



FOOTHILL-DE ANZA
Community College District

District Technology Plan

2022-2023 Revision

Approved 06/14/2023

EDUCATIONAL TECHNOLOGY SERVICES



Moving Education Forward With Technology

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Educational Technology Advisory Committee Members

The members listed below represent stakeholders from throughout the district. They have brought invaluable insight to the technology planning process.

Jory Hadsell, <i>Chair</i> Vice Chancellor of Technology	Pam Eberhardt Executive Assistant, ETS
Sharon Luciw Associate Vice Chancellor, ETS	Chien Shih Associate Vice Chancellor, ETS
Marisa Spatafore Associate Vice President, De Anza College	Alex Harrell Web Administrator, De Anza College
Michael Murphy Faculty Member, Foothill College	Danny Acosta Chief, District Police
Chris Chavez Student Success Specialist, Foothill College	Lydia Daniel Adjunct Faculty Member, Foothill College
Abeer Alameer Faculty Member, De Anza College	Tom Dolen Librarian, De Anza College
Moaty Fayek Division Dean, De Anza College	John Fox Faculty Member, Foothill College
Nazy Galoyan Dean, De Anza College	Rocio Giraldez Betron Adjunct Faculty Member, Foothill College
Juan Diaz Web Support Technician, De Anza College	Marty Kahn Technology Resource Coordinator, ETS
Dennis Shannakian Student Activities Coordinator, De Anza College	Paul Szponar Librarian, Foothill College
Lené Whitley-Putz Dean, Foothill College	Zain Mustafa Student, De Anza College
Tim Shively Faculty Member, De Anza College	Zach Cembellin Division Dean, Foothill College
Al Guzman Administrative Assistant I, Foothill College	Thomas Ray Associate Vice President, De Anza College
Justin Schultz Director of Operations, ETS	

A Message from Chancellor Miner

Virtually every plan and decision we make in the Foothill-De Anza Community College District is focused through the lens of equity. This is most certainly true of the technology we deploy. Our use of technology supports equitable access to critical digital resources for all students, faculty, and staff.



Over the years, our technology planning efforts have kept our district at the forefront of innovation and access. Most recently, our technology preparedness was demonstrated with great clarity by the effects of the pandemic. As all of our stakeholders needed to pivot, literally over a weekend, to 100% remote instruction and operations, our readiness to support them was tested to the limits. I am proud to say we passed this test with flying colors. As we emerge from the disruption of the pandemic, I am confident our technology planning efforts will help us sustain some of the important gains we made while responding to the greatest emergency in our lifetime.

I am thankful for the efforts of the Educational Technology Advisory Committee in working closely with our college technology planning bodies to assure the alignment between college and district technology goals. Through this collegial collaboration, our district is optimizing our investment in technology and providing our students, faculty, and staff with a robust, reliable, and consistent educational and professional experience.

Given the substantial accomplishments of our most recent District Technology Plan, I am even more excited to see what can be accomplished in the next three years under this Plan.

I want to close with an expression of the deepest gratitude to Vice Chancellor Joseph Moreau who has provided exemplary leadership for all aspects of our technology efforts. When he retires as of April 30, 2022, his legacy to Foothill-De Anza will endure through his contributions to policy development and systems implementation, and his formation of a team of outstanding professionals. I could not be more proud of all my colleagues in Educational Technology Services.

Sincerely,

Judy C. Miner, Ed.D
Chancellor

Introduction and Overview

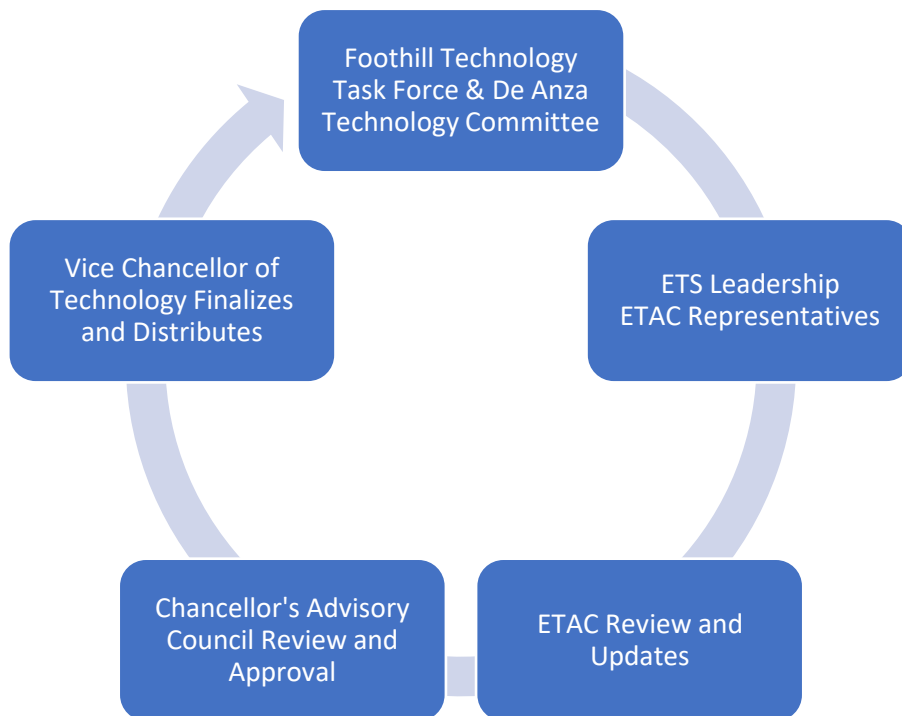
Supporting the Colleges and the District

Educational Technology Services (ETS) is a Central Services division that supports the technology systems and users at Foothill College, De Anza College, and District Offices. Educational Technology Services provides a district-wide approach to information systems, networks, information security, client services, classroom technology, help desk, institutional research and planning, and strategic technology initiatives.

The goals of the Education Master Plan and the Equity Plan for the Foothill-De Anza Community College District have been addressed in considerable detail in both the Foothill College and the De Anza College technology plans. The district strategic technology plan, in so far as it has been structured explicitly to support the respective college plans, is also addressing the goals of the Education Master Plan and the Equity Plan.

Development of the District Technology Plan

The District Technology Plan is a continuing three-year plan, updated annually via input from the college technology committees (Foothill Technology Task Force and De Anza Technology Committee) and through various instruments or needs assessments conducted each academic year. This information is shared with ETS leadership and the Educational Technology Advisory Committee (ETAC), which reviews modifications to the plan and sends those forward to the Chancellor’s Advisory Council. Upon review and approval from the Chancellor’s Advisory Council, the District Technology Plan is finalized and disseminated by the Vice Chancellor of Technology.



Supporting Remote Instruction and Operations

During the 2021-22 academic year, the effects of the Coronavirus global pandemic continued to impact the ability for the colleges and Central Services to maintain 100% on-site operations. For much of this time, a majority of staff continued to work remotely, online classes comprised a majority share of instruction, and various projects districtwide, including technology initiatives, necessarily shifted to ensure continuity of operations, flexibility as public health requirements changed, and increased service and support were prioritized. As such, some objectives and/or implementation goals planned for the 2021-22 academic year were either postponed or extended through the 2022-23 academic year.

Accreditation Support

With regard to regional accreditation efforts, specifically ACCJC Standard III.C, it is important to note that the colleges and district are closely coordinating their efforts to effectively deploy educational technology to support academic mission of the colleges. As this document confirms, the colleges have spent considerable time and energy identifying their strategic capabilities and goals relating to educational technology. The district strategic technology plan responds directly to the college plans and outlines in clear terms where and how ETS can support the technology needs of the colleges.

The following [functional map](#) delineates primary (P), secondary (S), or shared (SH) responsibility for colleges and the district, as related to Standard III.C.

Standard Number	Standard Description	College	District
III.C.1	Technology services, professional support, facilities, hardware, and software are appropriate and adequate to support the institution's management and operational functions, academic programs, teaching and learning, and support services	Shared	Shared
III.C.2	The institution continuously plans for, updates, and replaces technology to ensure its technological infrastructure, quality and capacity are adequate to support its mission, operations, programs, and services.	Shared	Shared
III.C.3	The institution assures that technology resources at all locations where it offers courses, programs, and services are implemented and maintained to assure reliable access, safety, and security.	Secondary	Primary
III.C.4	The institution provides appropriate instruction and support for faculty, staff, students, and administrators, in the effective use of technology and technology systems related to its programs, services, and institutional operations.	Primary	Primary
III.C.5	The institution has policies and procedures that guide the appropriate use of technology in the teaching and learning processes.	Shared	Shared

District Technology Plan 2021-2024

Technology Plan Structure



Strategic Capabilities

At the broadest level, the district has identified the strategic capabilities listed below. These are the specific capabilities the district strives to achieve with the support of technology. These capabilities also represent the institutional characteristics that need to be in place to support the technological goals and objectives of the colleges and the goals and objective of numerous other plans within the district around instruction, equity, facilities, and others. These strategic capabilities are not typically expected to change frequently, and the bulk of these capabilities were originally identified in the district’s 2017 Technology Plan and updated in the 2021 plan. The strategic capabilities are reviewed each year by the Education Technology Advisory Committee (ETAC).

#	Strategic Capability
1	Develop and maintain infrastructure and exostructure that supports the digital transformation of our colleges and Central Services organization.
2	Develop and maintain an agile product management methodology to support the efficient, effective, and timely completion of IT projects.
3	Partner with established and start-up technology firms to enhance the capabilities of the district and provide leading edge services for students, faculty, and staff.
4	Provide for the effective stewardship of district resources to promote efficiency, cost-effectiveness, privacy, and security.
5	Provide for rapid and agile instructional and operational shifts in response to catastrophic events that impact both on-campus and online infrastructure.

3-Year Goals

Based on the strategic capabilities listed above, ETAC has identified the following goals to be accomplished over the next three years. These goals are also essential in supporting the goals and objectives of the colleges articulated in their respective technology plans. The 3-Year Goals are reviewed each year by ETAC and are occasionally revised.

#	Goal Name	Goal Description
1	Modernization	Modernize district-wide applications to support greater access, efficiency, and effectiveness along with mobility.
2	Instructure	Improve district-wide infrastructure to support greater speed, reliability, and coverage.
3	Security	Improve information security at all levels.
4	Cloud Technology	Utilize cloud technology to optimize fiscal and staff resources.
5	Institutional Culture	Help transform the institutional culture around data management particularly regarding the requirements of FERPA, accessibility (ADA), copyright and fair use, and privacy and security.
6	Training & Professional Development	Increase training and professional development infrastructure and opportunities for faculty and staff.
7	Collaboration	Enhance collaboration between the colleges and ETS to promote innovation, efficiency, and institutional effectiveness especially in response to campus needs, such as regulatory compliance.

2023-2024 Implementation Objectives

Aligned to the 3-Year Goals listed above, implementation objectives intended to describe specific actions to be taken by ETS and other district staff in the 2021-2022 and 2022-2023 academic years were developed. As the district moves into the final year of the current technology plan, some objectives remain in progress and/or work is set to commence in the coming 2023-2024 academic year. Similarly, several new objectives reflect additional work to be prioritized in the coming academic year. Please note that any new objectives added for the coming 2023-2024 academic year are noted with an asterisk (*).

#	Annual Implementation Objective
Goal 1 - Modernization	
1	Implement the Banner 9 Self Service platform.
2	Begin the migration to the Banner NGS platform.

3	Investigate and develop new reporting and business intelligence tools.
3a	Implement Banner Ethos platform.
4	Implement a variety of productivity and support applications for both colleges and Central Services.
4a	Select and implement a new timekeeping system for all employees.
4b	Pilot a mobile device attendance application with interested faculty.
5	Upgrade Windows machines district-wide to Windows 10.
6	Explore avenues for effectively, securely, and ethically leveraging Artificial Intelligence (AI) capabilities. *
7	Support exploration of models for Augmented Reality (AR) and Virtual Reality (VR) for faculty/student interaction, collaboration, and delivery of instructional content. *
Goal 2 - Infrastructure	
8	Expand coverage of the wireless network and improve connection speeds at all district locations.
9	Upgrade various network and server equipment.
10	Model best practices regarding classroom technology decisions to ensure modern multimedia capabilities, effectively balancing intended classroom use with technological complexity to reduce user support needs while meeting user expectations. *
Goal 3 - Security	
11	Continue the use of <i>KnowBe4</i> information security training for all employees.
12	Conduct penetration tests and Payment Card Industry (PCI) compliance assessments.
13	Revise the district's Information Security Plan, including but not limited to current and/or planned cybersecurity measures, incident response procedures, and other operations. *
14	Implement security measures, including enhanced detection and mitigation tools and the elimination of end-of-life equipment across the district to further strengthen the district's security posture and comply with regulatory requirements. *
Goal 4 – Cloud Technology	
15	Migrate the key mission critical systems and infrastructure to the cloud.

15a	Upgrade ETS work order system and integrate with the district Lock Shop and Facilities.
Goal 5 – Institutional Culture	
16	Update data retention policy.
17	Provide training to all employees on compliance issues such as FERPA, accessibility, copyright, information security and privacy.
Goal 6 – Training & Professional Development	
18	Provide training for faculty and staff on Banner 9 Self Service components.
19	Work collaboratively with the colleges to increase and improve professional development opportunities.
20	Hire additional professional staff to develop and offer professional development and training programs for faculty and staff.
21	Provide training on the use of the SensusAccess accessibility conversion tool.
22	Continuously offer new and revised training for employees on information security.
Goal 7 - Collaboration	
23	Convene a district wide group to develop strategies and standards for accessible digital resources.
24	Support technical efforts with CCC Apply and Banner as colleges align local processes in support of a single college application for Foothill and De Anza students. *

It is the district’s goal to undertake a comprehensive review and update of the District Technology Plan in the 2023-2024 academic year to deliver updated 3-Year Goals (2024-2027) informed by the individual college technology plans and aligned to the District’s Strategic Plan.

Appendix A - Status of Current Implementation Objectives

The table below reflects the status of the existing implementation objectives (as of April 2023). As applicable, it is expected that any implementation objectives not completed by the end of the 2022-2023 academic year shall carry over into the 2023-2024 academic year.

#	Implementation Objective	Status (As of April 2023)
Goal 1 - Modernization		
1	Implement the Banner 9 Self Service platform.	Banner 9 self-service student registration is live; my profile and student record specification are under review and will be live in July 2023.
2	Begin the migration to the Banner NGS platform.	NGS Experience, CalGrant, CRM/Foundation and CCCApply are in development testing and will go live in 2023 against the Oracle hosted environment.
3	Investigate and develop new reporting and business intelligence tools.	In Progress
3a	Utilize Banner Pagebuilder.	No longer available in Banner SaaS. ¹
3b	Implement Banner Ethos platform.	Ethos platform implemented in our test and production environment; applications are in the process to convert to Ethos.
4	Implement a variety of productivity and support applications for both colleges and Central Services.	The ARMS software implementation is currently in progress. The Workflow software is under evaluation.
4a	Select and implement a new timekeeping system for all employees.	The new Liquid Office time keeping system will go live in June 2023.
4b	Pilot a mobile device attendance application with interested faculty.	The iClicker pilot program is currently on hold.
4c	Implement Banner Workflow module.	No longer available. ²
5	Upgrade Windows machines district-wide to Windows 10.	This is near completion. ETS continues to replace faculty and staff computers and continues to work with the colleges on the classrooms and labs as more courses are now being offered on campus.

¹ As no longer applicable, this has been removed from the list of 2023-2024 implementation objectives.

² As no longer applicable, this has been removed from the list of 2023-2024 implementation objectives.

Goal 2 - Infrastructure		
6	Expand coverage of the wireless network and improve connection speeds at all district locations.	The faculty offices/buildings now have WIFI. For the larger outdoor WIFI expansion project, we are in Phase 1 design which includes mainly the inner parts of campus. Phase 2 is athletic fields and parking lots.
7	Upgrade various network and server equipment.	The replacement network equipment for Phase 1 has arrived; however, replacement has slowed due to moving up replacement of the network security firewalls which will be complete by mid-May 2023. ETS has upgraded VDI servers at De Anza College and expanded the VDI servers at Foothill College.
8	Upgrade classroom, laboratory, and conference room presentation and interaction systems.	A few Zoom-enabled, flex and hyflex classrooms have been installed on both college campuses. Because the colleges have yet to set up 'hybrid' classes, ETS has stopped deployment in classrooms and are in the process of installing this type of technology in existing conference and collaboration rooms.
Goal 3 - Security		
9	Consolidate and streamline the district's Active Directory identity management system.	Completed
10	Continue the use of <i>KnowBe4</i> information security training for all employees.	Complete & Ongoing
11	Conduct a penetration test and Payment Card Industry (PCI) compliance assessment.	Partially Completed; More work planned
12	Provide standardized back-up for faculty and staff data files through Office365.	Completed
13	Implement two-factor authentication for employees with access to highly sensitive data.	Complete for all active employees
Goal 4 - Cloud Technology		
14	Migrate the key mission critical systems and infrastructure to the cloud.	In progress. Most of the mission critical systems are in the cloud and ETS is moving the college web services

		to the cloud as well. The student ID card was successfully moved to the cloud in 2022.
14a	Upgrade ETS work order system and integrate with the district Lock Shop and Facilities.	In Progress
15	Transform the ETS support expertise to address cloud infrastructure.	ETS staff participating in a number of vendor trainings and technology conferences to raise awareness and expertise in cloud technology in the 2022-2023 academic year.
Goal 5 – Institutional Culture		
16	Update data retention policy.	This is planned for later in 2023.
17	Provide training to all employees on compliance issues such as FERPA, accessibility, copyright, information security and privacy.	Postponed; this requires additional planning and discussion.
Goal 6 – Training & Professional Development		
18	Provide training for faculty and staff on Banner 9 Self Service components.	Completed
19	Work collaboratively with the colleges to increase and improve professional development opportunities.	Ongoing
20	Hire additional professional staff to develop and offer professional development and training programs for faculty and staff.	The district is currently exploring options.
21	Provide training on the use of the SensusAccess accessibility conversion tool.	Not yet started
22	Continuously offer new and revised training for employees on information security.	Complete & Ongoing
Goal 7 - Collaboration		

23	Convene a district wide group to develop strategies and standards for accessible digital resources.	An online accessibility subcommittee has been established within ETAC.
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Appendix B - Status of Current Implementation Objectives

The table below reflects the status of the existing implementation objectives (as of April 2024). As applicable, it is expected that any implementation objectives not completed by the end of the 2023-2024 academic year shall be reviewed for incorporation into subsequent annual updates to the District Technology Plan.

#	Implementation Objective	Status (as of April 2024)
Goal 1 - Modernization		
1	Implement the Banner 9 Self Service platform.	Banner 9 self-service student registration is live. This effort remains in progress due to a delay in final configuration and testing with the Business Office.
2	Begin the migration to the Banner NGS platform.	Migration to the Banner NGS platform is currently on pause as ETS evaluates the vendor's (Ellucian) product readiness and the district's most viable migration options.
3	Investigate and develop new reporting and business intelligence tools.	In progress
3a	Implement Banner Ethos platform.	Ethos platform implemented in our test and production environment; applications are in the process to convert to Ethos.
4	Implement a variety of productivity and support applications for both colleges and Central Services.	The ARMS software implementation is currently in progress. The Workflow software is under evaluation.
4a	Select and implement a new timekeeping system for employees.	The new Liquid Office time keeping system went live in August 2023.
4b	Pilot a mobile device attendance application with interested faculty.	The iClicker pilot program is currently on hold.
5	Upgrade Windows machines district-wide to Windows 10.	This is near completion. ETS continues to replace faculty and staff computers and continues to work with college staff on upgrades in classrooms and labs as more courses are now being offered on campus.
6	Explore avenues for effectively, securely, and ethically leveraging Artificial Intelligence (AI) capabilities.	In progress. An Artificial Intelligence subcommittee was formed out of ETAC, which will collaborate with the college technology committees.

7	Support exploration of models for Augmented Reality (AR) and Virtual Reality (VR) for faculty/student interaction, collaboration, and delivery of instructional content.	In progress; ongoing
Goal 2 - Infrastructure		
8	Expand coverage of the wireless network and improve connection speeds at all district locations.	Phase 1: For the larger outdoor Wi-Fi expansion project (mainly the inner parts of campus), ETS is still in the design phase waiting on final DSA approval (note that this phase is not Measure G funded) Phase 2: For this phase of the project (athletic fields and parking lots), ETS continues to meet with college leadership to discuss scope, cost, and a future third phase (note that this phase is Measure G funded).
9	Upgrade various network and server equipment.	Phase 1: The core equipment replacements were successfully completed by November 2023. Phase 2: Districtwide replacement of network switches in the network rooms and cabinets is still in the planning stage and will carry over into 2024-25.
10	Model best practices regarding classroom technology decisions to ensure modern multimedia capabilities, effectively balancing intended classroom use with technology complexity to reduce user support needs while meeting user expectations.	A few Zoom-enabled, flex and hyflex classrooms have been installed on both college campuses. Because the colleges have yet to set up 'hybrid' classes, ETS has stopped deployment in classrooms and are in the process of installing this type of technology in existing conference and collaboration rooms.
Goal 3 - Security		
11	Continue the use of <i>KnowBe4</i> information security training for all employees.	Complete & Ongoing
12	Conduct a penetration test and Payment Card Industry (PCI) compliance assessment.	Partially completed; more work planned
13	Revise the district's Information Security Plan, including but not limited to current and/or planned cybersecurity measures, incident	Completed & Ongoing; the district's Information Security Plan, in compliance with regulatory requirements, is updated annually and presented to the board. A focus for the 2024-25 academic year shall

	response procedures, and other operations.	be updates to existing incident response procedures and business continuity plans.
14	Implement security measures, including enhanced detection and mitigation tools and the elimination of end-of-life equipment across the district to further strengthen the district’s security posture and comply with regulatory requirements.	Ongoing efforts include deployment of Endpoint Detection and Response (EDR) in Winter 2024 and ongoing evaluation of potential 24x7x365 Managed Security Operations Center (SOC) services. Elimination of end-of-life equipment shall continue into the 2024-25 academic year.
Goal 4 - Cloud Technology		
15	Migrate the key mission critical systems and infrastructure to the cloud.	In progress. Most of the mission critical systems are in the cloud and the ETS team met with both colleges in November 2023 to discuss the web services cloud transition. This is still in the discovery stage.
15a	Upgrade ETS work order system and integrate with the district Lock Shop and Facilities.	In Progress. ETS is currently finalizing configuration of Freshservice (the replacement for the current KACE system) to be deployed by late April 2024 (Phase 1). Following initial deployment and sunset of KACE by July 2024, district Lock Shop (Phase 2) and Facilities (Phase 3) will be incorporated.
Goal 5 – Institutional Culture		
16	Update data retention policy.	This has been postponed to the 2024-25 academic year following updates to the <i>Computer & Network Use</i> and <i>Electronic Information Security</i> policies and procedures.
17	Provide training to all employees on compliance issues such as FERPA, accessibility, copyright, information security and privacy.	Postponed; this requires additional planning and discussion.
Goal 6 – Training & Professional Development		
18	Provide training for faculty and staff on Banner 9 Self Service components.	Completed
19	Work collaboratively with the colleges to increase and improve professional development opportunities.	Ongoing

20	Hire additional professional staff to develop and offer professional development and training programs for faculty and staff.	The district is currently exploring options
21	Provide training on the use of the SensusAccess accessibility conversion tool.	Not yet started
22	Continuously offer new and revised training for employees on information security.	Complete & Ongoing
Goal 7 - Collaboration		
23	Convene a district wide group to develop strategies and standards for accessible digital resources.	An online accessibility subcommittee was established within ETAC.
24	Support technical efforts with CCC Apply and Banner as colleges align local processes in support of a single college application for Foothill and De Anza students.	Discovery