

DVC – Technology Master Plan 2014-2016

(Approved by College Council for use through 2019)

Contributors

The 2014-16 Technology Plan was developed with the contributions and support of the following members and guests;

Table 1: Contributors to the Technology Plan

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I. Introduction

i. Executive Summary

The Diablo Valley Community College Technology Master Plan 2014-2016 addresses the present and future technology needs at both the Pleasant Hill Campus and the San Ramon Campus. The DVC Technology Master Plan will be integrated with college planning and resource allocation at the college wide and departmental program review levels. The action plan and strategic planning elements will be systematically assessed to incorporate the results of (a) institutional plans and priorities, and, (b) program reviews of instruction, administration, and student services. The new Technology Master Plan and planning cycles will facilitate the continuous improvement in the use of academic and administrative technologies to enhance the institutional effectiveness of the college. All references to DVC in this following evaluation include both campus sites except as noted.

ii. Background

The DVC Technology Master Plan 2014-2016 was developed during the 2013-2014 school year. It represents the collaborative research and planning efforts of both the college Information Technology Committee and District Information Technology. Currently the college is in a transitional period with respect to technology planning. In 2011, the Executive Dean of Information Technology and Services position was eliminated and District IT has taken over responsibility of the college network. While the district has defined the boundaries between the college and district technology, there is still uncertainty about the roles and relationship at the college level. This plan is in part a path to clarifying and insuring the effectiveness of this relationship.

During the Fall 2013 semester, the committee met from August through December, generally two times each month. The committee first reviewed and discussed the college-wide technology environmental scan, which was organized by technology goals (A-F). Next, the committee scrutinized the rollover items from the 2009-2013 Technology Plan implementation grid and made decisions about what should be carried over and what new items should be added to the plan. During this process, the committee frequently referred to both internal and external documents, especially the draft of the new strategic plan and focus group input gathered through the strategic planning process, the most recent student and employee technology surveys, and the Faculty Senate technology surveys. In addition, the committee stayed in close communication with the Institutional Planning Committee and the Standard 3C Technology Resources Accreditation Writing Group. College employees were kept abreast through flex activities and online surveys.

In order to provide more opportunities for input, a draft of the plan was presented to the Institutional Planning Committee and constituent groups for review and comment in February. Afterwards, the plan was revised accordingly and submitted to the appropriate college governance bodies for acceptance.

The following issues have been identified as significant challenges that require ongoing college-wide dialog in preparation for future implementation:

- Whether our current computer lab structure best meets the current and future needs of our students
- How to bring into balance our current technology infrastructure with the resources we have available to support it
- How to introduce new technology in an efficient, effective, and timely manner
- How to phase out old technology in an efficient, effective, and timely manner
- How to make our web based applications more efficient and effective
- How to develop a standard for smart classrooms
- Whether our current printing infrastructure best serves the campus community
- How to continually improve technology planning and implementation through ongoing, effective integration into the college resource allocation process
- How to integrate assistive computer technologies and equitable access into all aspects of college technology

Technology Definition

Technology is a broad subject that applies to many aspects of teaching, learning, research, communication, and operations at DVC. Such technologies are typically categorized as instructional technology or information technology. The former is associated with resources for teaching and learning (academic) and the latter is associated with resources for communication and operations (administrative). These technologies typically include computers, servers, software, assistive computer technologies, databases, printers, networks, network applications, storage devices, video projectors, video conferencing, and the like. Many such technologies are used for both academic and administrative purposes (e.g., computers, networks, email, etc.). Thus, it is necessary for the Technology Master Plan to address both information and instructional technologies.

There are technologies at DVC that are industry or discipline specific. Academic and vocational programs that require such specialized technologies consult with external advisory councils and engage in program review cycles to ensure that instruments, tools, and software are relevant and up-to-date. Program review plans are tied to college resource allocation processes that provide an avenue of funding for specialized technologies.

The DVC Technology Master Plan is focused on planning for instructional and information technology resources that have a broad application across the college. The technology plan addresses how technology resources will be implemented to further the mission of the college and improve institutional effectiveness. This plan does not go so far as to specify the details of all of the specialized technologies that would be included in program reviews. That is left to the subject experts. However, the Technology Master Plan addresses how specialized technologies will be integrated with the technology infrastructure and technology support services of the college.

iii. Alignment to College Mission and Strategic Plan Technology Guiding Principles

The Tech Plan strives to ensure that technology is used to its fullest effectiveness and potential to further the college's Mission Statement and Strategic Plan. These twelve guiding principles serve to align the technology plan with Mission and strategic direction of the college.

The successful application of technology at Diablo Valley College will:

- Foster student learning and success;
- Increase student access to college resources, including underserved populations;
- Consider ease-of-use and security and the availability of support before adoption;
- Encourage creativity and innovation;
- Include collaborative input for decision-making.
- Provide ongoing training and support opportunities;
- Promote efficiency and Green IT;
- Foster collaborative communication among college constituencies;
- Integrate with college plans and program reviews and the resource allocation processes;
- Promote the use of technology to bridge the digital divide;

- Evaluate the plan progress on an ongoing basis;
- Support the college mission and strategic plan.

Technology Vision

Diablo Valley College uses technology to support learning and instruction, enhance educational opportunities, personalize student services, and provide effective administrative and communication processes to meet the changing needs of the college community.

iv. Research and Data

The Information Technology Committee assessed current needs through discussion and reference to the following internal documents: (a) District Information Technology Plan (CCCD, in progress), (b) [DVC Technology Plan 2009 – 2013](#), (c) [DVC Strategic Plan](#) (DVC, 2014), (d) [DVC Educational Master Plan 2007 – 2017](#) Chapter 5 (DVC, 2007b), (e) [program reviews from fall 2013](#), (f) [Diablo Valley College - Policy on Distance Education and on Correspondence Education](#) (DVC, 2013) (g) [Technology Use survey of students, spring 2013](#), (h) [Technology Use survey of employees, spring 2013](#), (i) two rounds of technology survey administered by the DVC Faculty Senate, [spring 2013](#) and [fall 2013](#), (j) [College-wide Technology Environmental Scan](#) (DVC, 2013). (k) [ECAR Study of Undergraduate Students and Technology](#), (CCCD, 2013),

In addition, the Information Technology Committee relied on the following external publications: ACCJC/WASC Accreditation Standards (ACCJC/WASC, 2013), [Horizon Report 2014 Higher Education Edition](#) (nmc.org, 2014) [Horizon Report 2013 Higher Education Edition](#) (nmc.org, 2013), [“Top-Ten IT Issues, 2013: Welcome to the Connected Age”](#) (Educase, 2013), [“12 Tech Trends Higher Education Cannot Afford to Ignore”](#) (Savenije, 7/2013), [Distance Education Accessibility Guidelines: For Student with Disabilities](#) (California Community Colleges, Chancellor’s Office, 2011)

Based on our research, the information technology drew the following conclusions of the college’s strengths, weaknesses, and opportunities:

Strengths

- Completed comprehensive network infrastructure upgrade including wireless network .The college has a robust wireless network with specialized access for faculty/staff, students, and guests. Nationally, students brought three to four Internet-capable devices to campuses during the fall 2013 semester (Grajek 34). On the DVC campus, 74% of DVC students have smartphones and 34% have tablets (Stoup). The DVC college network has been built to withstand the BYOD (Bring-Your-Own-Device) trend, in which “faculty, staff, and students want to consume all of the content they need--ranging from campus maps to class schedules to campus news and alerts-- when you want it, where you want it, and on whatever device they may be using at the time. Providing this content to them is no longer an extra resource; it is a requirement” (Grajek 36).
- The college uses software to improve student outcomes. Student learning outcomes are reported and tracked through a custom database application, WebSLOs, and district LMS, Desire2Learn, includes learning and engagement analytics to help instructors cater instruction and support to students. In addition, all instructors of face to face courses have an available course-shell in D2L. In a 2013 survey of DVC students, 55.1% of respondents said that their optimal learning environment was a blended or face-to-face course with some online components (Stoup). The availability of D2L course shells for all instructors should increase the number of blended learning environments.
- The college marketing department has created a significant college presence on social networks. As active

participants in social networks, students have more of a sense of “connectedness” with the college; this sense of connection leads to persistence and success in academic pursuits (Grajek 38). While there is more work to be done here at the course and program level, the marketing department has created a solid base at the institutional level.

Weaknesses

- The college IT department remains understaffed during the implementation of large district-wide technology projects (infrastructure, switch to cloud based Microsoft email platform, new construction/new computer labs). The work from these projects was added on top of the regular IT duties of the college (maintain labs, faculty and staff computers, etc.). While college staff is appreciative of the IT staff’s predicament and workload, there is a general sense that IT problems are not handled expeditiously and computer labs are not properly maintained and updated (DVC Faculty Senate 5-7). In addition, there is currently no IT or media support available to instructors after 5:00 p.m. The faculty feels strongly that the college should hire additional IT staff (DVC Faculty Senate 8).
- With the change in management of college technology in 2011, the tech committee’s role within the college and with the district has changed over the last several years. The committee charge and function need to be clarified with a better understanding of its relationship between district IT and the college as a whole. The Information Technology Committee needs to reestablish itself and reengage in the college community as a source of expertise on educational technology, insight into future technology trends, and a critical arena for cross-constituency communication on these matters.

Educational Technology Trends in Higher Education

The following are a few emerging technologies in higher education that may have a significant impact on the college in the next five years. Technology in the one year or less trends is readily available, two to three years is currently being used by early adopters, and four to five years is largely in the conceptualization phase.

One Year or Less

- **Flipped Classroom:** The flipped classroom leverages the availability of learning management systems (D2L), video lectures, podcasts, enhanced ebook content, open educational resources (OER), and online communities to change the face-to-face time in class. In this model, “class time is devoted to more active, project-based learning where students work together to solve local or global challenges—or other real-world applications—to gain a deeper understanding of the subject” (Johnson 36).
- **Learning Analytics:** Essentially big data applied to education. Educational institutions are embarking on the exploration of the science of large data sets, with the aim of improving student retention and providing a higher quality, personalized experience for learners (Adams Becker 24).

Two to Three Years

- **Games and Gamification:** Game play has traversed the realm of recreation and has infiltrated the worlds of commerce, productivity, and education, proving to be a useful training and motivation tool. Gamification is the integration of game elements, mechanics, and frameworks into non-game situations and scenarios. Games and gamification reflect the perspective that while games are effective tools for scaffolding concepts and simulating real world experiences, it should also include the larger canvas of gamer culture and game design (Adams Becker 21).

Four to Five Years

- **Quantified Self:** Through the use mobile apps, wearable devices, and cloud-based services, users

have a lot of data at their fingertips today. Quantified Self in education is when this data is combined with learning analytics to illuminate environmental factors that can improve learning (Johnson 45). In both learning analytics and quantified self, the issue of privacy will need to be thoroughly discussed at all levels of educational institutions.

II. Goals

i. Key Findings/Themes

A. Student Access: Provide secure student access to learning resources and support services for all college locations.

B. Instructional Technology: Support the success of all students through the development and implementation of instructional technologies including the delivery of instructional material for use on and off-campus.

C. Campus Computing: Develop and improve secure computing systems to increase institutional efficiencies and provide long-term support for campus computing needs.

D. Network Infrastructure: Upgrade and maintain the network infrastructure to support comprehensive wireless, voice, video, and data communications with high availability and recoverability.

E. Technology Support: Provide ongoing training and technology support services to meet the needs of students, faculty, staff, and management.

F. Electronic Communications: Develop and support multiple, digital, means of communication between the college, community, and all constituencies.

ii. Goals and Objectives

A. Student Access: Provide secure and equitable student access to learning resources and support services for all college locations.

A.1. Identity management:

Expand user account system that requires students to login to all college computers and networks.

A.2. Computer lab operations:

Develop college standards to adequately staff and support all current and future student computer labs.

A.3. Computer lab hardware and software:

Conduct ongoing evaluations of the adequacy of student computer lab hardware and software to meet the needs of instructional programs.

A.4. Online courses and programs:

In order to increase student access, provide ongoing support for additional online courses and programs.

A.5. Online learning and support services:

Provide online access to all learning resources and student support services to assure equitable access and meet identified student needs.

A.6. Assistive Computer Technologies:

Provide students with disabilities an opportunity to compete on equal footing in the academic environment when utilizing specialized computer applications.

B. Instructional Technology: Support the success of all students through the development of instructional technologies including the delivery of instructional media for use on and off-campus.

B.1. Instructor support:

Deliver multi-faceted faculty training and support for the development and delivery of accessible instructional technology resources to students on and off-campus.

B.2. Online lectures:

Develop standardized processes for capturing on-campus lectures (audio and/or video and/or lecture resources) to publish online.

B.3. Smart classrooms:

Define "smart classrooms" for the college, create discipline specific standards, and complete installation of classroom technology from funds allowed.

B.4. Instructional video:

Develop new processes for efficiently licensing and delivering 508 compliant copyrighted and captioned instructional videos to students on and off campus.

B.5 Provide information storage locations and web site options for hosting instructional materials to be accessible to students

C. Campus Computing: Develop, standardize, and improve secure computing systems to increase institutional equity and efficiency and provide long-term support for campus computing needs.

C.1. Custom application development:

Standardize the development and maintenance of custom network applications for research, instruction, student services, and college operations in order to improve institutional effectiveness and bridge the digital divide.

C.2. Information Technology support:

Develop standardized procedures for requesting network applications and services. Use the DVC Help Desk to centralize user support requests for network applications.

C.3. Policies and procedures:

Develop college-wide policies & procedures, standards, priorities, and guidelines for technology use and support.

C.4. Inventory Standards and Systems:

Develop sustainable inventory standards for college hardware and software.

C.5. Development of new IT Projects:
Develop a process for developing new IT projects.

C.6. Fee Based Printing:
Develop a MOU or a procedure regarding fee based printing.

C.7. Systematically collect data on usage, evaluation and impact of technology resources to aid annual planning and preparation for regular accreditation self-evaluation cycles.

D. Network Infrastructure: Maintain and support the network infrastructure to ensure comprehensive wireless, voice, video, and data communications with high availability and recoverability.

D.1. Network management:
Implement enterprise level network management tools to monitor and control all critical network resources at all college locations. Develop emergency response and communication procedures for network outages or attacks.

D.2. Network storage:
Provide secure and centralized network storage, backup and recovery services to meet the needs of the college. Develop a data archiving and retrieval process.

D.3. Disaster recovery:
Develop a multi-tiered disaster recovery plan to restore access to critical information resources in case of a catastrophic outage. Determine ways to proactively minimize risks.

E. Technology Support: Provide ongoing training and technology support services to meet the needs of students, faculty, staff, and management.

E.1. DVC Help Desk:
Develop a responsive and comprehensive DVC Help Desk that handles all college technology support requests in a timely and efficient manner for all college locations.

E.2. Technology training for operations and support:
Provide ongoing training and support in the use of productivity technologies for faculty, staff and managers.

E.3. Electronic Records Management
Create, maintain, use and dispose of records on data storage servers throughout records life-cycle.

E.4. Computer Lab Support:
Provide effective computer lab support by working directly with IT to plan, deploy and manage technology and software resources.

E.5. Local/Networked Printer Support:
Develop standards to govern the purchasing, installation and support of printers for office and labs

(network and stand-alone)

E.6. Employee computer support:

Establish support policies for employee hardware/software platforms (both PC and Mac).

F. Electronic Communications: Develop and support multiple, digital, means of communication between the college, community, and all constituencies.

F.2. District portal:

Utilize the district portal for college communications, student communications and access to college support services and online forms.

F.3. Website development:

Continue to develop the navigational structure of the DVC website to improve access for current students, future students, high school students, adult students, international students, business and community, faculty and staff. Ensure that all faculty and all departments have current and accurate information on the college website

F.4. Video conferencing:

Provide and support additional audio and video conferencing resources to connect individuals /groups between DVC and off-site locations.

F.5. Time-sensitive notifications:

Implement a college-wide external notification system that can be used to send alerts to students and/or employees in a matter of minutes. Such a system would use multiple forms of communication such as text message, phone/voice-mail, and email. Utilize the system for any time-sensitive notifications.

F.6. Emerging communications:

Experiment with emerging technologies and social media to enhance effective communication and institutional effectiveness.

iii. and iv. Plan Matrix and Required Resources

The Implementation Grid shows the action items, lead manager, responsible units, timelines, performance indicators, dependencies, and required resources that are necessary to further the goals and strategies of the Technology Plan.

- **Action items:** Action items describe the activities for each of the technology strategies. Each action item has a unique ID. The first two characters of the ID refer to the related strategy. For example, action items A.2.a and A.2.b both refer to technology strategy A.2.
- **Lead manager:** The lead manager is responsible for initiating the action items and overseeing the completion of the activities.
- **Responsible units:** Employees in responsible units will be involved in completing tasks or providing input for the activities.

- **Timelines:** Timelines provide the fiscal years in which the activities will occur. Fiscal years begin July 1 and end June 30.
- **Performance indicators:** Performance indicators describe the major outcome of the action items.
- **Dependencies:** Dependencies need to be completed before the action item can be completed.
- **Required resources:** Required resources are ESTIMATES that primarily refer to staff/manager time, equipment funding, or existing resources. The time and budget allocations are gross estimates that would be further refined for an actual project proposal.

ID1	Action Items	Lead Manager	Responsible Unit(s)	Timeline	Performance Indicators	Required Resources
A. Student Access: Provide secure student access to learning resources and support services for all college locations.						
A.1	Assess the feasibility of using student user accounts for access to lab computers.	Technology Services Manager	College IT, Technology Committee	2014-2016	Dialog and research into the pros and cons of restricting access in labs. Make a decision where to implement or not.	Technology Services Manager's time, Technology Committee's time.
A.2	Develop assessment to evaluate IT support in college labs.	VP Business and Administrative Services, VP of instruction	Technology Committee	2014-2016	Survey & survey results from primary "owners" of campus computer labs that show the effectiveness of IT support.	Technology Service Manager's time, Technology Committee's time, IT Staff's time
A.3.a	Perform assessment of college computer labs that addresses institutional usage as well as hardware/software needs, including 508 compliance.	VP Business and Administrative Services, VP of instruction	College IT, Tech Committee	2014-2016	Analysis of computer lab use, and create survey for faculty/IT staff.	VP Business and Administrative Services' time, Technology Services Manager's time, Technology Committee's time
A.4	Investigate and evaluate the need for peer-to-peer (student) tech support.	Dean of Library, Education Technology, and Learning Support	Instructional technology, Technology Committee, Distance Ed. Committee, Instructional Technology Coordinator's time, Technology Committee Time	2014-2016	Dedicated space on campus and online to assist students with tech related questions (D2L, software, hardware, etc.).	Physical space on campus, Dean of L, ET, and L's time, tech committee's time.

ID1	Action Items	Lead Manager	Responsible Unit(s)	Timeline	Performance Indicators	Required Resources
A.5.a	Create a student support assessment plan to ensure the college is meeting accreditation standards for online classes.	Dean of Library, Education Technology, and Learning Support, VP of Student Services	Dean in charge of Distance Education, Distance ED Committee, Student Services	2014-2016	Developing criteria for the period review, conducting the periodic review.	Distance Education Coordinator's time, VP of Students Service's time, Distance Education Committee's time.
A.5.b	Implement mandated Student Success Act technology based initiatives: online orientation & master education plan applications.	Dean, Outreach, Enrollment, and Matriculation	Dean, Outreach, Enrollment, and Matriculation, District IT, Counseling Dept. Chair.	2014-2015	(Waiting to hear back from Beth)	Dean, Outreach, Enrollment, and Matriculation's time, District IT's time, Counseling Department's time
A.6.a	Develop a procedure to evaluate Section 508 compliance of prospective software/hardware prior to purchase and implementation.	VP Business and Administrative Services, VP of Student Services, DSS Manager.	College IT, Tech committee	2014-2016	Create of hardware and software purchasing rubrics.	VP Business and Administrative Services' time, Technology Services Manager's time, Technology Committee's time
A.6.b.	Ensure equitable student access to online instruction and student services.	VP Business and Administrative Services, VP of Student Services, DSS Manager.	VP Business and Administrative Services, VP of Student Services, DSS Manager, tech committee	2014-2016	Regular review process of online education and online student services.	DSS Manager's time, tech committee's time

ID1	Action Items	Lead Manager	Responsible Unit(s)	Timeline	Performance Indicators	Required Resources
B.	Instructional Technology: Support the success of all students through the development of instructional technologies including the delivery of instructional media for use on and off-campus.					
B.1.a	Expand the use of the district-wide learning management system for delivering class content, assessment, and effective student engagement	Dean of Library, Education Technology, and Learning Support	IT&S Office. Instruction Office. Technology Committee.	2014-2016	Number of desire2learn classrooms used per semester. Number of workshops developed and offered.	About 20 to 40 hours to develop the plan. About 10 hours per week for ongoing support.
B.1.b	Expand awareness of requirements and development of assistive computer technologies.	Dean of Library, Education Technology, and Learning Support	Instruction Office. Disability Support Services.	2014-2016	Increased quantity and quality of faculty-produced instructional media. Increased number of workshops on developing online curriculum and pedagogy. Increased number of computer work stations equipped with assistive technology in all campus computer labs.	About 20 to 40 hours to develop the plan. About 20 to 60 hours per week for ongoing support.
B.1.c	Provide a comprehensive support system to meet the needs of instructors who are teaching online and tech-assisted face-to-face courses.	Dean of Library, Education Technology, and Learning Support	IT&S Office. Instruction Office. Technology Committee.	2014-2016	Increased student retention and success in online courses.	About 20 to 40 hours to develop the plan. About 20 to 60 hours per week for ongoing support.

ID1	Action Items	Lead Manager	Responsible Unit(s)	Timeline	Performance Indicators	Required Resources
B.2.a	Investigate best practices, assess needs, and provide training for digitally recording, captioning lectures and other instructional material.	Dean of Library, Education Technology, and Learning Support	Media Services, Professional Development	2014-2016	Increased number of faculty has created accessible course material delivered online to increase student access and success.	About 40 hours to investigate and create plan. 5-10 hours per week to assist faculty with training and support.
B.3.a	Continue to complete the installation of multimedia technology, including instructor stations in the remaining, viable, classrooms, labs and meeting rooms.	Dean of Library, Education Technology, and Learning Support	IT&S Office. Technology Committee.	2014-2016	All remaining viable classrooms, labs, and meeting rooms have dedicated video projector, AV resources and control systems.	About 40 to 80 hours to identify the needs and develop the proposal. About
B.3.b	Continue to review and replace multimedia technology that is not functioning adequately. If funded, then implement the following school year.	Technology Committee, VP of Business & Administrative Services, Dean of Library, Education Technology, and Learning Support	IT&S Office. Technology Committee.	2014-2016	Older projector/AV/control systems are replaced.	About 40 to 80 hours to identify the needs and develop the proposal.

ID1	Action Items	Lead Manager	Responsible Unit(s)	Timeline	Performance Indicators	Required Resources
B.3.c	Develop policy, plans, and standards for classroom technology and advanced technology for instructional delivery to guide replacements and new installations. Investigate industry standards and best practices. Conduct detailed surveys and focus groups with faculty to clarify needs and expectations.	Manager, IT&S Office. Instruction Office. Technology Committee.	IT&S Office. Instruction Office. Technology Committee.	2014-2016	Standards for projectors, smart classrooms, instructional technology.	About 20 hours to develop and investigate standards. About 40 hours to develop, conduct and convey surveys results.
B.4	Investigate options and provide storage systems and instructor web sites for hosting instructional material.	IT&S Office. Instruction Office.	IT&S Office. Instruction Office. Technology Committee.	2014-2016	Effective options provided, supporting by training	About 30 hours.
B.5	Investigate options, develop and support institutional standards for implementation of classroom student response systems, lab control systems, and other technology applications to assist student assessment efforts.	IT&S Office. Instruction Office. Technology Committee.	IT&S Office. Instruction Office. Technology Committee.	2014-2016	Completed assessment of current applications, projected needs and best options.	About 5 to 10 hours to investigate options.
C.	Campus Computing: Develop and improve secure computing systems to increase institutional efficiencies and provide long-term support for campus computing needs.					

ID1	Action Items	Lead Manager	Responsible Unit(s)	Timeline	Performance Indicators	Required Resources
C.1.a	Conduct an inventory of online forms for instruction, student services, & business services.	VP of Business & Administrative Services, Director, Marketing and Communications, VP of Student Services	Tech Committee	2014-2016	Complete list of online forms.	VP of Business & Administrative Services time, Director of Marketing and Communications time, Technology Committee time
C.1.b	Develop standardized policies and procedures for the development of custom network applications for DVC functions to address platforms, documentation, testing, tracking, staffing, etc.	VP of Business & Administrative Services, District IT	Custom application authors/owners, District IT	2014-2015	Documentation for WEPR, WebSLOs, and WCS.	District IT's time, application creator's time.
C.2	Finish service level agreements for the support of the various network applications that are used by different departments.	Technology Services Manager	College IT, Tech Committee	2014-2016	The college-wide implementation of service level agreements.	Tech Services Manager's time, Tech committee's time
C.3.a	Make official recommendation on current employee computer policy: choice of desktop, laptop, PC, or MAC.	Technology Services Manager	College IT, Tech Committee	2014-2016	Use cost analysis of IT support and staffing to determine if current standards are sustainable.	Tech Services Manager's time, Tech committee's time
C.3.b	Develop replacement cycle plans for faculty/staff computers, lab computers, non-lab/non-staff computers, projection units, and servers.	VP of Business & Administrative Services	College IT, Budget Committee, Technology Committee	2014-2016	Sustainable financial commitment for purchasing cycle of faculty/staff computers, lab computers, projection units.	Budget committee's time, tech committee's time, VP of Finance and Admin's time

ID1	Action Items	Lead Manager	Responsible Unit(s)	Timeline	Performance Indicators	Required Resources
C.4.a	Complete software inventory for computer labs.	Technology Services Manager, Technology Committee.	College IT, Instruction office, tech committee	2014-2016	Comprehensive software inventory.	Technology Services Manager's time and tech committee's time
C.4.b	Develop software library and license documentation to account for all copyrighted software installed on any college owned computer/server.	Technology Services Manager	College IT.	2014-2016	IT&S staff can readily locate software or license for any application installed on any computer	Technology Services Manager's time.
C.4.c	Develop sustainable inventory systems for faculty/staff computers, lab computers, servers, and projection units.	VP of Business & Administrative Services, Technology Services Manager.	Finance and Administration, College IT,	2014-2016	Sustainable inventory systems.	To maintain a current inventory we would need additional administrative staff time.
C.5	Create college-wide workflow for technology planning that is fully integrated into institutional planning.	VP of Business & Administrative Services, Technology Services Manager, VP of Instruction, VP of Student Services	Finance and Administration, College IT, Tech Committee	2014-2016	Clearly situate the information technology committee into the college-wide workflow.	VP of Business & Administrative Services' time, Technology Services Manager's time, Technology Committee's time
C.6	Develop an MOU or a procedure regarding fee based printing.	Technology Services Manager	College IT, Tech Committee	2014-2016	Agreement that includes how print fees are allocated, who is responsible for the various aspects of fee based printing costs, replacement cycles for printers and software.	Technology Services Manager's time, Technology Committee's time

ID1	Action Items	Lead Manager	Responsible Unit(s)	Timeline	Performance Indicators	Required Resources
C.7	Review 2014 Self-evaluation to identify evidence used and create plan for ongoing methodologies to collect information linked to ACCJC standards, future reports and college planning.	Technology Services Manager	Tech Committee	2014-2015	Completed plan, outlining methodologies to be used for collecting relevant data.	Standard IIC and IIC committee members and Tech committee members time
D. Network Infrastructure: Maintain and support the network infrastructure to ensure comprehensive wireless, voice, video, and data communications with high availability and recoverability.						
D.1.a	District IT will provide periodic reports on the networks performance to the Technology Committee resulting from its monitoring of the system.	District IT	District IT, Technology Committee	2014-2016	Reports are placed on the Tech Committee's agenda.	District IT's time, Technology Committee's time.
D.1.b	Develop criteria that will shape the network bandwidth to prevent one type of traffic such as video from overwhelming all other types of traffic such as web browsing.	College Technology Systems Manager, District IT Director	College IT, District IT, Technology Committee	2014-2016	Written procedure documenting the criteria.	Technology Systems Manager's time. District IT Director's time. Technology Committee's time.
D.1.c	Develop emergency response and communication procedures for network outages or attacks.	District IT	District IT, Technology Committee	2014-2016	Procedure approved by the College President	Technology Systems Manager's time. Technology Committee's time.

ID1	Action Items	Lead Manager	Responsible Unit(s)	Timeline	Performance Indicators	Required Resources
D.2.a	Develop a DVC procedure to identify and remove older data from the DVC network storage arrays onto a fixed storage medium such as DVD or tape for long-term archive	VP of Business & Administrative Services, Technology Services Manager	College IT, Technology Committee	2014-2016	Procedure approved by the College President	Technology Systems Manager's time. Technology Committee's time.
D.3.a	Develop a multi-tiered disaster recovery plan to restore access to critical information resources in case of a catastrophic outage.	Technology Systems Manager	DVC IT, SRVC IT, Technology Committee.	2014-2016	An approved disaster recovery plan.	Technology Systems Manager's time. Technology Committee's time. The plan will identify additional resources needed for implementation.
D.3.b	Complete the installation of an electrical backup system to provide power for important online services (e.g. website, online classes, email, etc.) and related network devices in case of a power outage.	VP of Business & Administrative Services, Chief Facilities Planner	College Facilities, District Facilities	2014-2016	Backup system installed	Funds covered under 2006 Bond for Infrastructure Update.
E.	Technology Support: Provide ongoing training and technology support services to meet the needs of students, faculty, staff, and management.					

ID1	Action Items	Lead Manager	Responsible Unit(s)	Timeline	Performance Indicators	Required Resources
E.1.a	Develop communication/marketing plan for SysAid to 1) inform faculty and staff how and when to use, 2) the status of tickets, and 3) the status of long-term projects.	Technology Systems Manager	IT&S Office, IT Committee, District IT	2014-2016	Communications, training for the campus community.	Technology Systems Manager's Time
E.1.b	Evaluate Staffing needs to resolve help desk tickets in a timely manner especially when the college is involved in major IT projects.	Technology Systems Manager	IT&S Office, IT Committee	2014-2016	Staffing plan for the help desk.	Technology Systems Manager's Time
E.1.c	Provide periodic reports to the Technology Committee on the status and resolution rates for the help desk tickets.	Technology Systems Manager	IT&S Office, IT Committee	2014-2016	Periodic reports presented to the Technology Committee	Technology Systems Manager's Time
E.1.d	Implement a remote desktop / assistance support application	Technology Systems Manager	IT&S Office	2014-2016	Provide quick response to ticket request and resolution in a timely manner.	College IT
E.1.e	Study feasibility of a single Help Desk for faculty and staff for technical assistance on hardware, software, AV equipment / operations.	Technology Systems Manager	IT&S Office, I T Committee	2014-2016	Provide quick response to ticket request and resolution in a timely manner.	College IT

ID1	Action Items	Lead Manager	Responsible Unit(s)	Timeline	Performance Indicators	Required Resources
E.2	Provide ongoing training and cross-training for technical staff and management to increase their technical proficiencies and knowledge.	Technology Systems Manager, C&NS	IT&S Office	2014-2016	Technical staff is more proficient and able to cover for each other.	About 16 to 40 hours per person per year. About \$2,000 to \$20,000 per year. Maximize the use of district funds for management and classified staff training.
E.3	Define and implement Records Management policy	Technology Systems Manager, Dean of Counseling and Enrollment Services, VP of Business & Administrative Services	IT Committee, Dean of Matriculation, VP of Administration and Finance	2014-2016	Is the creation, receipt, maintenance, use and disposition of records on data storage servers	Mutual collaboration and planning of department deans & supervisors
E.4	Develop a staffing plan for to support current and future computer labs (lab coordinator positions)	Technology Systems Manager, VP of Business & Administrative Services	IT&S Office. SRVC IT. Technology Committee. Deans	2014-2016	Additional and/or reassigned staff	Mutual collaboration and planning / approval of new organizational model for labs
E.5	Develop standards to govern the purchasing, installation and support of printers for office and labs (network and stand-alone)	Purchasing / Budget Committee; Technology Committee	Purchasing / Budget Committee; Technology Committee	2014-2016	Improved communications for printer purchases and support processes	Increase multi-function copier / printer contract to add additional resource to each building (approximately 2 to 3 per building) / Funding

ID1	Action Items	Lead Manager	Responsible Unit(s)	Timeline	Performance Indicators	Required Resources
E.6.a	Provide Mac cross-training for staff	IT&S Office		2014-2016	Provide adequate and reasonable hardware, software, and on-campus equipment support for non-PC (i.e. Macintosh) hardware/software platforms based on departmental and educational needs	Funding
E.6.b	Publish procedures for implementing computer protections (such as anti-virus, email filters, spam blocking, spyware, storage backups, etc.) for faculty and staff.	Technology Systems Manager	Campus IT, IT Committee	2014-2016	Faculty and staff security training and procedure awareness will reduce unwanted and/or malicious programs and improve overall data security.	Mutual collaboration and of campus personnel
F.	Digital/Electronic Communication: Develop and support multiple, digital, means of communication between the college, community, and all constituencies.					
F.1.a	Collaboratively develop and implement a project plan for best using the district portal more consistently for college communications, student communications, online forms, etc.	Director of marketing and Dean of Matriculation	District IT, Marketing and Communications, Student Services, Instruction	2014-2016	There is an easily accessible location for students and the public to access information. It is clear to both students and campus personnel here to find that information.	The implementation would involve a huge campus-wide effort, with significant project management and oversight. The marketing office would require the addition of a content coordination or marketing assistant position.

ID1	Action Items	Lead Manager	Responsible Unit(s)	Timeline	Performance Indicators	Required Resources
F.2.a.	Work with student services and instructional managers to conduct usability testing among students, prospective students and other college and community stakeholders to improve the navigational structure and 508 compliance of the DVC website.	Director of Marketing and Communications, VPI, VPSS (or designee)	Marketing and communications unit and DVC management team.	2014-2016	Students know how and where to access the information that they need both from student services and academic departments to ensure their success.	The marketing office needs the addition of a content coordination or marketing assistant position to move beyond basic web maintenance.
F.2.b.	Work with college management team to assign "ownership" and review the college's 2,000 webpages for relevancy. Update or delete pages that are not relevant or up to date.	Director of Marketing and Communications	Marketing and Communications unit and DVC management team.	2014-2016	All faculty and all departments have current and accurate information on the college website to support student success.	The marketing office needs the addition of a content coordination or marketing assistant position to move beyond basic web maintenance.
F.2.c.	Work with the management team to ensure that departments and programs have adequate training and account access to keep their department pages updated through OmniUpdate CMS.	Director of Marketing and Communications	Marketing and Communications unit and DVC management team.	2014-2016	As campus faculty and staff identify areas of the campus website that need updating, they will have the resources and knowledge within their areas to make the necessary content updates.	The marketing office needs the addition of a content coordination or marketing assistant position to move beyond basic web maintenance.

ID1	Action Items	Lead Manager	Responsible Unit(s)	Timeline	Performance Indicators	Required Resources
F.3	Work with the district to help research and identify additional audio and video conferencing resource purchases to improve inter-district communications that will aid distance communication between individuals/groups between DVC and off-site locations.	District IT - supported by college IT.	District IT - supported by college IT.	2014-2016	More people can participate in inter-college meetings without the significant time and costs of travel between campuses.	District IT's time, Technology Committee's Time.
F.4.	Work with the district office to identify districtwide emergency communications solutions that all college emergency responders and communicators have access to use.	District Police, College/district PIOs, And campus safety coordinators/chairs	Police, marketing and communications, VPFA (safety?)	2014-2016	All students and campus personnel have a reasonably good chance of receiving notification in a crisis situation.	Costs unknown
F.6	Create an emerging technology Special Interest Group (SIG) to apprise the Technology Committee of new developments in communication technologies.	College Technology Systems Manager	Technology Committee	2014-2016	Periodic reports to the Information Technology Committee	3-6 hrs per month

III. Implementation and Evaluation

A. Implementation

The annual review and update cycle of the Implementation Grid will be coordinated with the DVC annual calendar for planning, program review, and student learning outcomes. This will facilitate the integration of program reviews and college planning with the annual updates of the Implementation Grid. The Technology Committee will prioritize which college-wide action items will be submitted for the annual resource allocation process. The following table shows the annual planning cycle of the Implementation Grid.

Annual planning cycle

Semester	Responsible Party	Activity
Late Spring – April/May	Co-chairs	Evaluate the prior year's technology plan action items and draft an annual report. Submit the annual report to the Information Technology Committee and to College Council.
Early Fall	Technology Committee	Review the current implementation grid.
Mid Fall	Technology Committee	Implement Identify criteria/standards Resources
Early Spring	Technology Committee	Review the current implementation grid.
Mid Spring	Technology Committee	Implement Identify criteria/standards Resources

B. Evaluation

The Implementation Grid will be reviewed and revised on an annual basis. A progress report of the previous year's activities will be presented to the College Council and to all constituent groups for information and feedback purposes.

While the Implementation Grid is updated every year, the strategic portion of the Technology Master Plan will be revised every three years. The current technology planning cycle will be aligned with the six year accreditation cycle so that a comprehensive review occurs before the Accreditation Self-Study Report is written. This way, every comprehensive review process will serve the needs of writing both the next Technology Master Plan and the next Accreditation Self-Study report with respect to technology resources.

Technology Planning Grid.

Year	Activity
2013	Review action items Close out the 2009-2013 DVC Technology Master Plan Start new technology plan Complete annual update report
2013-2014	Review Strategic Plan Begin writing a new technology plan Complete annual update report
2014	Implement technology plan Review action items Complete Annual Update Accreditation Visit
2014-2016	Review action items Complete Annual Update Review Strategic Plan Begin writing a new technology plan 2016-2022
2016	Review action items Close-out the 2014-2016 DVC Technology Plan Review action items Complete Annual Update
2017	Implement technology plan Review action items Complete Annual Update
2018	Review action items Complete Annual Update
2019	Complete Annual Update Review Strategic Plan Complete annual update report
2020	Implement technology plan Review action items Complete Annual Update
2021	Review action items Complete Annual Update Accreditation Visit
2022	Close out the 2016-2022 DVC Technology Master Plan Complete Annual Update Review Strategic Plan Begin writing a new technology plan 2022-2025 Complete annual update report

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