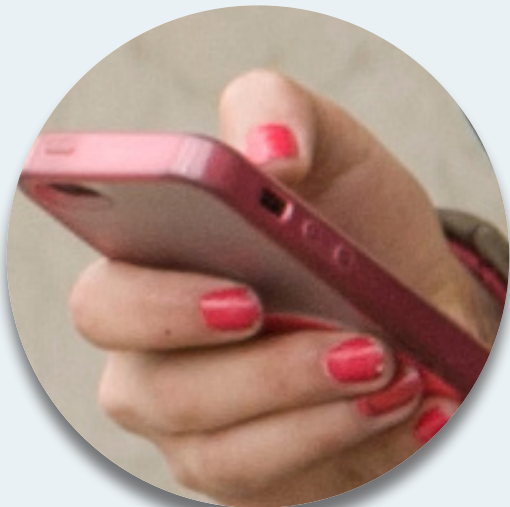


Campus Technology Services



**Annual
Report
2017-18**

Message from the CTO



Sean Moriarty

CTO

State University of New York at Oswego

A handwritten signature of Sean Moriarty in black ink.

2017-18. Highlighted projects and programs completed support initiatives central to the of the college, including:

- The Digital Direct Access (DDA) and Open Educational Resources project help to address the affordability of college and lower financial barriers to a SUNY Oswego education.
- The data center redesign project done in partnership with Facility Services cut the data center in half and reduced energy consumption in support of the campus's drive to be environmentally sustainable.
- Improving the inclusivity of our technology ecosystem by focusing more on accessibility of our electronic IT resources.

This document lists CTS achievements in the broader context of supporting the College's strategic initiatives. It is important to note the success of these projects are always measured in terms of students graduating, succeeding and ensuring we create an environment for our students to thrive in light of our College's mission.

The past year was the second year of the SUNY Oswego's IT strategic plan *The Digital Campus - Technology for an Enhanced Tomorrow*. Each year we execute the plan and move closer to creating our vision of the Digital Campus - a location with:

- Seamless anytime, anywhere access with intuitive easy-to-use systems
- A highly skilled workforce that utilizes technology in innovative ways
- Easy, secure access to data to support decision making
- Access to technology essential to succeed and thrive

The Digital Campus plan is tightly aligned with the strategic priorities outlined in the College's *Tomorrow - Greater Impact and Success* plan. A balance of innovative and transformative technology with established, robust systems, executed with effective and efficient implementation and support by adept practitioners and expert support professionals are key enablers assisting the College to achieve its mission and strategic goals. The goals of the Digital Campus plan map directly to the goals of the *Tomorrow* strategic plan in a manner that is shown in Appendix I of this annual report.

Over the past year, CTS can be proud of our many accomplishments made either in support or in collaboration with a wide variety of partners during

Goal I

Students, faculty and staff thrive by seamlessly integrating technology into their teaching, learning and scholarly activities.

OBJECTIVE 1 - PROVIDE A DIGITALLY RICH ECOSYSTEM THAT ENCOURAGES ACCESS TO TECHNOLOGY

Facilities Support

Campus Technology Services works closely with Facilities in the design and construction of new spaces on campus. The joint goal has been to create a digitally rich campus, allowing faculty to integrate technology seamlessly into their teaching. Projects done this year include:

- Wilber Tower construction - The Wilber Tower project, the final step in bringing the School of Education together in one series of buildings will be ready for occupancy in late Fall 2018. There are eight newly designed classrooms with extensive technology and flexible spaces. The top floor has state of the art classrooms and breakout spaces for Counselling and Psychological Services.
- Tyler Hall Phase II - Construction continues in Tyler Hall Phase II for Theater, Art and Music. The new construction will allow Art to move into new spaces in Winter 2019, while construction continues on the West portion of the building during the coming year.
- The downtown Oswego location of the Office of Business Community Relations was opened in September 2017 with several high tech rooms and a network connection to campus.
- MCC Student Activity Center Design - A new student space will be put in the lower level of Swetman Hall. The space will provide students with a new activity center, ready for use in Spring 2019.
- Arena Sound upgrades - the sound system in the arena was upgraded to provide users of the space an improved experience.
- Smaller projects included Lanigan 25, Building 12 Mailroom, and the Hockey Hall of Fame in the Arena.

TIP Grants

TIP grants are annual funding provided by the Campus to fund academic initiatives that relate to instruction, student usage, improving student usage, and/or improving student learning through the use of technology. Priority is given to new and innovative or trial initiatives, which can possibly later expand on campus. Nine requests were awarded some portion of funding for a total of \$72,000.

Examples include Communication Studies acquiring a portable television broadcast system, giving students real world experience in broadcast journalism; new digital editing computers for the Cinema and Screen Studies Editing and Post Production lab; creation of a hybrid Maker Space for Art's studio and graphic design students; the Theater department's move to a digital format to manage all productions.



Communication Studies Cinema and Screen Studies Edting Post Production Lab

Classroom upgrades

CTS upgraded a series of classrooms to provide instructors with access to high quality equipment for instruction and presentations. After four years of upgrades, virtually all classrooms are digitally capable.

Goal I

This year's projects included:

- MCC Auditorium new projection
- MCC 133 & 201
- Penfield Speakers Corner classroom opened
- Mahar 116
- OBCR Downtown conference rooms and digital signage
- SUNY Oswego in Syracuse at the Metro Center addition of digital signage
- SUNY Oswego in Syracuse at the Metro Center Building Classroom upgrades (6 classrooms)
- 118 Rich Hall
- Arena sound upgrade
- Park 315 screen replacements
- (11) classroom computers replaced
- Laker Rm 11 mobile AV cart with projection



Marano Campus Center Auditorium (Room 132) with new projector.

Computer Lab Replacements

CTS upgrades general purpose classrooms on a three year rotation. Departmental labs fall into plans that vary from receiving gently used equipment to four year upgrades. Overall the campus offers students over 1,000 PCs, Macs or chromebooks to utilize for their academic needs. To enhance security in the labs, CTS has upgraded all Windows lab machines to Windows 10, and implemented a new patching plan to ensure they have the latest security enhancements.

Upgrades for the last year included:

- MCC 202 & 206
- Rich 322
- Shineman 448, 130, 208, 210, 377,404
- Park 102
- Park 208
- MCC 255
- Penfield lab Macs, 24-hour room Macs
- Lanigan 20
- Shineman 406
- Shineman 382
- Laker 115 (used)
- Sheldon 337 (used)
- Park 115 (memory and hard drive upgrades)
- BHI Lab creation
- Mahar 6 (addition of data and Macs)

Faculty Computer Replacement

CTS revamped the process for providing computing equipment for incoming faculty. Working with Office of Research Services, together we streamlined the process for early arrivals to ensure equipment is delivered and ready for their start date.

Over the last year, 74 faculty and 24 VAP received replacement computers.

OBJECTIVE 2 - POSITION FACULTY AND STUDENTS FOR SUCCESS BY ADDRESSING ACCESS AND AFFORDABILITY OF TEACHING AND LEARNING RESOURCES

Learning Materials Projects

The College is pursuing two projects that work to enhance Learning Materials students use in class. The project started as an electronic textbook adoption

Goal I



program, but as it progressed, it morphed into multiple opportunities in both digital and printed format.

- Inclusive Access – This project allows students to receive electronic materials on Day 1 of classroom through a link in Blackboard. The students are charged up front for the materials, usually at a 15% - 60% discount from the printed materials. Along the way we have created new partnerships, adopted new technology, and streamlined the billing process.
 - Fall 2016 - 5 sections, 340 students
 - Spring 2017 - 10 sections, 1,040 students
 - In Fall 2017 - 30 sections and 1,715 students participated.
 - In Spring 2018 – 36 sections and over 2,000 students participated.
- Open Education Resources – The State of New York has set aside \$4M dollars for SUNY to invest in OER. Oswego received \$20,000 and offered grants to faculty who wanted to implement these resources into their classes. Five faculty members received grants to redesign their classes and put >51% OER materials into their class.

Excelsior Scholarship software development

As Excelsior was rolled out in the state of New York, a number of systems were modified to provide timely information for staff implementing the scholarship program and to aid students in staying on track. The Excelsior process this year was fairly time intensive, and more modifications are expected as the program moves into its second year.

ROI communication modifications

Communication to senior students was modified to enhance awareness of ROI and the process for receiving the funds.

Goal II

Our community is efficient and creates value with our technical resources

OBJECTIVE 1 – SUPPORT STUDENT SUCCESS BY LEVERAGING TECHNOLOGY TO ENABLE DATA-DRIVEN DECISION-MAKING

Mobile App Upgrade

The Oswego mobile app changed platforms and received a complete facelift as it was rolled out. A number of new services were added to enhance student's ability to see their DegreeWorks plans and handle small enrollment tasks.

OBJECTIVE 2 – SUPPORT NEW DIGITAL BUSINESS MODELS BY ENSURING SYSTEMS AND PROCESSES ARE AGILE

Over the last year, the Administrative Technology team has executed a series of projects to ensure the campus gains access to the latest software and have implemented them to allow campus work processes to be client-friendly, effective and efficient. Major projects include:

Implementation of Banner 9

Oswego was one of the first colleges in the country to implement Banner 9 when it was rolled out on campus in October 2018. Banner 9 will be required to operate many administrative processes in 2019, and having it in production early allowed departmental users to become accustomed to it while having Banner 8 running in parallel. Some Banner 8 modules will be removed in Fall 2019 to prepare for the new business processes that Banner 9 brings. Banner 9 is intended to enhance the user experience. It expands the browsers beyond Internet Explorer to include Chrome. Other new features include:

- Improved navigation
- Modernized user interface with industry standard web controls like zoom
- System messaging
- Multiple record views
- Lookups and filters
- Tablet friendly

Over the last year, investigation, selection and the start of a year long implementation of a new Client Relationship Management system to assist the admissions process has been taken on. The major stakeholders in this joint project are Undergraduate Admissions, Graduate Admissions and CTS. Other stakeholders include Extended Learning, Marketing and Institutional Research, and International Students.

OSWEGO MOBILE APP

DINING IS THE MOST POPULAR SECTION

**12,000 INSTALLS
2017-2018**



Goal II



Slate was selected as the new system, and it was implemented in Graduate Studies in September 2018. Undergraduate Admissions started implementing the system in May and it will be used this year as individual modules are delivered on a just in time basis as required for various parts of the admissions process. The system promises to enhance personalization to the recruiting and admissions process, as well as improving reporting capabilities. Additionally it will help streamline activities with the departments that work with Admissions for admitting students.

OBJECTIVE 3 – ENSURE CORE ADMINISTRATIVE SYSTEMS ENABLE ENHANCED SERVICE TO OUR COMMUNITIES

Accessibility

A major focus for the campus was improving the accessibility of our electronic IT resources. This included the campus website, third party application procurement processes and classroom materials. Improving accessibility helps to foster a culture of inclusivity on campus. Removing technical barriers assists all students and end users who use several methods for gathering content, information and learning. Work on this program will be continuous in the coming years.

Preferred Name Policy

The campus Preferred Name policy, created to be consistent with Title IX federal law protecting students and employees against discrimination based on gender identity and expression was developed with stakeholders from several units, including CTS. Implementation of the policy led to several changes inside IT systems, which were executed in September 2017.

Goal III

Service excellence provides efficient support through robust, green and secure infrastructure and processes.

OBJECTIVE 1 – PROVIDE A ROBUST INFRASTRUCTURE THAT DELIVERS ANYTIME, ANYWHERE SERVICE

Data Center Renovation

To assist the campus's effort to reduce our carbon footprint, Facilities Services and CTS completed a data center renovation in February 2018. Over the last five years, much of the campus infrastructure has moved to the cloud. Over 90% of the remaining infrastructure has been virtualized, thus reducing our need for physical rack space. The renovation halved the size of the facility, improved the power system in the space, and modernized the cooling systems.



New datacenter layout.

Network

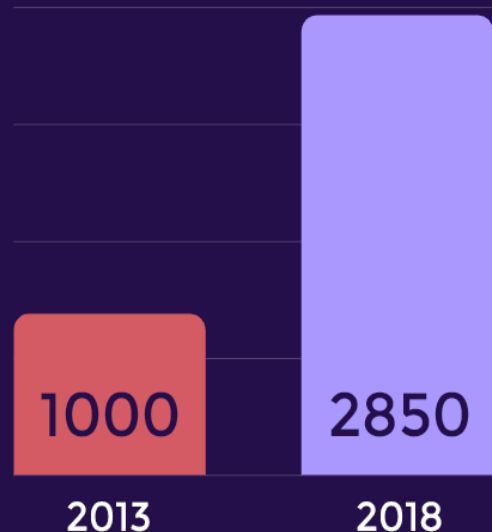
The campus network continued its multi-year improvement plan. Changes made over the last year include:

- Replace all network switches in Marano Campus Center - Swetman, Poucher and the Arena
- Doubled the campus internet pipeline to 6 gigabits

for September 2017

- Firewall and Intrusion Detection and Prevention (IDP) system installed June 2017
- The new OBCR downtown location was connected with the campus network

INCREASE IN THE NUMBER OF WIRELESS ACCESS POINTS **285%**



Between 2013 and Summer 2018, the number of wireless access points has jumped from 1000 to 2850, a 285% increase.

OBJECTIVE 2 – BALANCE OPENNESS, AGILITY AND SECURITY

Security

Security is vital to protecting our systems and keeping our data safe. But security is more than just hardening campus systems and restricting access, it is also savvy technical users who handle data and electronic resources with the appropriate care and respect required. Work was done on both ends of security over the last year, both improving security on our systems and also educating users on the many risks in our technical environment.

Goal III

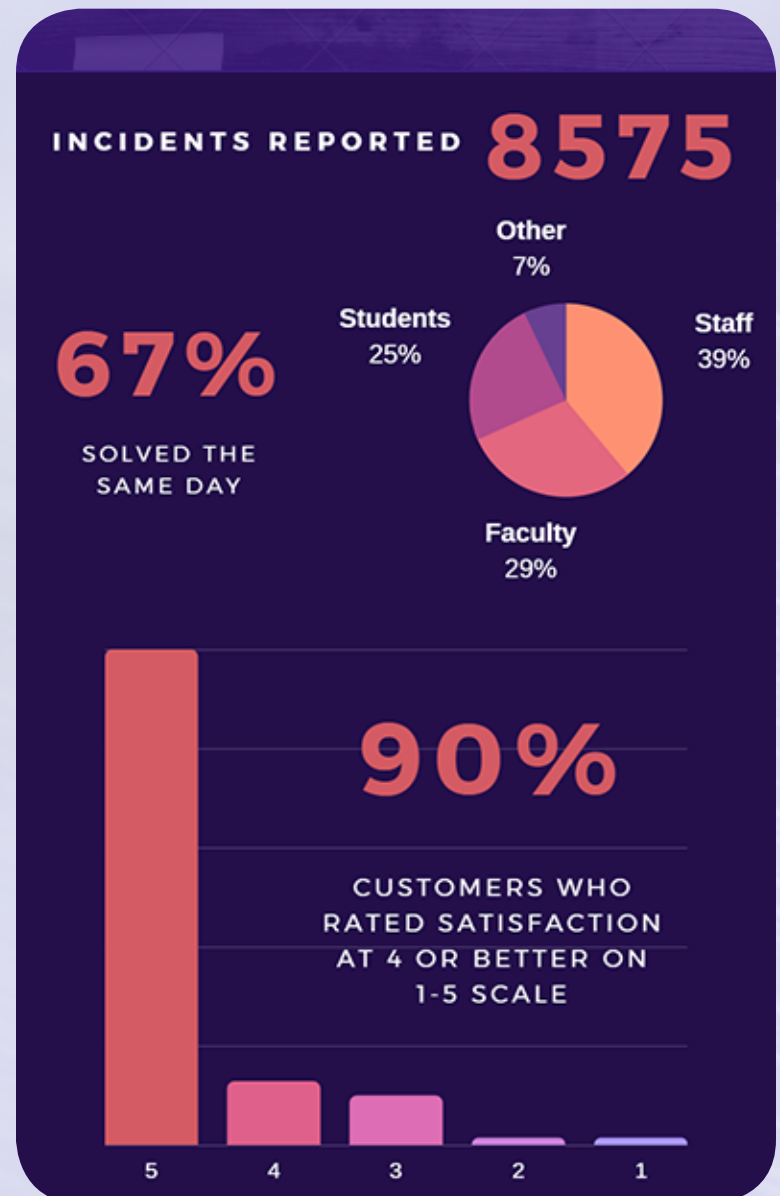
- Cyber Security Month (October 2017) - CTS had a vigorous agenda for October 2017's national Security Awareness month. Activities included weekly education sessions on topics such as phishing and secure home computing and the first annual Security speaker night. Over 75 students and staff assembled to hear security tips from individuals working for a regional security firm.
- Security training - mandatory security awareness for all faculty and staff.
- Cylance implemented as the new end-point security system - improving the campus end-point protection to enhance virus and spyware security. Cylance is a modern system, which does more predictive analysis on how likely a file is to be malicious, improving from the old model of signature based analysis. The system was implemented in Summer 2018.
- The campus has reviewed all processes and systems around Payment Card Industry (PCI) compliance. The project has been a multi-department program involving Finance, Auxiliary Services and Alumni & Development. Many processes and policies have been changed to enhance security of our systems. Additionally, a new training program has been implemented to improve awareness of roles and responsibilities in keeping the campus PCI secure.

OBJECTIVE 3 – PROVIDE USER-FRIENDLY, EFFICIENT PROCESSES WITH SKILLED STAFF TO DELIVER SERVICE EXCELLENCE

CTS is generally involved in the purchase of all computer hardware and software for the campus. We consult with and provide quotes to faculty and staff for their purchases. We provide updated quotes of standard campus configurations on our website, but also started a self-serve quote request form for people to use when they need something outside of the standard. Employees use an online form to indicate what hardware they need and it's specifications. This has helped streamline the request process and allowed us to deliver quotes more efficiently.

This past year, CTS Helpdesk processed over 8,500 incidents. The majority of these calls, 67% are resolved within the same day and 46% are resolved within the same hour.

CTS installed approximately 800 computers as part of faculty computer replacements, new faculty purchases, departmental purchases, and academic classroom and lab computer replacements. The continued use of a workflow allows the process to be followed from procurement through post-installation.



Goal IV

Effective planning and governance ensure campus priorities are achieved

OBJECTIVE 1 – DEVELOP IT FUNDING MODELS THAT SUSTAIN CORE SERVICE, SUPPORT INNOVATION, AND FACILITATE GROWTH

With the assistance of IT Steering, CTS developed models for funding and upgrading labs on a rotating basis, as well planning long-term infrastructure needs. With campus assistance, Oswego has been able to replace most of our end-of-life campus network equipment.

OBJECTIVE 2 – IMPLEMENT AN IT GOVERNANCE MODEL THAT OVERSEES THE IMPLEMENTATION OF THE STRATEGIC PLAN AND ASSURES ALIGNMENT WITH STRATEGIC GOALS

IT governance is handled with several committees on campus. The committees include Campus Technology Advisory Board (CTAB), CTAB Executive committee, IT Steering and Information Technology Council, which is a branch of Faculty Assembly.

IT STEERING COMMITTEE

- Kelly Roe (chair; Art)
- Mark Hardy (CTAB chair; Technical Education)
- Theresa Gilliard-Cook (ITC chair; Extended Learning)
- Sean Moriarty (CTS)
- Kathleen Evans (Student Affairs)
- Adrienne McCormick (CLAS)
- Nicole Decker (CTS)
- Vicki Furlong (Finance)
- William Bowers (SRS)
- Jerret Lemay (Registrar)
- Michael Pisa (CTS)
- Marcia Burrell (Curriculum and Instruction)
- Jill Pippin (Extended Learning)

CTAB EXECUTIVE COMMITTEE

- Mark Hardy (CTAB chair)
- Kelly Roe (IT Steering Chair)
- John Kane (Technology Education Subcommittee chair)
- Theresa Gilliard-Cook (ITC chair)
- Sean Moriarty (CTS)

INFORMATION TECHNOLOGY COUNCIL

- Eric Blanchard (Political Science)
- Ritu Radhakrishnan (Curriculum & Instruction)
- Theresa Gilliard Cook (chair, Extended Learning)
- Mark Hardy (Technical Education)
- Paul Leary (Music)
- Emily Mitchell (Library)
- Sean Moriarty (CTS)

Conclusion



The projects listed above outline the major initiatives of CTS. Central to these achievements is the hard work of the dedicated staff in CTS. The commitment to service is recognized by all staff in CTS and the students who work at the Helpdesk, in the Audio/Visual department the computer labs and Telecommunications. People are the key to the service provided by CTS. CTS staff are widely recognized for their commitment to service and achievement.

Several staff contribute to the SUNY system by working on the Executive boards of the following SUNY and higher education associations:

- Nicole Decker - SUNY Technology Conference (STC) Planning Committee
- Katherine Dutton - SUNY Center for Online Teaching Excellence, Open SUNY LMS Administrators
- Daniel Laird - SUNY Computing Officers Association (COA) Chair. SUNY Electronic and Information Technology (EIT) Accessibility Committee. HighEdWeb National Conference Audio Video Chairperson.
- Sean Moriarty - SUNY Council of CIOs (CCIO) Vice-Chair. Co-Chair Educause IT Organizational Staffing and Finance committee
- Christopher Palian - SUNY COA Webmaster
- Michael Pisa - SICAS Board Chair, ITEC Board member

CTS Staff also contributed to higher education at large with the following presentations and publications:

- Matt Brooks
 - *Patching a Diverse Set of Campus Computer Labs Using LANDesk*, LabMan 2018
- Tyrone Johnson-Neuland
 - *Live Squared - Live Streaming and Live Captioning*, SUNY Technology Conference
- David Kahn
 - *Performance, Users, Applications, Inventory - We Have it All*, SUNY Wizards and SUNY Technology Conference.
 - *Using Slack to Change Team Dynamics*, SUNY Wizards.
 - *We Are Encrypting Our Mobile Devices, Are You*, SUNY Technology Conference.
- Dan Laird
 - *SUNY Accessibility Roundtable*, SUNY Technology Conference.
- Sean Moriarty
 - *It Takes a Village to Create the Digital Campus*, RTM Conference.
 - Educause Review, *Building a Culture of Accessibility in Higher Education* (published July 30, 2018).

Goal Alignment

IT Strategic Plan Goals	Tomorrow Plan Impacts					Academic Affairs Goals				
	Impact 1 Students & Graduates	Impact 2 Education Ecosystem	Impact 3 Communities & Partnerships	Impact 4 Institution	Impact 5 Grand Challenges	Goal 1 Enrich academic excellence	Goal 2 Support personal growth	Goal 3 Provide educational opportunity	Goal 4 Promote social responsibility	Goal 5 Demonstrate accountability
Students, faculty and staff thrive by seamlessly integrating technology into their teaching, learning and scholarly activities.										
1.1 Provide a digitally rich ecosystem that encourages access to technology		✓	✓		✓	✓			✓	
1.2 Position faculty and students for success by addressing access and affordability of teaching and learning resources	✓	✓						✓		
Our community is service oriented, efficient and creates value with our technical resources										
2.1 Support student success by leveraging technology to enable data-driven decision-making	✓			✓				✓	✓	
2.2 Support new digital business models by ensuring systems and processes are agile				✓			✓	✓		✓
2.3 Ensure core administrative systems enable enhanced service to our communities	✓		✓	✓				✓	✓	
Service excellence provides efficient support through robust, green and secure infrastructure and user-friendly processes										
3.1 Provide a robust infrastructure that delivers anytime, anywhere service	✓	✓	✓	✓	✓				✓	
3.2 Balance openness, agility and security		✓	✓	✓					✓	
3.3 Provide user-friendly, efficient processes with skilled staff to deliver service excellence	✓			✓			✓	✓		
Effective IT planning and governance ensure campus priorities are achieved										
4.1 Develop IT funding models that sustain core service, support innovation, and facilitate growth	✓	✓		✓			✓			✓
4.2 Implement an IT governance model that oversees the implementation of the strategic plan and assures alignment with strategic goals	✓	✓		✓			✓			✓

TIP Grants



Principle	Department	Award	Description
Pat Parimi	ADWISR, Physics & AGS	\$15,700	This grant supports a collaboration between the Advanced Wireless Research Center (ADWISR), Physics and Atmospheric and Geological Sciences. The proposal builds upon the previous experience of ADWISR in developing novel wireless sensors, antenna and radar systems, strong experience of Physics in cosmology and, AGS in radiation physics and weather radars, and paves the way for innovative interdisciplinary curriculum. The curriculum development involves four courses offered in these disciplines which will teach students how to build and utilize equipment that studies the cosmic microwave background (CMB), which is background radiation leftover from the early stages of the Big Bang. AGS courses will use the equipment to train students in wireless radar and transmit and receive modulation design. The radar and signal propagation data will be used to determine precipitation of particles in the atmosphere, rain and fog droplet sizes.
Kathleen Blake	Anthropology	\$3,000	This grant supports Anthropology receiving three laptop computers for use in the anthropology forensic and archaeology labs. The new equipment will allow students to integrate the newest computer applications for data collection and analysis. Among the primary uses will be forensic analysis using Fordisc software, as well as Osteoware - software managed by the Smithsonian Museum of Natural History for recording human skeletal materials.
Cynthia Clabough & Jennifer Knapp	Art & Theater	\$8,100	This grant supports a collaboration between Art and Theater to obtain a dye-sublimation printer to explore this technology and incorporate into the studio process being taught. The printer will reside and be shared from the Art department's "Maker Space". The printer will support several studio degrees offered by Art, such as graphic design, illustration, print making and ceramics. It will support several areas in Theater including costume and set design as well as being useful for theatrical productions.
Patrick Mochler	Communication Studies	\$12,900	This grant supports Communication Studies acquiring a portable television broadcast system, giving students real world experience in broadcast journalism. Implementing the "Live U" system will allow for live reporting which will be used in the classroom as well as in news production. The platform enables professors and students a tool which can provide a wide range of live content, including events they otherwise may not have been able to cover, and those where a live feed is needed.
Serenity Sutherland	Communication Studies	\$3,600	This grant supports the Communication Studies obtaining two virtual reality workstations for project-based student learning and cross-disciplinary faculty collaboration. The VR equipment will be integrated into the curriculum of a variety of Communication Studies courses, including "Introduction to New Media" and "Integrated Media and Design".
Josh Adams	English and Creative Writing	\$8,500	This grant supports the acquisition of new digital editing computers for the Cinema and Screen Studies Editing and Post Production lab. The addition of the latest digital tools to a space with analog devices provides students with a unique opportunity to engage critically with image mediums and processes. The skills developed from the tools will not only encourage thoughtful creativity, but prepare students for occupations in disciplines such as film archiving, preservation and restoration.
Patricia Krauss	Office of Learning Services	\$2,100	This grant supports the use of technology to expand tutoring to the SUNY Oswego in Syracuse branch campus. Currently, tutoring is offered for a multitude of 100 and 200 level courses as well as several upper level courses at the professor's request. Adding equipment in MLSC, the Writing Center and Syracuse will allow the expansion of tutoring beyond the Oswego campus. If the one-year pilot is successful, it may be possible to expand the service to include SUNY Oswego online students as well.
Cara Thompson, Chris McEvoy & Keli DiRisio	Art - Studio & Graphic Design	\$7,000	This grant supports the creation of a hybrid Maker Space for Art's studio and graphic design students. The funds will allow Art to acquire cutting edge technology to serve as an incubator for projects combining students from these areas. New technology will include "Draw Bots", iPad Pros for drawing, an HTC Vive unit allowing artists to create in a virtual 3-D space and projection mapping software and projectors for a Fall 2018 collaborative initiative.
Cole Sostak & Jennifer Knapp	Theater	\$11,000	This grant supports the Theater department's move to a digital format to manage all productions. Ten iPads along with theater-industry software will be purchased to allow Stage managers, Directors, Choreographers, Designers and Technicians to communicate instantly, make adjustments in moments, save reams of paper and time. The applications "Stage Write" and "Production Pro" will be acquired and implemented to ensure students have access to state of the art technology.