  - Provide via portal inventory and locations of physical campus resources such as which computers have which programs (computer-assisted instruction, simulation software, computation software, voice recognition, adaptive technologies).
  - Provide ongoing and current information on the portal to all employees about available technologies, training, and campus information

## **Goal-6: Identify and implement technologies to support campus services and facilities:**

### **Background/Overview -**

- **Problem: How do we facilitate communication between faculty, staff, and students to support campus services?**

Historically, campus services focused on enabling staff who in turn provided services to students. Furthermore, communication between campus service providers, departments, and students has been inconsistent and inadequate. The needs of perspective, current, and former students must be fully integrated into a self-service model, which requires addressing the needs and expectations of a diverse and changing population.

- **Recommendation for Strategy 6.1: Establish a technology standard for departments and programs to support a multimedia, state-of-the-art campus environment that is flexible as new and more effective technologies emerge.**
  - Partner with the National Student Clearinghouse to offer students the opportunity to request transcripts and verifications online.
  - Expand agreements with CSUs and UCs for electronic transcript submittals.
  - Purchase Connect Ed automatic call software in order to alert students to closed classes, registration dates, schedule changes, or anything else of interest. This is both an outreach and enrollment management tool with more flexibility, speed and capability than the current SARS system.
  - Research the cost for an “Amazon.com style” program to suggest course alternatives to students whose classes have been cancelled.
  - Design a website specifically for veterans to provide information and services for students claiming benefits under a veteran’s program.
  - Build a “cradle to grave” infrastructure for non-F-1 visa international students who are interested in an online AA degree. This infrastructure would include online orientation, counseling support, registration, assessment and admissions advisement. More specifically, this infrastructure would include an “echat” system for real-time counseling, transfer and admissions advisement and an online international student application from CCC apply. Echat can also be used for advisement for non-international student populations such as veterans.
  - Scan and electronically store all appropriate admissions and records documents so that student records are safe and easy to retrieve.

- Continue with the “Degree Works” project that will permit students to engage in self-service counseling. Degree Works users are able to gauge their time to degree or certificate completion, and may track their completion time under a variety of different hypothetical scenarios, such as a change of major.
- Along with the expansion of self-service online options for students, the expansion of computer self-service stations with student assistants.
- Redesign of the online fee payment system in SIS to improve reconciliation problems and to create the capability to calculate transcript and verification processing fees.
- Purchase scanners so that signatures can be more easily used on forms, certificates and diplomas, so that forms can be updated for online use, and so course descriptions can be emailed rather than faxed or mailed.
- An electronic faxing system that converts faxes into digital images that can be forwarded via email.
- Collaborate with the LACCD to implement an early alert program for students.



## **Goal-7: Identify how Measure J funds will support academic computing:**

### **Background/Overview -**

- Los Angeles Community College bond election, also known as Measure J or Local Community College Classroom Repair, Public Safety, Nursing, and Job Training Measure, took place on [November 4, 2008](#) in [Los Angeles, CA](#).
- Measure J was approved on November 4, 2008. It required a fifty-five percent (55%) vote for passage, and it got 69.43%.
- Measure J authorizes the community college district to issue \$3.5 billion in bonds at legal interest rates.

Measure J intends to prepare students for jobs by improving classrooms, laboratories, equipment; train nurses, police, firefighters, paramedics; increase apprenticeship training opportunities; repair electrical wiring, plumbing, fire alarms; improve earthquake safety, energy efficiency to reduce costs; acquire/improve real property.

### **Recommendation for Strategy 7.1:**

- In regards to Measure J, \$12 million dollars, or a portion thereof, has been targeted for classrooms to support academic computing.
- **The committee and its related sub-committees recommend classroom technology standards as a proven way to improve the academic computing environment of the college.** In addition, classroom standards are Measure J compliance and will create an efficient, equitable teaching environment in which every instructor can walk into every classroom knowing what teaching technologies to expect and how to use them.
- These standards represent the baseline for general purpose classroom technology. There is recognition and agreement that some departments have unique requirements that cannot be met or addressed by the proposed classroom technology standards.
- The classroom technology standards make no attempt to decide upon or limit exceptional technologies, present or future, for exceptional teaching requirements.

- **Classroom Technology Standards** – will assure classrooms can support multimedia-based lectures. Classroom technology will also give instructors the ability record lectures, as well.
- Classroom Configuration:
  - The development of a secured modular and mobile SmartBox (teaching station) consisting of:
    - Desktop or laptop computer
    - Wireless keyboard, mouse, and microphone
    - High resolution Web cam and possibly Document camera
    - Blu-ray DVD player
    - Support for CD-RW, HD DVD-RW, and possibly legacy VHS
    - Both wire (Gigabit speed) and wireless Internet connectivity
    - Smart control system e.g. wireless remote keypad
    - Media support for: flash memory cards
    - I/O support for:
      - USB flash drives
      - ExpressCard and/or PC Cards
      - Smartboard, Documents
      - MP3 players and/or iPods
  - Fixed data/video Hi-resolution projection capability
  - Sound system
  - Adjustable classroom lighting capabilities
  - Wireless student networking
  - Whiteboards and Smartboards

## Appendix-2: Network and Technology Infrastructure

West Los Angeles College working with Los Angeles Community College District intends to build a robust and sustainable technology infrastructure that can accommodate the rapidly evolving needs of the students, faculty and staff with an ability to accommodate emerging demands and new technologies. (January 5, 2009 LACCD Strategic Plan)

The WLAC network and technology infrastructure will embrace the following fundamental design goals:

- **Scalability** - to assure our network can grow to include new user groups and remote sites and can support new applications without impacting the level of service delivered to existing users.
- **Availability** – to deliver consistent, reliable network performance, as needed by the college.
- **Security** – the campus network and technology solutions will adopt best practices as it relates to network access, physical security, and data protection.
- **Manageability** – IT staff will be able to manage and support the technology infrastructure in the most cost efficient and effective manner.
- **Open Architecture** – to accommodate multi-vendor, multi-product environment
- **Total Cost of Ownership** – to assure that all associated costs, related to technology, over a given time period are considered during acquisition. This will also include; upgrades, contracts, and licensing.

## Appendix-3: TMP eSurvey - Conclusions and Interpretations

- An online survey was conducted over a nine day period from November 18, 2008 to November 27, 2008. The target goal for participation was approximately 150. At the conclusion of the survey over 138 responses were collected. Survey participants included; faculty members, classified employees who work directly with students, and campus administrators.
- **The survey was conducted in an attempt to determined and assess the following:**
  - The overall utilization of technology in support of academic computing and student services.
  - The dominant technologies used within the college environment.
  - The effectiveness of technology in its usefulness to help students or solve student related issues.
  - The problems associated with using existing technology in perspective areas.
  - Suggestions related to identified problems.
- **Survey's major conclusions:**
  1. Survey results indicated that technology and its use is prevalent throughout the college. All participants stated that computers are used within their area, department, and/or discipline.
  2. Approximately 77% of the participants indicated that their students are using computers to complete or perform related course work or access college related information.
  3. Over 86% of the participants found computers and its related technology to be very useful in helping them work with students or solve student related issues.
  4. Nevertheless, over 49% of the participants felt that there were not enough computers or access to technology to meet requirements related to delivering student services.



5. Approximately 40% of the participants indicated their use of some distance learning software. Over 32.8% were using ETUDES and 6.7% were using some other distance learning course management system.
6. Technology related to multimedia, animation, podcasting, and Web 2.0 is significantly under-utilized at the college.
7. Approximately 20.2% of the participants felt that their classroom is not suitable to support the existing technology they are using.
8. Participants expressed several suggestions related to identified problems:
  - Over 90% of the participants agreed or strongly agreed that more on-campus training would be beneficial.
  - Approximately 44% of the participants believe that a technology-based newsletter would be helpful.
  - Over 46% agreed that additional on-line training would be helpful.
  - Over 61% strongly believe the existing technology should be simpler and easier to use.
  - Over 52% strongly agreed that our existing technology needs to be more reliable.
  - Over 46% strongly agreed that technical support needs to be improved.
  - Approximately 54% strongly agree that existing classrooms and facilities need to be retrofit to support technologies.
9. Participants clearly expressed the desire to have more technology in their classroom and work areas. Some examples are:
  - Over 39% would like to have access to high-speed color printers.
  - Over 44% would like to have access to document scanning technology.
  - Approximately 40% of the participants would like to have a Web 2.0 training labs for instructors.
  - Over 41% would like to see support for Web 2.0 applications.

- **Survey interpretations:**

1. The college is clearly using computers and related technology to support academic computing and student services. But, the survey's results indicate that this is a "*work-in-progress.*" Current efforts are fragmented and decentralized.
2. The college faculty has clearly embraced distance learning as a course delivery method.
3. The college needs to address its deficiency as it relates to the number of computers available and technology access, respectively. The campus migration to wireless technology may help to address the latter.
4. The college needs to continue to address technology training as it relates Web 2.0 applications.
5. The college needs to address and standardized classroom technology standards. Goal-7 related to Measure J proposes possible standards.

- **Survey results can be viewed at the following link:**

- [http://www.surveymonkey.com/sr.aspx?sm=LD6adnCdQN7a4CJMN\\_2bbF4xAiqA1CKQ3QsCCUIR\\_2buBU4\\_3d](http://www.surveymonkey.com/sr.aspx?sm=LD6adnCdQN7a4CJMN_2bbF4xAiqA1CKQ3QsCCUIR_2buBU4_3d)