



# Technology Master Plan

2010-2015



# **Foothill College Technology Master Plan, 2010-2015**

**Draft November 9, 2010**

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**Purpose, Mission and Function of the Technology Master Plan**

The Foothill College Technology Master Plan creates the foundation for college-wide decision making and goal setting for technology planning, purchases, implementations, and policy-making. Through the input of college program reviews and the resource request process, the plan also identifies college priorities for technology purchases and implementations. This information then informs the Foothill-De Anza Community College District Technology Plan.

The Mission of the plan is to improve student learning, engagement and retention and organizational innovation, entrepreneurship and efficiency, through the use of technology. The Technology Plan is an integral part of both the Foothill College Integrated Planning and Budget Process and the Foothill De Anza Community College District Master Plan. The plan is informed by program review plans completed at Foothill College and through the shared governance process of the Tech Task Force, and the Planning and Resource Council (PaRC).

As a community of scholars serving a diverse population of students, Foothill College uses technology to provide access to outstanding educational opportunities, to facilitate access to services and resources and to support and improve student learning and success. The technology plan describes how we use technology to support our goals as defined by our college mission.

The technology plan outlines our planning process for technology purchases and acquisitions, our way of assessing the technology needs of faculty and students to support learning, and identifies how we support faculty and students through training and in the use of the technologies the college and district adopt and support.

Understanding that predicting future technology needs is an imprecise science due to the quickly changing nature of the industry, we endeavor through this plan to position ourselves to meet the needs of the future, in terms of emerging trends and new technology.

## **Vision and Goals for 2010-2015**

Foothill College begins its technology plan with the following vision and goals for 2010-2015. Understanding that this plan is intended to provide a general framework for defining institutional planning and organization around technology, we seek outcomes that improve student learning and improve our overall college operations. Through the processes and activities outlined in this plan, we seek to accomplish the following goals in the next five years:

### **Draft Technology Goals for Foothill College 2010-2015**

1. Deploy technology to create a more dynamic learning environment;
2. Meet students' expectations for access to informational resources, the Internet and support for computing devices;
3. Provide high-quality learning environments supported by technology
4. Reach the cutting edge of higher educational computing and technology deployment to support students;
5. Offer the highest quality online learning tools/systems for students and faculty;
6. Ensure all students have access to technology to provide student equity in the learning environment.

## **Master Plan Overview**

The Foothill College Technology Master Plan 2010-2015 defines how technology is integrated with college-wide planning processes, how the college makes decisions around technology purchases and implementations and how the college uses technology as part of a high-quality learning environment, to support student achievement and student success. This plan is an appendix to the Foothill College Educational Masterplan, and to the Foothill-De Anza Community College District Educational Technology Services (ETS) Master Plan.

1. Introduction: Foothill's goal of leadership in technology innovation in higher education and vision for the role of technology in supporting an innovative and inspiring learning environment for students—Our past accomplishments, current initiatives and goals for the future.
2. The integration of technology planning and decision making into the Foothill Strategic Planning Process—The Tech Task Force and its role in the integrated planning model at Foothill College. How program review and institutional planning form the basis of college priorities for technology implementations, acquisitions and initiatives. The role of the District technology organization and how it supports college activities, and how the college interacts with and informs district priorities.
3. Technology and its Role in Supporting Student Learning at Foothill College. Distance Education and the Foothill Global Access program.
4. Infrastructure and Organization: How Foothill creates and maintains a technology infrastructure that is consistent, safe, and reliable.
5. Training: how Foothill and the District technology organizations train its students, faculty and staff on the technology it supports.
6. Assessment: How Foothill College ensures that technology needs of students, faculty and staff are identified and met through surveys, program planning, SLOs, AUOs and other methods.
7. Priorities and Positioning for the Future: A brief overview of current project priorities and how we position our college to meet the needs of the future.
8. Appendixes and related documents: Distance Education Plan, District Technology Survey.

# Executive Summary

## 1. Introduction and History

Since its founding in 1957 with the mission of “Educational Opportunity for All” Foothill College has sought to create a new standard in community college higher education. Located in the heart of Silicon Valley, several miles from Stanford University and techno-historical sites such as the Palo Alto garage where Bill Hewlett and Dave Packard founded HP in 1939, Foothill College has always included technology as an integral part of the learning and teaching environment. In 1995, Foothill College faculty member Michael Loceff, authored the first online class taught in the California community colleges, Programming in C++. Later, Loceff would help create Foothill’s own course management system, Etudes (Easy To Use Distance Education System).

Through the support and innovation of Foothill faculty members, Foothill quickly became the Bay Area leader among community colleges offering online classes. Under the leadership of President Bernadine Fong, Foothill continued to innovate in course management system, in 2003 entering into a partnership in the Sakai Project with Stanford University, an open source course management platform. Foothill online classes were migrated in 2005 from Etudes Classic to Etudes-NG (Sakai platform), providing a new level of support and service to faculty and students. Under the leadership of Dean of Technology and Innovation Judy Baker, Foothill continues to offer the most robust selection of online classes among Bay Area community colleges, and through the support of the Hewlett Foundation, has emerged as a national leader in the support and development of open education resources, commonly known as open-source textbooks.

Measure C: In 2006, voters in the Foothill-De Anza Community College District approved Measure C, a \$490 million bond to support new construction, renovation, and funds to upgrade district technology. The bond funds have enabled Foothill and De Anza to meet the needs of students, faculty and staff in terms of classroom technology, personal computing and technological infrastructure, in a way it never could before. As part of this funding, in 2009-10 the Foothill-De Anza Community College District was able to replace its aging enterprise resource program SIS+, with Banner, an ERP product offered by Sunguard Higher Education. The Banner implementation process continues in Fall 2010, and resources have been stretched thin as new registration, finance, human resource and portal systems have been implemented to date.

In 2010, Foothill College is well positioned to meet the needs of the future as it looks to the completion of its wireless network across campus, the renovation of classrooms not completed under Measure E, the construction of the new Physical Sciences and Engineering Complex beginning in Fall of 2011 and the upgrade of existing classrooms with high-quality audio visual and instructional computing. The college just recently updated its entire website, and is looking to include mobile computing devices in its strategy to push information to students, faculty and staff.

## 2. Technology and the Strategic Planning and Budget Process

Foothill integrates technology planning with college planning through its institutional planning model and through its primary technology-based shared governance committee, the Technology Task Force. The Tech Task force is chaired by the Associate Vice President of External Relations, The Dean of Technology and Innovation, the Academic Senate representative and the Classified Senate Representative. The college has a Distance Education Advisory Committee, to address distance education specifically. This will be outlined in section three.

In the 2009-10 academic year, Foothill College implemented a new integrated planning and budgeting model, to improve college-wide participation in the planning process and to align program review, student learning outcomes and assessment, with the decision-making and budgeting groups on campus. The new structure includes the Planning and Resource Council (PaRC) as the ultimate authority for college planning and decision-making. The PaRC is made up of representatives from college governance groups including the Academic Senate, Classified Senate, employee unions and representatives from instructional and student services working groups such as the Basic Skills Task Force, the Transfer Advisory Committee and the Workforce Advisory Group.

**2a. The Technology Task Force:** How college needs are identified, communicated and prioritized and how college decisions about technology purchases, services, facilities, and hardware/software standards are made in the integrated planning model.

The Technology Task Force (TTF) is an auxiliary shared governance group that reports to PaRC and includes membership from the Academic Senate, Classified Senate, District ETS organization, administration, distance education representatives, faculty and staff technology practitioners and specialists. In addition to this college-based group, the Vice Chancellor of Technology for the Foothill-De Anza Community College District, convenes a district-level technology committee, named the Educational Technology Advisory Committee (ETAC), which includes membership from all employee groups and the chairs of the TTF.

Under the authority of PaRC and under the guidance of the District Technology Organization ETS, the TTF provides a forum for informing overall District technology planning, supervises and is responsible for drafting the college technology plan, decision-making and goals, and creates a forum for college decision making, planning, and vetting issues and requests for technology.

The Tech Task Force addresses the following issues and tasks on an ongoing basis:

- Individual faculty and staff computers including replacement, priorities and hardware/software standards;
- Classroom technology needs including instructor computing and audio visual hardware standards, priorities and planning;
- College website and web technology needs; requests for new technology implementations and purchases beyond regular classroom and individual computing needs;
- College priorities related to district-wide technology projects and implementations.

**2b. How college needs for technology, and new initiatives emerge through the program planning process.** The TTF is the primary organizational element at Foothill College that is used in the identification and assessment of technology needs. It works with the district's central services technology organization, Educational Technology Services (ETS), to gain an understanding of the full scope of technology needs and issues. ETS conducts surveys, elicits input from ETAC, and develops analyses of system performance to understand the needs of the colleges.

The college identifies, communicates and articulates its needs and requirements for technology services through the TTF. The TTF identifies technology needs by participating in and reviewing the college's strategic plan, through analysis of program plans of academic and administrative departments, and by soliciting input from its members in committee discussions.

#### ***Priorities Defined in 2009-2010 Academic Year***

During the 2009-2010 Academic year, the following priority projects emerged from the program planning process (In equal priority order).

**Priority 1:** Complete the college-wide wireless implementation at Foothill College.

**Priority 2:** Implement a consistent standard for classroom multimedia technology so each classroom is equipped with a basic level of instructional technology.

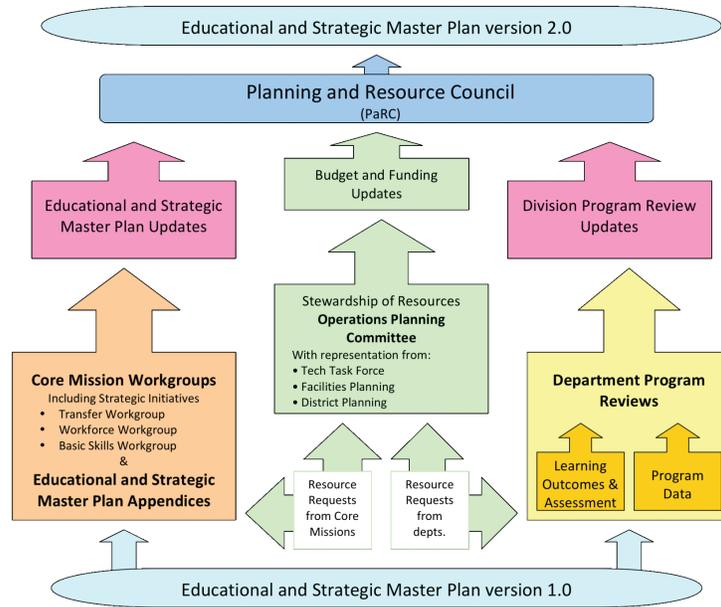
**Priority 3:** Complete Banner implementation and successfully train staff and students in its many operations and functionality.

These priorities have been communicated to the ETS organization to inform the overall district technology plan, and to the campus community, so that students, faculty and staff understand the college-wide priority for work to be completed in the 2010-2011 year.

#### ***2b1. Defining our resource allocation model for technology and role the Tech Task Force plays in recommendations to the Planning and Resource Council (PaRC) and the Operations and Planning Committee (OPC).***

In the governance structure of the college, the TTF serves as the primary channel to the PaRC, for recommendations on new technology implementations, major purchases of new technology and for policy recommendations and approvals. For instance, technology needs that are identified through individual program review documents, or technology needs that are identified through divisional program reviews, through college-wide needs discussions involving technology that occur, would first be aired in the TTF for review, feedback, investigation and recommendation to both PaRC and the ETS organization. Examples include the need for a new email system for part-time faculty, or the need for a new custom software application to document lab hours in the tutorial center. These types of requests would channel through the TTF for evaluation and recommendation to the PaRC and the Operations and Planning Committee, the budget arm of PaRC.

The TTF will work with the OPC to consult on budget issues related to technology and to receive and review any technology related resource requests that come to PaRC outside the direct channel to the TTF or that are identified in program review documents that flow through by the OPC and the TTF.



In addition, the TTF serves as a forum for monitoring the progress of ongoing technology support operations, and for ongoing implementation projects, such as routine computer updates for faculty and staff, classroom audio-visual upgrades and related standards, and the campus-wide wireless implementation. The TTF monitors and sets priorities for classroom technology updates and installations funded by Measure C, and for employee computing needs and updates, as funded by Measure C. These activities are done in concert with the ETS departments and staff responsible for servicing, purchasing and installing the equipment.

For systems and services provided by ETS, such as the district-wide network, the Banner ERP system, and other critical IT functions, the TTF communicates these needs to ETS, who works with representatives of the college to define requirements and develop solutions.

\*\* (Insert/create flow chart showing program review and resource request cycle with TTF, OPC and PaRC.)

### **2c. Foothill-De Anza District Educational Technology Advisory Committee**

Technology needs are brought forward by the TTF to the Educational Technology Advisory Committee (ETAC) committee. The ETAC committee has primary responsibility for developing a district strategic plan for technology and monitoring the ongoing implementation effort aimed at achieving the goals of this plan. ETAC is a participatory governance committee at the district level designed to be as inclusive as possible of all constituency groups (administration, faculty, staff, and students) from both college campuses and district central services.

The ETAC committee:

- Makes specific recommendations to the Chancellor’s Advisory Council on the use of technology throughout the district with regard to both ongoing activities and future direction.
- Keeps informed about the current activities and future plans in each of the technology areas: Infrastructure, Information Systems, and Client Services through the appropriate ETS managers and its own subcommittees.
- Monitors the operations, special projects, and overall budget of the Educational Technology Service (ETS) staff in an ongoing effort to have a comprehensive overview of the entire technological effort in the district.
- Assesses policy on matters such as intellectual property rights, appropriate use of technology, and standards.  
(\*Insert district organizational structure chart?)

## **3. Technology and its Role in Supporting Student Learning at Foothill College. Distance Education and the Foothill Global Access program.**

In creating a dynamic learning environment for students and a high-quality working environment for the college community, intelligent and strategic use of technology is critical to success at Foothill College. Student learning and improving the instructional experience is at the heart of college technology deployments, from equipping classrooms with multimedia and high-speed internet, to facilitating an interactive lecture and classroom experience, to creating the highest quality virtual classroom experience through distance education software, allowing students from across the globe to participate and earn credit in Foothill classes.

### **3a. Foothill College Distance Education: Foothill Global Access.**

As a means to increase access to education, Foothill College has offered distance education courses for more than 12 years. In addition, it has built and maintained comprehensive instructional and student support services available for distance education students. Faculty and staff engage in iterative processes to monitor, evaluate, and improve the quality of distance education instruction and services. Foothill College’s distance learning program is called Foothill Global Access (FGA). It offers a wide complement of services in support of faculty and students engaged with distance education courses.

The mission of FGA is to increase educational access for students by supporting technology-mediated delivery of high-quality instruction and providing students with a flexible, convenient, and cost-effective system for achieving their educational goals. The FGA mission aligns with the college mission by emphasizing educational access and providing students with the scheduling and logistical flexibility they need to overcome barriers to success in their educational pursuits.

Foothill College on-campus facilities reach capacity at peak hours such as 10 a.m. and 11 a.m. To increase our capacity to serve students, construction and renovation projects are under way and will continue for several years, including the construction of a new Physical Sciences & Engineering complex which will house the

Science Learning Institute, focusing on STEM careers and transfer programs, due to be completed in Spring 2012. Distance learning delivery of instruction provides Foothill College with a means to expand enrollment without impacting facilities on campus. The college's well-developed and successful FGA distance learning program, which has continued to expand, offers courses via the Internet using Etudes online course delivery software. The number of enrollments in fully online and partially online courses has grown to approximately 10,539 in the Fall 2009 Quarter, representing more than 12 percent of Foothill's enrollment.

### ***3a1. FGA and the Distance Education Advisory Committee***

The plan to offer distance education courses was initially implemented through the creation of FGA that would support online instruction. Online course delivery began in 1996–97 and has grown steadily over the past 12 years which is consistent with Foothill's mission to provide ". . . access to outstanding educational opportunities for all of our students." (2008–09 *Foothill College Course Catalog*). In response to the growth of the college's online course offerings, Foothill's instructional and student support services expanded to provide the same services to distance education students as are provided to on-campus students. Now distance education planning is addressed by several shared governance committees at Foothill College: Technology Task Force, Distance Education Advisory Committee, and the Committee on Online Learning. Foothill's Technology Task Force is responsible for updating the three-year Technology Plan, providing technology infrastructure for the college in support of instruction and student services, and coordinating technology-training efforts.

This committee has primarily been involved in planning Foothill College's distance education technology, equipment and infrastructure needs, including development and improvements to Foothill's website and online district faculty and student resources. The Distance Education Advisory Committee is the shared governance body with primary oversight of the delivery of Foothill's distance education programs. The Distance Education Advisory Committee has been primarily involved in developing a Distance Education Plan which includes establishing processes to ensure high-quality standards in online courses, and instructional and student support service.

FGA is responsible for the assessment, planning, development, and implementation of the Distance Education Program. The dean for FGA co-chairs the Distance Education Advisory Committee and the Technology Task Force and is a member of the district's Educational Technology Advisory Committee. The active involvement of the FGA dean in these Foothill College governance groups is instrumental in coordinating institutional efforts to meet the needs of Foothill College's distance education students and instructors.

Core values of the FGA Program are to increase educational access for students by supporting technology-mediated delivery of high-quality instruction and providing students with a convenient, and cost-effective system for achieving their educational goals. Outcomes for FGA are: 1) Students will identify their readiness to learn via technology-mediated delivery such as the Internet and develop the skills necessary for success in distance learning courses; 2) Faculty will develop the skills necessary for effective technology-mediated delivery of instruction; and 3) Staff will provide technical, training, and administrative services necessary to support technology-mediated delivery of high-quality instruction. Evidence of success in achieving these goals are: 1) Students will demonstrate their distance learning knowledge and skills by successfully completing distance education courses; 2) Faculty will demonstrate their distance instruction skills with completion of required and optional professional training and 3) Evidence of provision of services by staff will be demonstrated by steady enrollment in fully online courses.

## **4. Infrastructure: Creating and maintaining an environment for learning with technology that is consistent, safe, secure and reliable.**

### ***4a. How Foothill College provides for the management, maintenance and operation of its technological infrastructure.***

The college and the district together provide the staffing, organization, funding, and participative governance structures necessary to ensure the effective management, maintenance, and operation of its technological infrastructure and equipment.

#### ***Staffing and Organization***

**Central IT:** The management, maintenance, and operation of the college's technological infrastructure and equipment is primarily handled through the district's central technology organization, Educational Technology Services (ETS). ETS is organized to support the development, improvement and support of IT systems including software applications, networks, instructional computer labs, smart classrooms, personal computing and telephony for the district's two colleges. A chart showing the organizational structure of ETS can be viewed at [http://ets.fhda.edu/who\\_we\\_are](http://ets.fhda.edu/who_we_are). In addition to providing direct technical support through staff, ETS manages some of its systems through outsourcing contracts.

**College staffing:** In addition to the staffing in ETS, the college provides a limited number of IT staff (primarily at the Instructional Associate level) to directly assist with instruction in computer labs. The college also has a Web Coordinator who coordinates and maintains the college's website (<http://www.foothill.fhda.edu/index.php>) and the curriculum management system (C3MS) (<http://www.foothill.edu/cms/>).

The college has established a senior leadership position for oversight and coordination of technology and is currently held by the Associate Vice President of External Relations, Kurt Hueg.

**External staffing:** The college outsources some of its IT support needs to vendors. Its learning management system (LMS) is maintained by Etudes (<http://www.etudes.org/>).

### ***4b. How Foothill College systematically plans, acquires, maintains and upgrades or replaces technology infrastructure and equipment to meet the needs of the college, including computer refresh cycles and classroom multimedia upgrades and installations. How Foothill College funds its technology program.***

Foothill College maintains a coordinated ongoing plan for updating faculty, staff and administrator computers, on a five-year refresh cycle. The college has a full-time coordinator of Furniture, Fixtures and Equipment (FFE), that is responsible for working with ETS to maintain a database of all computers on campus, and to coordinate with the TTF and Associate Vice President for External Relations, in ordering new computers and arranging for timeline installations.

In addition, the college maintains a coordinated plan for the updating of all classrooms with multimedia equipment for instructional use.

The Director of Facilities, the FFE coordinator and the Associate Vice President work with ETS to develop timelines for classroom renovations and multimedia upgrades, to schedule the updating of existing multimedia equipment on a five year refresh cycle, and to handle immediate issues that come up such as equipment failure. Computer labs on campus are coordinated in the same manner, and Deans and faculty are consulted so that appropriate computer equipment is ordered and installed to meet the needs of the specific division and program area students and faculty.

For scheduling computer and smart classroom refurbishment / installation, the college coordinates with ETS through a group called the Prioritization Team (composed of the Associate Vice President of External Relations, the Facilities Director, the FFE Coordinator, the ETS Director of Networks Communication, & Computer Services, three ETS supervisors and other key ETS staff) and creates a priority list for scheduling replacements/installations.

#### ***4b1. Refreshing personal workstations and laptops***

The results of an analysis completed in 2010 by ETS set a standard for replacing desktop and laptop computers every five years. A five-year replacement cycle extends the available funding in Measure C Bond funds to refresh computers. For more information refer to: Measure C Computer Refresh Program Analysis (September 1, 2009)

#### ***4b2. Standardized computer configurations***

A subcommittee of ETAC called the Hardware and Software Standards Committee (<http://ets.fhda.edu/etac/H&SMembership>) is responsible for setting computer hardware and software standards. These standards cover computers, printers, and portable projectors. The committee meets six times annually to review the needs of the colleges and the product offerings of vendors and makes changes to standards that are posted at <http://ets.fhda.edu/Standards>. College staff may purchase computers off of this standards list or request an exception based on need.

#### ***4b3. Funding***

The college provides funding support for technology through several funding sources including district-level bonds, categorical funding from the state chancellor's office, grants from other sponsors, and general revenue funds.

## ***Bonds***

The college and the district have secured capital funding from voter-approved bonds for technology maintenance and refresh projects. Since 1999, the district has raised \$739M in funding through two bond measures (referred to as Measure E and Measure C).

The work on Measure E is nearly completed and it involved primarily facility construction projects. The Measure C bond contains approximately \$75M in funding to support technology over a 15-year period beginning in 2007. Funding from the Measure C bond is set aside for each major category of technology infrastructure including:

- Computer replacement
- Printer replacement
- Server replacement
- Smart classroom refurbishment and installation
- Telephone PBX replacement
- ERP (administrative system) replacement
- Data Center refurbishment and replacement
- Network and Security refurbishment and replacement

## ***State Chancellor's Office Categorical Funding***

The State Chancellor's Office provides technology funding through grants and categorical funding to colleges including:

- Instructional Equipment, Library Materials, and Scheduled Maintenance Grant – currently unfunded
- Technology and Telecommunications Infrastructure Program (TTIP) – direct allocations to colleges currently unfunded

## ***Grants***

The district has a grants office, which raises grant funding to support college programs.

## ***Foundation***

The Foothill-De Anza Colleges Foundation (<http://foundation.fhda.edu/>), also provides funds to the college in form of grants to support college programs.

## ***General Revenue Funds***

The college provides general revenue funds to support technology initiatives when needed.

#### ***4c. College/District procedures and processes for ensuring data integrity, security and backup for core systems, and faculty, staff and student information.***

Most of the college's technology assets and services are managed by a central district organization called Educational Technology Services (ETS). More information is available at <http://ets.fhda.edu/>. However, the management of some technology systems are outsourced by the college or managed internally:

##### **College-Managed Systems**

- Curriculum Management System (C3MS)
- Listservs
- Website
- CISCO Network Lab
- Academic department systems

##### **College Outsourced Systems**

- Etudes learning management system

System reliability and disaster recovery are provided by ETS through its systems operations team. ETS currently maintains a data center located at De Anza College to support both colleges and is currently building a new data center to be located next to district offices on the Foothill College campus. The data center operations team provides full back up and recovery services for systems hosted in the data center through a tape system for servers and applications. The administrative system (also known as the ERP system or Banner) is backed up to a storage area network (SAN). In addition, the district maintains a hot site in Carlsbad, California for Banner with full redundancy and near real-time replication for disaster recovery. The systems operations team monitors the network and servers on a 5 x 24 schedule and reports are sent to ETS managers at the end of each eight-hour shift describing any operational issues and system statistics. On weekends, ETS directors monitor the network to provide an immediate response to any system failure. ETS managers and technicians are supported by automated system monitoring (What's Up Gold), which is configured to alert technicians and management if any network component or critical system becomes non-responsive or the data center temperature exceeds a threshold value.

The College-maintained systems, including the website and C3MS curriculum database, are housed on servers located within the District's data center, and co-located at an off-campus server hosting company in San Jose named Verio. Foothill maintains three servers, one at Foothill, one at the De Anza Data Center and one at Verio. The Verio server is the primary and the remaining two provide redundant backup, to ensure data integrity, security and backup is maintained. The servers are supported by the automated monitoring system (What's Up Gold).

#### **4d. Security Policies and Audits**

The district developed a new security policy and accompanying procedures in 2009. These procedures articulate the extent to which information has to be secured as well as addressed the privacy rights of employees and students. These policy and procedures can be found at:

- BP 3260 [http://www.fhda.edu/about\\_us/stories/storyReader\\$229](http://www.fhda.edu/about_us/stories/storyReader$229)
- AP 3260 [http://www.fhda.edu/about\\_us/stories/storyReader\\$234](http://www.fhda.edu/about_us/stories/storyReader$234)

In addition, ETS developed a protocol for managing IT security incidents and also commissioned three security related audits / studies to assess the security posture of the institution. ETS is currently working on measures identified in the audits to improve security.

- Incident Response Procedures (continually being revised)
- Banner Implementation Review – Perry Smith Auditors (January 26, 2010)
- Banner Security Assessment – Strata Information Group (May 15, 2009)
- Network / Security Architecture – Burton Group (August 11, 2008)

##### **4d1. Architectural Studies**

To provide a stable and reliable technology infrastructure ETS periodically commissions architectural studies to assist staff in building and maintaining supportable systems. Recent studies have included:

- Banner Implementation Review – Perry Smith Auditors (January 26, 2010)
- Banner Security Assessment – Strata Information Group (May 15, 2009)
- Network / Security Architecture – Burton Group (August 11, 2008)
- Telecommunications and Multimedia Design Standards – P2S with modifications by FHDA (continually updated)
- Network Infrastructure Status – Salas O'Brien Engineers (June 23, 2010)
- In addition, ETS conducts internal studies and research to assess system readiness and has recently completed the following studies:
  - Measure C Computer Refresh Program Analysis (September 1, 2009)
  - Technology Infrastructure Status (July 29, 2010)
  - The results of these studies are used to identify issues and needs to be addressed.

## 5. Technology Training

To ensure that technology assets are appropriately utilized by all members of the college community, Foothill College has multiple resources available for training its employees in the use of campus technology. Included in this plan are district level training services, coordinated by the district Call Center, and college-level training services, including the Foothill Global Access department, and the Krause Center for Innovation, which offers numerous classes and training opportunities through its FastTech program of classes and through numerous technology training workshops and activities.

### ***5a. How Foothill provides technology training to meet the needs of faculty, staff and students. How Foothill ensures the technical support and training provided is appropriate and effective.***

#### ***Distance Education: Foothill Global Access Training Services and Faculty Support***

The FGA online learning program provides distance education faculty support with a variety of training opportunities. This includes formal training programs, workshops, conferences, and technical support. Training sessions focus upon effective online teaching practices using the Sakai-based Etudes course management system. Faculty are taught how to utilize various CMS tools such as the discussion board, e-mail system, chat rooms, and the assignments tool to design online courses that foster interaction between faculty and students. Additional faculty development opportunities provided by FGA include skill-building in use of open educational resources and open textbooks; multimedia for teaching; anti-plagiarism software, Web 2.0 tools, and student e-portfolios.

In 2007, FGA upgraded its online technical help desk support services for students to provide greater student identity security and follow-up. FGA received a President's Innovation Award grant in 2008 to implement a Pilot Student ePortfolio Project. Beginning Winter 2007, FGA has conducted face-to-face orientation sessions for students on campus each quarter.

#### ***District and Campus-Level Training Services and Programs***

For technology functions such as email, phone systems, meeting software (MeetingMaker), and the Banner database system, which includes finance, human resources, student registration and records systems and related portal system, the district has a centralized training and support organization to support these systems. Since these systems support both Foothill and De Anza College, the ETS organization maintains a Call Center for channeling faculty and staff support for technology issues and also to coordinate individualized trainings.

To address the growing demand for training around the new Banner ERP system, in July of 2010, the central IT organization (ETS) hired a training specialist in to assess needs, develop a training plan and deliver technology training to employees and student employees. Initially, the training specialist is focusing on providing training to district employees on the new administrative information system (Banner).

ETS currently provides training to staff and student employees in the configuration and operation of the new administrative information system (Banner). In addition, information is also available online regarding how to use various administrative systems used by the district including email, calendaring, anti-virus software, and the district portal. More information can be found at: [http://ets.fhda.edu/call\\_center/](http://ets.fhda.edu/call_center/).

*The Krause Center for Innovation: A regional resource for training K-14 educators in the use of technology in the classroom and in advanced pedagogical use of technology.*

Through its Krause Center for Innovation, Foothill College offers its staff and faculty an outstanding resource for professional development and training in numerous technology-related subjects. Through its FastTech program of short technology classes, each quarter faculty and staff have access to a variety of one to two-day classes on subjects designed to improve the use of technology in the classroom, such as Adobe Premiere, Illustrator, InDesign and Flash. In addition, the Krause Center for Innovation serves the entire Bay Area region and beyond by offering programs designed to improve K-14 teacher proficiency in using technology such as the Merit Program, the FAME program, Adobe Youth Voices and the Adobe Administrative Technology Program. For a full description of these programs consult the Krause Center Report To Donors 2010, or the Krause Center for Innovation website at [www.krauseinnovationcenter.org](http://www.krauseinnovationcenter.org).

### *Staff Development Program*

In the 2010 year, Foothill College implemented a comprehensive program of staff development workshops, training opportunities and seminars, including many technology related areas such as Banner training, portal training, training in using the Argos research tool and workshops on common software tools.



## **6. Assessment: Assessing the Effectiveness of Technology and Progress in Meeting Goals, and Student, Faculty and Staff Expectations.**

### ***6a. How Foothill College ensures that technology needs of students, faculty and staff are identified and met through surveys, program planning, SLOs, AUOs and other methods.***

Foothill College has several methods of assessment to identify technology needs are identified and students, faculty staff expectations are met or exceeded. The college and district use surveys of faculty, staff and students as a primary means of identifying their satisfaction level with its array of technology services and functions. In addition, the college has a fully integrated program review process that is tied to its budget allocation model. Through assessment of program review and SLO data, the college can identify needs related to technology and also assess the progress and success of ongoing technology services and current implementations.

In addition, the college uses means such as Academic Division meetings, campus department meetings, academic and classified senate meetings, college Planning and Resource Council meetings (PaRC) and other informal forums to gather feedback and information on the deployment and effectiveness of technology at the campus. That feedback is channeled by managers, college governance leaders, faculty and staff, to the ETS leadership and to the college Tech Task Force for follow-up and review.

**6b. Computing survey and how we use the information to prioritize resources and projects, identify areas of need and make improvements.**

Each year the ETS area conducts a survey of students, faculty and staff to gather data about how well we are meeting the needs campus wide. The survey provides specific data for informing the college about where its priorities should be in terms of funding technology projects and in determining immediate needs and long-term goals. The data for the 2010 survey is included as an appendix to this technology plan.

In addition to the annual survey, the college conducts other surveys, such as the 2010 Accreditation Survey, to gather data around technology and student, faculty and staff satisfaction. The accreditation survey provides data related to the areas in Standard III of the Guide to Evaluating Institutions titled "Technology Resources."



**7. Priorities and Positioning for the Future: A brief overview of current project priorities and how we position our college to meet the needs of the future.**

The District ETS and ETAC committee is in the process of reviewing a Technology Project List, which details all the major projects either in process or that have been requested of ETS. This document will provide the basis for district-wide decision making and priority setting for technology projects. The Foothill Tech Task Force will be reviewing the list and providing feedback to ETS as to which projects are most critical. The Technology Project List is included as an appendix to this document.

**7a. Positioning for the future.**

Foothill College participates in several national organizations dedicated to furthering campus technology and to improving student success and teaching through the use of technology. One of the primary organizations we participate in is EDUCAUSE, which publishes the annual "Horizon Report" which identifies key trends in technology, issues to watch going forward and critical challenges for colleges to address. For instance, two technologies the report identifies as priorities for addressing in 2010 are mobile computing and open content.

As a leader in online education, in training educators to use technology in the classroom, and in providing students with high-quality learning environments through the use of technology, Foothill College has many talented faculty and staff who engage with emerging technologies and bring that information back to the campus for informing our decision-making around technology and in helping the college focus on which technologies will serve our students and faculty best. Areas such as CTIS Division, and the Krause Center for Innovation, serve as regional resources for technology training, and serve to inform our campus community about emerging trends in instructional technology, for instance.

Through the contributions of the many departments and individuals on campus, Foothill will continue to innovate and stay current of emerging technologies. While it is important to stay informed of emerging technologies, Foothill College bases its strategy for meeting the needs of the future on assessing and identifying what the needs of faculty and students are and in finding technologies that match those needs.



**8. Appendixes and related documents:** Distance Education Plan; District Technology Survey; Accreditation Survey; Krause Center for Innovation Report to Donors 2010; ETS Technology Project List