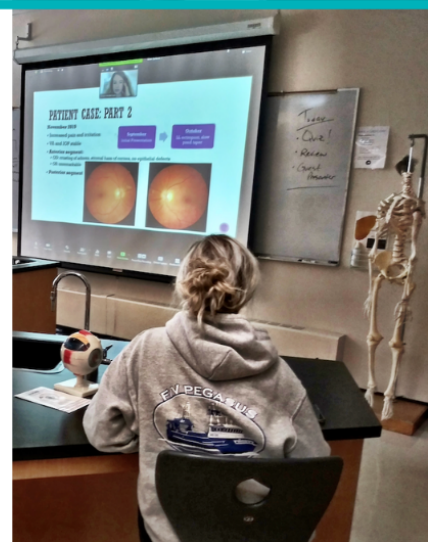


OREGON COAST COMMUNITY COLLEGE

INFORMATION TECHNOLOGY OPERATIONAL PLAN

2022-2028 | Updated July 2022



OREGON COAST
COMMUNITY COLLEGE

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Executive Summary

Oregon Coast Community College (OCCC) is an open-access, publicly funded two-year institution, one of 17 community colleges in Oregon, established in 1987 as a “contract college” operating under the regional accreditation of other larger Oregon community colleges. In 2014, OCCC leadership began the process to seek independent regional accreditation, which was earned in 2020 through the Northwest Commission of Colleges and Universities. The path to accreditation profoundly impacted all operations including the Office of Information Technology (OIT).

OCCC serves Lincoln County which encompasses nearly 1,000 square miles of land (and 200 square miles of water) with 73 miles of coastline on the Pacific Ocean. This terrain of great beauty and incredible ecological, biological, and geographic diversity is rapidly becoming a nexus for STEM-based activity. Lincoln County also faces many of the challenges of isolated rural communities, including sparse population, distance to services, pockets of poverty, dearth of public transportation, and other barriers. Access to reliable technology (both broadband itself, but also end-user devices) is by no means a given for our students in Lincoln County.

OCCC is committed to the use of technology to enrich our teaching and learning environments, to augment effective and seamless student interactions, to secure the data of students and employees, and to enhance functionality of the variety of activities encompassed across the College. While Technology planning is an operational function for OCCC, each year the institutional impact of technology grows. Information Technology is integral to many of the strategic goals of the College. Information Technology services are led and delivered by the Office of Information Technology (OIT), whose departmental mission is:

To strengthen support services and instruction to students by advancing the use of technology in all aspects of the College's operations. OIT is responsible for guiding, assessing, planning, developing, and executing state-of-the-art information technologies.

Process to Develop the ITOP

OIT authored this plan in partnership with College leadership. The ITOP was developed through collaboration between the Office of Information Technology and the executive leadership team, including the College President, along with input and review from the Information Technology Advisory Council (ITAC). The ITOP development process also considered prevalent and emerging trends within the IT environment for higher education, as summarized by [Educause 2022 Top 10 IT Issues](#) and the [New Media Consortium \(NMC\) Horizon Report](#).

Together, these sources identified the following IT trends to be considered in planning for the future:

- Cyber security
- IT's role in disaster preparation, mitigation and recovery
- Using digitization and digital transformation to produce technology systems that are more student-centric and equity-minded, including achieving full, equitable digital access for students by investing in connectivity, tools, and skills.
- Helping students prepare for the future by giving them tools and learning spaces that foster creative practices and collaborations
- Accelerating digital transformation to improve operational efficiency, agility, and institutional workforce development
- Ensuring faculty have the digital fluency to provide creative, equitable, and innovative engagement for students
- Creating a blended campus to provide digital and physical work and learning spaces
- Creating a cloud and SaaS strategy that reduces costs and maintains control
- Changes in how teaching and learning occurs enabled by IT, including the following: flipped classrooms, makerspaces, wearable technology, adaptive learning techniques, Internet of Things

This Technology Plan serves several purposes. It guides the work of the OIT to advance College Strategic Goals as enumerated in the College Strategic Plan. It provides clarity to the College community articulating priorities and long-term direction of OIT. The Plan provides a framework for the development of year-to-year IT planning and budget development including alignment with varying levels of resources over time. It is intended to be a living document that is reviewed regularly by College leadership to adjust to the changing higher education environment.



History of IT Planning & Implementation

The Technology Infrastructure Plan (TIP 2015-2020)

TIP 2015-2020 guided a profound reworking and enhancement of IT structures and systems at OCCC, equipping OCCC to meet the demands of independent regional accreditation (NWCCU) which was earned in 2020. Under that plan, OCCC

- Consolidated servers and implemented server best practices
- Enhanced data integrity, improving & securing data back-up systems
- Reorganized and increased IT staffing
- Replaced patch-worked learning management systems (LMS) with Canvas
- Migrated from Google to Microsoft for email and office applications
- Deployed web-based video conferencing with Zoom and Microsoft Teams
- Developed a new and enhanced college website
- Implemented student email

Large Impact Initiatives Carrying Forward

Certain initiatives begun during TIP 2015-2020 are a continued focus for the current IT planning cycle (2022-2028). Critical is continued and holistic enhancement of OCCC's cyber security environment. Cyber security in public education requires costly, sophisticated, and interdependent strategies including network design, detection systems, use policies, disaster recovery, and on-going staff training. This occurs in an environment where myriad bad actors are constantly evolving new methods of attack.

Also on-going, in 2018, OCCC learned our Enterprise Resource Planning (ERP) system "SharkNet" would be discontinued. This placed OCCC and the Office of Information Technology (OIT) in a reactive mode for large-scale change requiring the reallocation of major fiscal and human resources. While the impact of migration has been significant for OIT, other staff were impacted in even more profound and lingering ways. Time for training and learning curves for new ERP system processes is significant and can be expected to be a continuing effort for the OIT. Unfortunately, the implementation of certain applications (student information system, financial aid, registrar functions) continues to require staff time to diagnose, test and work with the vendor to resolve or work-around ongoing and lingering issues. Consequently impacted staff have not had time and mental capacity to also engage in fully learning and optimizing their use of the many other new technology-related systems at OCCC. A focus areas for OIT going forward is continued training and staff development. OIT will also provide the technical and system administration support for the remaining ERP modules – Financial and "Reach," the contact management module within the ERP.

Growing Reliance on Technology Mediated Teaching and Learning

Technology's importance in the delivery of education has been on an upwards trajectory for several decades. It took on even greater importance during the pandemic, at times providing the only access point for many students. Pandemic conditions further demonstrated the potential of technology as a vehicle to enrich teaching and learning.

Many individuals and communities were unable to adequately access critical online services during the pandemic, which OCCC strived to mitigate for students. Now that we are transitioning from pandemic to endemic conditions, the need for technology mediated instruction and student services continues. In fact, expectations have risen not only regarding access, but as a sea-change in instructional delivery which now must support instruction distributed across time and space.

Next Steps in Plan Activation

An important culmination of this process is communicating the plan to the College community. This will ensure the vision for technology use is shared among the constituencies served. Future communication on changes to, and progress on, the plan will also be conveyed on a continuing and timely basis.

It is important to establish a mechanism for overseeing the implementation of strategic and tactical technology plans, as each of the objectives requires an owner who will be responsible for moving the individual objective forward under the oversight of the OIT. Furthermore, it is imperative that the plan be considered holistically. A review of all objectives, regardless of the goals they are intended to support, reveals patterns and identifies common activities that can be leveraged in support of these goals. This plan should serve as a basis for the annual work plan process which outlines action items that align with strategic goals and objectives. Additionally, as some goals are dependent on funding, the ITOP will feed into the budgeting process for technology for the coming five years. An implementation grid will be used to manage the progress of achieving the objectives outlined in the ITOP.

IT Plan Goals

The Office of Information Technology Operational Plan (ITOP 2023-2028)
Technology Plan and Goals in Support of the College Strategic Plan (CSP)

OCCC's Integrated Planning System

This Information Technology Operational Plan exists within OCCC's comprehensive planning system, which consists of three levels of planning:

- Comprehensive: Mission/Vision/Values; Institutional Effectiveness/ Core Themes; College Strategic Plan
- Institutional: Budget, Facilities, Enrollment
- Operational: Assessment, Accreditation, Information Technology, Emergency Response, Business Continuity, and special project plans – which vary over time.

Operational plans support and advance the College Strategic Plan. The ITOP presents IT plans, goals and strategies that support and advance the College Strategic Goals.

The departmental mission of the Office of Information Technology is to strengthen support services and instruction to students by advancing the use of technology in all aspects of the College's operations. OIT is responsible for guiding, assessing, planning, developing, and executing state-of-the-art information technologies.

The ITOP was developed through collaboration between the Office of Information Technology and the executive leadership team including the College President, along with input and review from the Information Technology Advisory Council (ITAC).

Purpose of the Information Technology Strategic Plan

The primary purpose of this plan is to guide the work of the OIT to advance College Strategic Goals as enumerated in the College Strategic Plan and provide clarity around the long-term direction of OIT. The ITOP provides a framework for the development of year-to-year IT planning and budget development including alignment with varying levels of resources over time. It is intended to be a living document that is reviewed regularly to adjust to the changing higher education environment.

Strategic Plan Comprehensive Goals of OCCC 2023-2028

In 2021 the OCCC Board of Education completed a review of the College Mission (adopted in 2015). The 2021 review resulted in expansion of the phrase “a commitment to equity” to now read “a commitment to equitable outcomes.” In 2022, the President led the College community in a strategic planning process to develop the College Strategic Plan 2023-2028 (CSP). The CSP has five College Goals. Operational plans may address any of the five college goals; there is no expectation that operational plans (such as Information Technology) set goals in all five areas.

1. **Students at the Center:** OCCC is a Student-Centered College. OCCC strives to provide equitable outcomes for all students; Our culture is welcoming of all and values diversity of students and employees. College systems are designed and organized for student success; Educational Pathways are designed to ease access and streamline successful attainment of student goals such as degrees, employment, or transfer.
2. **Resourced and Ready:** Our People, Technology and Buildings are Student Ready, The College is Fiscally Strong and Sustainable. This strategic goal enumerates specific elements of being a student ready college and draws attention to the centrality of sustainable financial resources. Those elements are: College culture (for students and employees); professional development and training to fully optimize the many system enhancements of the past six years; technological and physical learning environments and well-maintained and forward-focused. Key elements of fiscal soundness will be aligning college enrollment (in times of or contraction) with fiscal resources, and the cultivation of alternative sources of revenue.
3. **Careers Built Here:** The Next CTE Building is Funded, Built and Occupied. The primary focus of this goal is to develop and pass a Bond measure providing the match investment to fund a new building for specialized Career Technical Educational (CTE); to construct and populate the new facility; and to ensure that new and existing CTE programs (regardless of location) are equipped to provide industry-relevant learning.
4. **First Choice Best Choice:** Lincoln County Thinks OCCC First for Education and Employment. We will reach out to all who may have interest in post high-school education with particular attention to those who have stepped away from education. We intend to be the first choice in Lincoln County for those seeking a college degree or certificate, workforce education, small business skills, GED, enrichment and life-long learning. Additionally, for those seeking employment in Lincoln County, OCCC will be perceived as an employer of choice due to our culture and working environment.
5. **Sharks Make Their Marks:** OCCC Positively Impacts Lincoln County. Our efforts will grow the living wage workforce; and support, engage with, and grow the business community. OCCC will also serve as a convener of civil community discourse and learning. Our students and our work will have meaningful and positive impact on our home, Lincoln County, Oregon.

College Goal: Students at the Center

OIT Supporting Goal: Technology solutions optimize the learning environment.

OIT will deliver technology solutions to provide effective and student-centered teaching and learning environments across OCCC in buildings and in “the cloud,” AND will provide for an infrastructure that supports future growth by

1. Ensuring an inclusive physical learning experience that includes updated computers, peripheral equipment, network connectivity, applications, and learning spaces that encourage flexibility and engagement
2. Ensuring all students can access, understand, and utilize digital learning, adaptive, and assistive technologies that support different learning styles and perceptual processes regardless of their digital literacy, background, abilities, or any unknown barriers. Using technology that focuses on learning approaches will make it easier for all students to engage, interact, and act on course content.
3. Ensuring technology is designed to improve and enhance the teaching environment for faculty. OIT will assist Academic Affairs in exploring applications and technologies that support this goal.

OIT Supporting Goal: Comprehensive and integrated technology planning.

OIT will ensure cross-functional planning and implementation of technology services occurs in partnership with leadership of Student Affairs, Academic Affairs, and College Support, so that technology solutions are designed to advance a student-centered environments and College comprehensive planning and goals, while working within available budgetary resources as they fluctuate over time.

1. Together with the President and Executive Team annually agree upon IT priorities, goals and budget, providing operational boundaries for the work of ITAC and OIT.
2. Convene the Information Technology Advisory Council (ITAC) regularly to develop and monitor short and long-range plans to strengthen campus-wide technology initiatives, instructional and content management systems, and academic computing facilities. And focus on improving access and usage of these facilities and meeting college community needs.
3. Communicate monthly with AMG to seek input, share progress on implementation of OIT Operational Plan, and provide updates on technology topics of interest and importance.



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IT support technician



OIT Supporting Goal: Technology solutions provides operational efficiencies for staff

Information Technology Services will assist with providing technology solutions that will ensure operational efficiencies in support of effective processes by staff across the College by:

1. Assessing the use of technology and office operations
2. Collaborating with constituents to provide guidance related to the implementation of new technologies and procedures
3. Researching alternative ways of conducting business that could leverage technology

OIT Supporting Goal: Training and professional development grow awareness of technologies and optimize the use of technology.

Information Technology Services will assess staff training needs, provide relevant training, and continually grow awareness of technology solutions. This will be accomplished by:

1. Continued assessment (formal and informal) of training needs of staff, providing training opportunities in support of technology currently being used and for future initiatives that enhance teaching, learning, and College-support functions
2. Continuing to enhance the knowledge of the faculty, staff, and students to align with industry best practices
3. Increasing awareness for training opportunities and resources
4. Collaborating with academic and administrative departments to maintain a consistent approach to highlighting technology initiatives and services

OIT Supporting Goal: Manage risk effectively with particular emphasis on Cybersecurity and disaster recovery solutions

Information Technology Services will continue to provide an environment where users can access data or systems and collaborate securely. IT will continue to implement strategies that reduce cyber risk, provide for business continuity and disaster recovery solutions. This will be accomplished by:

1. Leading and promoting a "security-first" culture to reduce risk to the organization and increase trust with students, employees and business partners.
2. Seeking creative ways of mitigating the high cost of cybersecurity including partnerships, cost-sharing, insurance, and grant funding.
3. Researching best practices for data backup/restore, data security and Business Continuity Disaster Recovery (BCDR) procedures; implement improvements where feasible and raise awareness for BCDR-related activities;
4. Engaging with Lincoln County governmental agencies on BCDR-related activities; maintain continued involvement in appropriate committees, programs and initiatives;
5. Exploring opportunities for using available resources/ (on-campus) locations for BCDR systems as an interim approach in lieu of a full fail-over hot site.

Ongoing Projects and Initiatives

Multiple ongoing initiatives and projects are managed by OIT that do not rise to the level of supporting a College Strategic goal, but nonetheless are essential to the effective operation of the College and/or OIT.

Business Continuity and Disaster Recovery

An IT disaster is defined as any condition or event that alters normal information technology services to such a degree that the mission-critical business operations of the institution are significantly compromised. OIT is continuing refinement of a Disaster Recovery Plan and processes, aimed at re-establishing IT services that support business continuity needs, outlining strategies for responding to a disaster and ensuring that appropriate back-up procedures, off-site storage, and co-location plans are in place. OIT developed a Disaster Recovery manual and procedures as part of the Lincoln County disaster recovery initiative. Coalesced contact information and a call list with procedures for IT backup and recovery was developed. OCCC will be a pilot school for Lincoln County's business continuity and disaster recovery initiatives. Refinement of disaster recovery planning and systems is ongoing.

IT Governance

IT governance plays a critical role in ensuring that decisions about technology are widely understood. OIT and College leadership will continue to enhance governance structures so decisions are made in a coordinated and purposeful way. A recent and effective addition to governance was the formation of the Information Technology Advisory Council (ITAC), made up of the Director of Technology and the Vice President of Administrative Services in collaboration with the Vice President for Student Affairs, Vice President of Instruction, and the Vice President of Engagement. ITAC participates with other academic and administrative units to develop short and long-range plans to strengthen campus-wide technology initiatives, instructional and content management systems, academic computing facilities, improving access and usage of these facilities, and meeting college community needs. Subcommittees augment ITAC and recruit additional expertise for topics, such as the College website.

Assessing for User Needs

An Information Technology survey is administered annually at the end of spring term. The survey was created to offer the college community an opportunity to provide feedback on the technology services offered. OIT also performs systematic data collection and analysis, to continually improve a framework for service delivery and support. OIT will continue to explore other vehicles for gathering end-user input.

Telecom Infrastructure

OCCC has an older Panasonic VOIP phone system which is coming to its end-of-life. Procedures for identifying and implementing a replacement system are ongoing.

Network Enhancement

The network infrastructure, established in 2009, supports daily campus activities and has grown organically. It provides the physical network interconnects including data exchanges between academic and administrative areas distributed across the entire three-site, four-building college. The fiber plant also supports the campus' telecommunications and building management systems (e.g. HVAC, fire alarms, door access, and security cameras). The original design topology and infrastructure (including a lack of fiber redundancy between buildings) cannot accommodate the rapid expansion of data flows and file transfers to and from the desktop machines and backup systems. A substantial replacement of the network infrastructure, incorporating an enhanced topology, is necessary.

Exploring and Advocating for IT-Supported Innovation

At OCCC, an important role of OIT continues to be the exploration of new ways of accomplishing the work of the college, and ensuring that leadership and staff across the college understand what could be possible. For example, makerspaces could fulfill a role in some instructional areas. The “Internet of Things (IoT)” consists of devices (i.e., “things”) that compute, are networked, and interact with the environment with the intention of collecting sensory data and/or manipulating the local environment. The coming decades will see a new wave of personalization enabled by big data and artificial intelligence. Higher education has the potential and the imperative to lead that transformation. OIT will continue to investigate IOT initiatives that enhance the strategic initiatives of the College.

Network Infrastructure

OIT continues to make substantial upgrades providing for a scalable and flexible architecture to support 1G connectivity. OIT has replaced several switches and performed configurations allowing for Quality of Service (QoS) in support of increased traffic and bandwidth. Also, as part of the network enhancements, OIT has continued to improve access by mobile technologies to support pedagogy and student success. Faculty, staff, and students will be leveraging the UniFi Wireless Access System for faster and more seamless access to the wireless network.

Classroom and Faculty/Staff Technology

OIT continuously monitors the college computing environments to ensure they are as up to date as resources allow and are equipped with the necessary software needed for classes and disciplines that take place in these rooms. Zoom as a tool for hybrid and streaming classrooms continues to be a success. Canvas is currently being used by faculty and students for classroom instruction, networking and training.

Moving to smaller-footprint computing modules is creating a more expansive and inviting computing environment for students. OIT is examining an ITIL (Information Technology Infrastructure Library) framework to standardize the selection, planning, delivery, and support of IT services. The management of technology assets became more efficient through the installation of the Spiceworks Agent. All computers connected to the network are now being monitored by Spiceworks, which automatically records hardware specifications, specific applications and the software running on the machine. In addition, Spiceworks provides a new robust ticketing system for use by faculty, students, and staff.

Sustainability and Cost Recovery

OIT intends to develop a cost recovery model for provisioning IT resources and services at a level that is appropriate and does not jeopardize the ability to remain committed to the mission and strategic objectives of the institution.

Project Approval Process

To promote a more coordinated approach to IT decision-making and investments, OIT has developed an approval process for new projects. Project approval criteria include consideration of the proposed project’s benefit and need, its anticipated institutional impact, and its alignment with the IT strategic plan.

Communication, Training, and Outreach

Through improved training and email phishing testing, OIT has made great strides improving the security of college services. OIT actively participates in orientation for new students and faculty. Paylocity has been instrumental in providing links and reminders for required trainings. OIT also plans to provide training and support for the use of resources to promote the Library's expansive e-resources that are available to faculty and students.

Budget and Administration

New procedures were recently implemented to streamline the budget request process for IT purchases. Technology requests are standardized utilizing templates to capture requests received from the Academic and Administrative areas. These new practices will require communication, assessment, and refinement depending upon effectiveness.