Information Technology Services
2018 Annual Report

iT
SERVICES

UMASS
BOSTON

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1   CIO Welcome and Summary

I want to take this opportunity to thank you for your support and collaboration during the 2017/2018 academic year. As a unit, Information Technology Services (ITS) at the University of Massachusetts Boston has implemented significant enhancements in support of the University's mission and strategic goals. Those initiatives, along with measurements of the effectiveness of our existing services, are articulated in the following pages.

Since my arrival three years ago, I have shared with everyone who would listen that _IT is all about people serving people_. While we are experts in technology and its application in enabling both individuals and teams across campus, the benefit of IT is realized through working with you and your teams on _your_ priorities. The number one response I've received from you, our customers, is an appreciation of the people who comprise ITS.

This report summarizes the AY2018 academic year for ITS and our services. As you'll see, we've made significant progress across the board including, continued support of Teaching and Learning, Research, Administration, IT Security, and, most importantly, our student customers. In the following pages you'll find reference to these, and many other, service improvements. The one thing these services all have in common is that the measure of their success is how much ITS has enabled constituent individuals and teams to achieve their objective(s).

As you'll see, our focus for the coming year, beyond sustaining our services to you, will be to:

- ✓ Invest in our people, including a renewed emphasis on staff technical and soft skill development.
- ✓ Solidify the campus-wide technology infrastructure (i.e. networking) upon which we all rely.
- ✓ Improve our ability to create and deliver ITS services and support to you.
- ✓ Improve our ability to effectively utilize the resources entrusted to ITS.
- ✓ Deploy our bi-annual Community Satisfaction Survey next spring to guide our work going forward.

Finally, I want to thank the talented, hard-working professionals who are ITS. They are the ones who make the phrase _IT is all about people serving people_ a reality at UMass Boston.

Sincerely,

Bob Weir

Bob.Weir@umb.edu, 617-287-5410, Healy Library Lower Level

## 2	ITS Organizational Overview [Organizational Chart]

Academic Year 2017-2018 has been a very challenging one for ITS and the University as a whole. The campus was hit with a $30 million deficit resulting in deep cuts in both operations, projects, and personnel – one not seen in many years.

ITS saw turnover in the AVP for Business Operations – a critical department that manages the ITS budget, personnel & business operations. We were fortunate to hire Neil Rosenberg, who has over 20 years of experience in the UMass Boston Budget office. His joining ITS has had a very positive influence in the operations and maintenance of the ITS budget.

Praise for IT – Andy Arcadipane, Desktop Support

"I just wanted to give a shout out to Andy Arcadipane for all his recent help in getting my two new postdocs set up with their new laptops and the UMB environment --- He has been just terrific as always!! Thanks to all in IT"

-Crystal Caissie

At the Annual Chancellors Recognition Award ceremony, four IT Staff – Alison Murray, Mimoza Papargjir, John Jessoe & Bob Seibert were recognized for their contributions for their outstanding work to the UMass Boston community.

Several key members of the ITS staff retired this past year, notably Dianne Kroll after over 30 years in Telecommunication Services. Other staff that retired were James Morrison – Manager for Telecom Operations, and Richard Fish – AV and Classroom Support Specialist. These retirees represent decades of service to the UMass Boston community and will be missed.

ITS is comprised of 94 staff members across seven departments, a reduction of about 10% from last academic year.

- Office of the CIO (3)

- Application & Web Services (16) – 2 open positions

- Business Operations (3)

- Client Services (21) – 1 open position

- Communications and Infrastructure Services (26) – 2 open positions

- Educational Technology (23)

- Research Computing (2)

The ITS Org Chart is included in Appendices.

3   Unit Goals and Achieved Initiatives for AY 2017-2018

<u>Advance Student Success & Development</u>

1. Taskstream, an assessment and ePortfolio solution, continued to be problematic in usage for the Davis Foundation Grant. Work began in partnership between the instructional design team and Undergraduate Studies in Fall 2017. A Blackboard solution was designed and then successfully implemented in Spring 2018. The Blackboard solution offered a new opportunity to investigate a possible digital solution for the Writing Proficiency Exam. A Writing Proficiency Portfolio Pilot was successfully run in the spring semester.

2. Many presentations were made to faculty to enhance Teaching & Learning – Blackboard Day, iClicker, using echo360 to record lectures and most importantly, the 12th Annual Conference on Teaching, Learning & Technology was hosted on May 11th 2018. This conference is a collaborative effort of the Office for Faculty Development (OFD), Center for Innovative Teaching (CIT), Library, CAPS and ITS – Educational Technology. Faculty are recognized for their exceptional work in three areas – Online Teaching, Face-to-Face teaching and Community engaged activities.

> **Praise for IT – Echo 360**
>
> *"I really want to sincerely thank you for the lecture videos, It's been a heaven send for me this semester. I commute 2 hours each way to UMB. Being able to watch our class online has saved me so much commuting time I cannot express how much I appreciate being able to watch our class videos."*
>
> *-Torri DeSilva, student*

3. The adoption of Echo360 is increasing year-over-year as faculty realize the potential of this system. This is the first video-based system designed to foster active, engaged and personalized learning. Students can listen to lectures remotely and asynchronously. Because of outreach efforts the number of courses using Echo360 has increased from 147 in FY17 to 228 in FY18 – an increase of 81% and we see this growth continuing. We have reached an agreement with the vendor allowing for unlimited hours of video streaming.

4. A local "Virtual Computer Lab" service was rolled out allowing faculty and students to remotely access software applications that they don't have installed on their personal computers. The benefit is the ability to run these programs "anywhere, anytime", off-campus or on campus, with 24/7 access, and without the need to visit an on-campus computer lab. Students can select a suite of applications to work with, ranging from SPSS, MATLAB, STATA, SAS, NVIVO, Adobe Acrobat, Microsoft Office and other specialized software that a faculty member might use in their classes. Due to hardware and licensing limitations, the system is only available to certain courses and not the general student population. In prior years, UMass Boston was dependent on UMass Dartmouth for this service.

5. Zoom a robust system that allows faculty to easily collaborate with their students through various formats such as webinars, breakout rooms, online teaching and collaboration & office

hours. This cost-effective tool brings student engagement to the next level by integrating personal response system features, annotation features and other interactive tools to engage students. The number of Zoom licenses distributed is close to the maximum we have – 115.

6. As Research Computing becomes mainstream and the demand for it grows, several workshops on using High Performance Computing (HPC) systems were offered to the campus community with emphasis on the adoption of these services by our students.

Enrich and expand academic programs and research

1. Members of the MakerSpace team designed and implemented a professional development course for students to get experience in MakerSpace systems. The team offered 2-hour workshop sessions throughout the year, as well as held individual meetings with faculty on integration with their courses. One- and five-day curricula for professional development were also developed. These classes were also available to students at UMass Boston and other organizations.

   Probably the greatest compliment and recognition came when John Mazzarella and Michelle McIntyre were invited to train the faculty and students at Roxbury Community College - they were setting up a MakerSpace Lab of their own.

2. The Open SUNY Course Quality Review Rubric (OSCQR) is being used to ensure that online courses are learner-centered and well designed for best online practices was customized and implemented for use at UMass Boston and piloted with the Nursing Faculty. OSCQR replaces the 'Quality Matters' set of guidelines which we had been following previously.

3. The AV Services team created many videos for several UMass Boston departments and Centers – most notably for the Department of Nursing, Infant-Parent Mental Health, the McNair Program, Performing Arts. These professionally created videos are used by academic departments to promote their programs and recruit faculty.

Improve the learning, teaching, and work environment

1. The computers (25) in the Green Lab were over six-years-old and not very functional for teaching or research. Using resources provided by the Student Senate, the computers in the lab were replaced, allowing for a better teaching and learning experience. Client Services also provided technical expertise in upgrading the hardware in the Engineering department lab, allowing additional applications to be installed on the systems.

2. We received many requests for adding additional printers across campus, especially in University Hall (UH) – a new academic building with over 40 classrooms; some of the large classes with hundreds of students – often looking to print on one available printer. A printer was installed in UH and a second (color) printer installed in the library to accommodate the demand.

3. As funds permit, old HPC hardware is replaced to ensure that faculty, research staff and graduate students have access to reliable and current technology. Also, an investment to increase capacity to backup large data sets stored on research Computing Servers have been completed. In the coming months, this new service will be made available to research groups on campus.

4. We implemented the Extron Global Viewer and Crestron Fusion systems to monitor the AV Systems in 204 Classrooms. These systems monitor the usage of lamp hours in projectors so we know when to replace them, reducing lost teaching time. These systems also allow us to program some projection systems to automatically turn off, which conserves energy and prolongs the life of the lamp. The plan is to expand this service to include the classrooms in the Integrated Science Center.

5. Because of various outreach efforts, much progress has been made in educating our faculty on new pedagogies and technology service that enhance Teaching & Learning. Programs to support Active Learning; the TEAL Fellows Program and working closely with OFD (Office for Faculty Development) and CIT (Center for Innovative Teaching) to offer training workshops to Non-Tenure Track & Part-Time faculty have been provided.

> **Praise for IT –eLearning and Instructional Support**
>
> *"*Tremendous thanks to everyone who stayed late or got here early this morning to get our TEAL desktops prepared for the HESI exam this morning. All is working very well on the desktops, and students are testing now!"
>
> *- Emily Jones*

CAPS and IT applied and received a grant from Steelcase to renovate space to convert a traditional classroom to an Active Learning (AL) one. Several faculty members were invited to make use of the classroom, and the instructional designers assisted them in using the space to improve student engagement.

6. The adoption of Blackboard across the colleges continues to increase steadily. Today about 70% of our faculty use Blackboard to manage a little less than 1,600 courses. The increase in adoption is a result of students asking faculty and by an influx of newer faculty joining UMass Boston – all of which have used some Learning Management System in the past. – See chart in Appendices.

7. The ITS Application Services team developed and deployed the "Engage" web application (engage.umb.edu) for the Community Partnership office. The system was made available to all University and Client Partnership entities. Phases II and III were also completed making this a very valuable resource for the UMass Boston community. This new tool allows us to report partnership activity, make new connections, and strengthen existing ones.

8. The OneDrive system, which offers 1TB of storage space to every faculty, staff and student, has been made available. Training sessions commenced in June.

9. ITS invested in peripherals, such as adapters, remote presenters, laptops, etc. that support classroom technology, which allow faculty to use newer technology. The Classroom Technology Support offices were also equipped with an HD Video camera that can be loaned out to departments for lecture recording.

> **Praise for IT – Katherine Ananis**
>
> *" 'Katherine did a great job given the many things Office 365 has to offer', 'Instructor was helpful in breaking down complex procedures into easy steps', 'Class was well paced - exercises reinforced presentation', 'Very helpful! Well presented', 'Questions answered very patiently & clearly', ''Instructor was helpful and offered her assistance by email and phone after the class.' Thanks Katherine!"*
>
> *-Small selection from instructor feedback*

10. In conjunction with the Library Administration, the Applications Services and Infrastructure and Security teams replaced the antiquated Voyager system, implemented in the late 1990's with a new state-of-the-art system - ALMA / Primo from ExLibris. The system took over a year to implement with members of the ITS teams playing a significant role in its successful implementation in January of 2018. The system has sophisticated search and cataloging capabilities, all available via a web-based portal.

    The web service team redesigned the Healey Library's website concurrent with the launch of ALMA / Primo system, improving the student and faculty experience.

Establish a financial resources model consistent with the university's vision statement

The OER (Open Education Resources) service, in collaboration with the library, was restarted. Outreach efforts to Faculty Council, and faculty in general have led to some initial success. Initial collaboration with UMass Amherst and the Boston Library Consortium may bear fruit with faculty adopting open resources as a way of saving students money on textbooks.

Develop an infrastructure supportive of the preceding goals

1. Deployed a Multi-Factor Authentication service - Duo - to the HR system. The Duo system provides enhanced security over the previous authentication system.

2. The network and operations team continue to make enhancements to the wireless network across the campus, regarding both coverage and speed. To improve the end-user experience, the number of network names broadcast has been reduced. Faculty, staff, and students are encouraged to use the "Eduroam" wireless network when connecting to the campus wireless network. This education coupled with UMass Boston's partnership with the Eduroam providers gives students the ability to connect to any Eduroam wireless network in the world just by using their UMass Boston credentials. An "Open Guest" wireless network for visitors to the campus has been created, allowing patrons to seamlessly access the campus wireless for "open house"

events and other campus activities. A secured wireless network – "Beacons" has been created for paid events.

3. An investment in EMC storage and Syncplicity application was made a few years ago. These services were implemented and are being made available to the community. Related to this investment is the migration of the VSTART (Dell Virtualization Server) system to the EMC solution.

4. Cyber Security training workshops, both formal and informal, are offered throughout the year. Particular emphasis has been laid on phishing, which continues to be an uphill battle.

5. Supported rebuilding the Geographic Information System (GIS) environment. A 20-station computer lab has been created to help the GIS program. Some of the existing services such as managed printing and storage have been restored.

6. Implementation of Office 365 "Groups" has allowed us to retire our Lyris listserv system.

7. The redesign of www.umb.edu has been a multi-year endeavor. The Web Services team in conjunction with the Communications Department and all Academic, Administrative Departments, Centers, and Institutes commenced this extensive project in 2015 and is

> ### *Praise for IT – Michelle McIntyre*
>
> *" 'Ms McIntyre is a wicked - wicked awesome teacher! Fun fun fun workshop! Lots of tips and tricks were thrown in!', 'She had great energy & tailored it to fit our needs. More =)', 'Great learning experience.' Thanks Mish!"*
>
> *-Small selection from instructor feedback*

slated to be completed by mid-2019. Some of the Academic sites upgraded include: McCormack Graduate School, Honors College, College of Management, School for the Environment, School for Global Inclusion and Social Development, Graduate Studies & Healey Library. Some of the non-academic sites upgraded include Admissions, Office of Diversity, Equity and Inclusion, One-Stop, Financial Aid and Housing.

For Academic Year 2018 compared to Academic Year 2017, the University's website saw an increase of 31% in the total number of visitors, 40% in the total number of unique visitors and 26% in the number of total pages viewed.

Home (www.umb.edu) Visitors	**6,723,234**
Home (www.umb.edu) Unique Visitors	2,606,006
Home (www.umb.edu) Pages Viewed	20,217,149

Total traffic was comprised of 71% desktop devices and 29% mobile devices.

A marked increase of 22% has been seen in web traffic via mobile devices, particularly mobile phone and tablet technologies with the iPhone being the most popular mobile device in use today.

4   Major unit achievements for AY 2017-2018

[*Discuss their relationship to your unit's strategic plan and UMass Boston's strategic goals.*]

Advance Student Success & Development

1. Accessibility – "ALLY" Project

After the National Federation of the Blind (NFB) cited us for having inaccessible content in Blackboard and other areas, we invested in "Ally", a Blackboard product designed to help identify inaccessible documents in Blackboard. In Spring 2018, we implemented Ally for all online courses. In 238 online courses, 16,287 documents were uploaded to Blackboard and checked via Ally for accessibility. Of those, 1,381 documents had severe accessibility issues, and over 5,000 had major to moderate accessibility issues. We have an overall score of 41% accessibility. To improve the overall accessibility score, we need to help faculty improve the accessibility of their documents through identification, education and support. In the coming months, we plan to hire students to help identify and fix inaccessible content. In addition, we will partner with ODI to host a campus-wide campaign to raise awareness.

> #### Praise for IT – Theresa Nelson-Miller
>
> " 'Workshop was very helpful. Presenter was great. Very knowledgeable', 'Class was very fun! Thank you very much!', 'I knew a lot of Illustrator before but the shortcuts & other tools I've never used are SUPER helpful =)' Thanks Theresa!!"
>
> *-Small selection from instructor feedback*

Enrich and expand academic programs and research

1. MakerSpace Lab

The services at the MakerSpace Lab have matured very quickly. In a short period, faculty learned the benefits of integrating hands-on, 3D design and printing into their curriculum. It has increased student engagement and made learning more creative. Three faculty – Aaron Devine (English), Michael Gilbert (CEHD) and Karla Schallies (Biology) presented at the 12th Annual University Conference on Teaching, Learning and Technology on their work with the MakerSpace lab. They each described the activities they undertook, and the benefits students received.

> #### Praise for IT – Makerspace
>
> " John and the MakerSpace crew welcomed our class of 16 CAPS ESL students into the Makerspace. The students were engaged throughout and asked excellent questions. Our class guidestar this semester is 'thinking outside the box.' The MakerSpace visits gave the students a new, engaging encounter with language and technology outside the box of our classroom. Thanks to John, Linda, and the MakerSpace student staff for facilitating our visits and exploration. "
>
> *-Aaron Devine*

In October 2017, the team that supports the Makerspace hosted "MakerFest". The staff set up equipment in the first floor of the Campus Center, just outside of the cafeteria, to expose a large number of students, faculty, and staff to the services of the MakerSpace Lab. Visitors learned about 3D Printing and got to watch printers in action; they got to use the 3D Scanners, and over

20 students got their heads scanned so a bust of themselves could be printed. Visitors were able to use Virtual Reality equipment, and faculty met with Instructional Designers to discuss how these tools could be integrated into their curriculum to benefit their students.

2. **Salesforce for One Stop & Beyond**

Salesforce is an Enrollment Management initiative and new to ITS. The goal is to develop a fully functional Case Management Salesforce Application to replace an existing set of manual processes. Working with Enrollment Management, the One Stop will be able to swiftly meet the needs of walk-in students and communicate with the home office (e.g., the Bursar's Office, Financial Aid, or the Registrar's Office). In addition, many student needs will be met electronically;   they will no longer have to travel to those offices for assistance. There is also a check-in kiosk feature, dashboards, and metrics generation.

Improve the learning, teaching, and work environment

1. **Classroom Technology & AV Services**

> *Praise for IT – Rosa Oculto, Classroom Technology and AV Services*
>
> *"I just want to thank you for all the support. Especially Rosa Oculto is a pillar in the McCormack building that I can build on whenever there is a tech problem. She was awesome in the preparation and during the conference."*
>
> *-Werner Kunz*

We have approximately 265 teaching spaces across the campus; a significant number do not have the latest AV equipment to meet today's standards. In an ongoing effort, there has been a push to upgrade ALL classrooms from Analog to Digital so faculty can use the latest laptops, tablets and other devices for teaching. This year, 22 classrooms and meeting rooms were upgraded to support HDMI connectivity. An equal number of aging LCD Projectors were replaced, and new teaching stations/podiums with a resident computer installed the classrooms. In addition to teaching spaces, the Classroom & AV team provided project management and support for 10 AV installations for various academic and administrative departments.

Known for providing high-quality service, the AV team provided support for all major university events including the Doctoral Hooding Ceremony, Graduate Studies Commencement, Undergraduate Commencement, Fall Convocation, Open House & Welcome Day events. Some of the special events supported were video recording and live streaming for two mayoral candidate interviews and a democratic gubernatorial debate, all of which were broadcast live on WBUR.

The Performing Arts department has for the past year hosted many events for which the AV team has provided audio engineering services. Events such as the Jazz Band, Rock Band, Choir and other musical performances have been supported.

2. Computer Replace Program

After a one-year hiatus, about 440 computers (Dell and Apple) were ordered to replace those that are five years and older. Faculty and staff were given a choice of Dell & Apple Desktops & Laptops and a Microsoft Surface Pro tablet. In the first round, 219 computers were ordered, received, and added to the inventory. Faculty and staff receiving a new computer were informed to prepare their data to ensure quick deployment and to surplus the old computer. By the end of June, most computers ordered in round one had been deployed by the Desktop Team. Deployment of computers ordered as part of round two will soon be underway.

> *Praise for IT – Annual Replace Program*
>
> *"This is outstanding. Thanks for all of your hard work on this. I know it wasn't easy."*
>
> *-Anne Riley*

The replacement of 440 computers in such a short time is indicative of the excellent teamwork of the Desktop Team. ServiceNow, the new service management system, was used for communicating with the end-user as well as monitoring the progress of deployment of each computer.

3. Course Evaluation – EvaluationKit

In past years, course evaluations were completed using bubble sheets. With the widespread adoption of Blackboard across campus, ITS was able to switch to Blackboard's online course evaluation tool – Enterprise Survey to make access and reporting easier. The system initially worked well; however, in late Fall 2017, it faltered not allowing many students to complete the course evaluation.

> *Praise for IT – Annual Replace Program*
>
> *"These Herculean efforts from you and your staff are much appreciated!"*
>
> *-Anita Miller*

After a quick scan of the marketplace, and a few demos, EvaluationKit was chosen. The vendor agreed to let us 'pilot' the system for the Spring 2018 semester for free. The system went live in April 2018 and in Spring 2018 all the academic departments that had used Blackboards' Enterprise Survey tool, were successfully using EvaluationKit. This service will be made available to ALL academic departments, moving away from the manual and time-consuming bubble sheet system.

Develop an infrastructure supportive of the preceding goals

1. ServiceNow Service Management Suite

Replacing an antiquated Service Desk Ticketing System (HEAT), ITS implemented a best of breed software solution with the introduction of ServiceNow – a cloud-based solution built on the ITIL

(Information Technology Infrastructure Library) framework. As the first part of a phased implementation plan, the team implemented in March of 2018 the ability to track both incidents (break/fix), and requests for IT services. ServiceNow will continue to expand in the coming years with the implementation of a user self-service portal, a knowledge base, change management and configuration management along with asset discovery.

2. Consolidation of Firewall Devices across Campus

To improve the security posture of the campus, the Information Security Team has designed and implemented an enterprise-class consolidated firewall solution. This solution replaces 19 pieces of firewall equipment with four pieces of equipment (2 firewalls and 2 logging/configuration appliances). This approach uses the "addition by subtraction"

> *Praise for IT – Peter Tofuri, eLearning and Instructional Support*
>
> "I am writing to pass along my gratitude for the extraordinarily good service I have received from Peter Tofuri. I have benefitted from this for several sequential semesters. I am not a computer use guru and greatly appreciate his patience and friendly assistance. It has been invaluable. The University needs more people like Peter."
>
> *- Seth Boorstein*

model. That is, even though there are only two firewalls on campus, there will be a firewall presence in every building. Departments that require additional protection will be able to leverage the firewalls. Compliance enclaves such as Health Services will reside behind the new firewalls.

3. Telecom Upgrade Project – the Implementation of VoIP (Voice over IP)

A multi-year project to upgrade the Telecom system from the legacy "digital" services to "VoIP" is well underway and is expected to be completed in FY 19. The VoIP system utilizes the existing UMass Boston data network. The cross-department team comprised of members from Application Services and Infrastructure (Telecom, Network, Security) have configured and deployed VoIP phones, replaced all the telecommunications equipment and software including the PBX, Voice Mail System & Billing System across campus. Next steps include the implementation of the Automatic Call Distribution (ACD) system and Emergency Call (E911) for public safety.

Other upgrades in the Telecom System are the billing system (Compco to Pinnacle) and the console upgrade to Inattend, an IP based console for enhanced operator call forwarding and directory lookup.

One of the benefits of upgrading the Telecom System is the potential savings from the high-maintenance cost for operating the PBX system. The savings will allow us to invest in new features and services in the VoIP system that will enhance productivity and improve services to our faculty, staff & students, including both presently enrolled and prospective students.

This conversion is also directly tied to both the substructure demolition and Infrastructure Hub (iHub) site readiness projects.

4. **Building the new Campus IT Infrastructure**

   a. *Removal of President's office equipment from the data center*

   In preparation of transitioning UMass Boston's data center the campus worked directly with the University System Presidents office to plan and execute the removal of 14 fully loaded racks that service the entire University System community. These racks were relocated to the UMass Amherst Datacenter. This project was the beginning of transitioning the Boston campus data center and relocation to the Service and Supply Building..

   b. *Dark Fiber to Corcoran Jennison/Bayside building leased spaces*

   The installation and testing of direct fiber optic connectivity between the UMass Boston main campus and the Corcoran Jennison (CJ) building fifth floor was completed. The fiber connectivity allows the delivery of 10GB/s speeds between the two locations. Connectivity was previously provided via a microwave link and required a direct line of sight. With new buildings being constructed on campus (residence halls and parking garage), and with the School for Global Inclusion and Social Development located at CJ (4th floor), a reliable network connection between the two sites is critical. CAPS, which hosts their ESL classes at the CJ building, also benefited from this upgrade/new service.

   c. *Installation of new Utility Corridor Roadway Redesign (UCRR) Building Management System (BMS) backbone and associated hardware*

   All campus buildings now have a high speed, high bandwidth network connection that will serve as the new campus BMS backbone to replace the legacy BMS network currently running through the garages.

   d. *UCRR Low voltage cabling*

   Completion of the new UCRR fiber optic ring. As of this writing, the new UCRR ring has the following connections active: BMS, Fire alarm, Copper telecom, Firewall. Campus network backbone is in the planning stages and will be connected in 2018 as well.

   e. *UCRR building utility cut-overs*

   As each campus building is connected to the new UCRR utilities, the IT infrastructure team has been engaged in all planning, notification and post cutover testing of electrical, chilled water and fire alarm systems.

   f. *Parking garage and Residence Hall technology design*

IT infrastructure staff have advocated and designed robust technology infrastructure environments for these two new unique facilities – Residence Hall & Parking Garage - to open end of summer 2018.

5. **Security Education Training and Awareness (SETA)**

This year the Information Security team has improved response and education around phishing emails as part of an ongoing effort to communicate threats to the campus community in a timely fashion. Three groups across IT - Systems, Service Desk, and Communications collaborated to streamline the response to phishing attacks and have leveraged Next-Generation Firewalls (NGFW) to help keep people safe from known phishing sites. The annual Cybersecurity Awareness Month focused on the dangers of phishing as well as ransomware. Tabling events in the Campus Center, a flyer campaign and other outreach efforts helped increase awareness of phishing, ransomware and better password practices. A "Phishing wall of shame" collection by email and web, highlighting recent phishing attacks hitting our community was created to educate our users. A formal 90-minute workshop on Data Security on university security policies and general best practice is held monthly for new employees.

5   Goals for AY 2018-2019

Advance Student Success & Development

1. Access to resources - Enhance / improve VDI services so faculty & students can access software resources from off-campus.
2. Continue to promote the adoption of Blackboard to increase participation by faculty. Introduce the Blackboard Mobile app to faculty and students.
3. Host events that promote the use of tools and pedagogies that support ALS (Active Learning Systems); echo360 (Classroom capture); Virtual and Augmented Reality and other software systems that enhance teaching & learning.
4. Development of Salesforce PASS Predictive Analytics for Student Success for Academic Advising.
5. The deployment of Ally – a tool that checks for inaccessible documents within Blackboard – across all courses, not just online courses.

Improve the learning, teaching, and work environment

1. Invest in tools that integrate with Blackboard that ensure courses meet a certain set of protocols as defined by the OSCQR consortium; help automate manual processes (online course evaluation); assist faculty with academic integrity issues as well as ensure that all content is 'fully accessible". Use ALLY as a tool to check and ensure documents are accessible.
2. Enhance the Research Computing environment by redesigning the website, expanding the local HPC cluster & market the services to attract new faculty to the GHPCC.

3. Pilot late-night laptop loans for both residential and commuter students allowing them to have access to a laptop from their dorm or home.
4. Widespread deployment of Course Evaluation – an online system – migrating from paper-based Scantron System – we did a successful pilot in Spring 2018 (Future)
5. Support for the growth of Online Programs – converting on-ground to online (EHS is one such recent success); introducing virtual labs to meet the demand for intro level science courses (Future)
6. Grow the Makerspace services by introducing Virtual Reality services for faculty to integrate into their curriculum.
7. Support the formation and delivery of services of two student clubs attached to the Makerspace. The graduate and undergraduate student clubs aim to develop services that enhance the quality of life for those less fortunate.
8. Support for the growth of Online Programs – converting on-ground to online (EHS is one such recent success); introducing virtual labs to meet the demand for intro level science courses.

Develop an infrastructure supportive of the preceding goals

1. The transition from MyPassword to the new password management solution will enable faculty, staff and students to manage passwords without calling the Service Desk.
2. Invest in services such as file storage (OneDrive); mobile apps, VDI, and pay-for-print that enhance faculty, staff and student experiences.
3. Implement systems that support the new residence halls and parking garage. Systems such as the OneCard (Beacon); residence hall systems; credit card processing, etc.
4. Review and revise student pay-for-print incorporating OneCard for managing student charges.
5. Publish a support catalog for all IT services - This will build on the service catalog work done as the underpinning of ServiceNow and will be part of our rolling out another module of ServiceNow called the Service Portal.
6. Complete the implementation of the Unified Communications Plan, including the deployment of SIP Phones, implementation of Pinnacle Billing System, Automated Call Distribution, and E911.
7. Continue web redesign activities with all Academic and Administration Departments, including ITS to conform to the new template created.
8. Working in close collaboration with Facilities, continue developing plans to build out the new iHUB facility in the Service and Supply building.
9. Complete the UCRR plan by providing connectivity to all campus building BDF locations & by eliminating all garage level low voltage connections and absorb these connections into UCRR low voltage cabling distribution.
10. Upgrade the "Active Directory" system that allows for managing client computers across the enterprise
11. Develop reporting for system utilization and capacity planning for the virtual environment
12. Deploy read-only Domain Controller in Shrewsbury as part of the DCO environment

13. Move Wireless NAT to the border
14. Implement Anti-Malware strategy for Virtual Machines and Kiosks
15. Selection and implementation of a NAC (Network Access Control) System
16. Consolidation and virtualization of web server footprint to Shrewsbury as part of the DCO environment
17. Migrate license servers into new environment to accommodate a greater selection of applications that depend upon software licensing.
18. Upgrade the technology in the classrooms, computer labs and other non-formal teaching spaces to allow the latest computers, laptops and mobile devices to connect to projectors, document cameras and other AV systems.
19. Upgrade the technology that supports the Digital Signage System
20. Review and revise the Kace 1000 implementation to enable better workstation management across campus.
21. A complete review of workstation lifecycle process and develop project plans for streamlining critical parts of that process.
22. Improve personnel management practices to address areas of staff recruitment, retention, and professional development.

6　Beyond IT: Collaboration and Outreach

Internal Partnerships

Members of the Application and Web Services team developed a unique application —Engage— web portal. This easy-to-use web platform allows users to search for a current UMass Boston engagement activity by subject or partner name, enables the possibility of combining resources for similar projects, and provides organizations an easy way to express their interest in collaborating with Boston's only public research university.

Many partnerships have been formed … especially around the implementation of Salesforce - Graduate Studies, Enrollment Management, Academic Support and CAPS. Additional partnerships with Student Affairs supporting the integration of the new buildings/dorms are underway.

External Partnerships

The MakerSpace Lab in a very short time has attracted and collaborated with many external organizations – helping educate others on using the technology and explaining the benefits of this collaborative and innovative space. In May 2018, Michelle McIntyre and John Mazzarella spent five-days training faculty and staff of Roxbury

> *Praise for IT – John Mazzarella and Michelle McIntyre*
>
> *"John and Michelle, Thank you again for such a great program this week. Everything was really well done and the students benefited in so many ways."*
>
> *-Hillel Sims, Dean of STEM, Roxbury Community College*

Community College on setting up and using 3D printers and design software and helping them work as a team to design, create, problem solve and build an object. In preparation for this training, both Mish

and John created a one and five-day curriculum which can be replicated for other schools and institutions.

In April, 25 Chinese scholars spent a day learning about the MakerSpace services, the technology and designing and creating a souvenir. On a more serious note, students from "Coastal Research in Environment Science and Technology "(CREST REU) program spent a day working in the lab. An external group of high-school girls from Boston Public School – "Tech Savvy 2017" also spent half a day exploring and learning about the MakerSpace Lab services.

7   Addressing ITS Weaknesses: Investment in Infrastructure & People

In spite of a challenging year, a majority of our goals have been completed. All departments— Application Services, Client services, Educational Technology, Infrastructure and Research Computing— completed some large complex projects. The Firewall Consolidation Project, the Computer Replace Program, and implementation of an online course evaluation tool – EvaluationKit, a well as building of the new IT Campus Infrastructure, and the rollout of ServiceNow are just a few examples.

With an uncertain budget, planning is difficult. As it happens year after year, the last three months of the fiscal year is when most of the spending takes place. With a new administration in place, there is promise that processes will change and each unit will receive their budgets at the start of the fiscal year, which will allow for a spending plan to be put into place.

The campus is witnessing tremendous growth, both regarding enrollment as well as in physical infrastructure/buildings – new residence halls, a parking garage, and an academic building have been built in the last 24 months. This has resulted in needing to support the new students and buildings; often with little or very few additional resources. ITS has been fortunate to hire students to help with Tier I issues. However, in project management and technical expertise, we have lost personnel, often leading to existing staff taking on additional tasks or projects not being completed on time.

Investment in additional staff is often challenging. Hence it is essential that ITS invest in new technologies or methods of doing business that allow us to be efficient in meeting the growing needs of our community.

Today we invest very heavily in academic software. However, we do not offer training or support services around these applications which would allow our faculty to take advantage of the investment for their teaching and research needs.

We have seen an uptake on the investment in professional development resources; from about $18k in 2017 to over $41k in 2018 – a doubling of funds allocated. This is very encouraging news, though ensuring that training and professional development dollars are spread across ALL ITS staff to ensure that everyone benefits from the investment, as the only way to move forward is to have ALL of us move together.

Appendices

1   Professional Development

Application Services

1. Salesforce Higher Ed Summit
2. Salesforce Regional NYC
3. Salesforce National at Notre Dame
4. Salesforce Day @ UMass Lowell
5. ServiceNow Knowledge18
6. ServiceNow Regional User Group
7. CollegeNet Annual Conference
8. CollegeNet Regional User Group
9. UMass IT Conference @ Dartmouth (Presenters)

Educational Technology

1. Serious Play Conference – George Mason University
2. Faculty Workshop on Active + Adaptive Learning - University of Louisville
3. Training on Active Learning Strategies – Steelcase, Boston
4. ID - Course Quality Review (OSCQR) – Online Learning Consortium - Online
5. The Digital Backpack: Next Generation Digital Learning Management Systems - NERCOMP
6. Badging and Employer Engagement – EDUCAUSE Online
7. OLC Innovate Conference - Nashiville
8. Mass Colleges Online - Annual Conference - Framingham
9. Google G Suite for Education: Inside and Outside of the Box - NERCOMP
10. Digital Service Learning: Connecting with a Global Community - NERCOMP
11. Next Generation Portals – NERCOMP
12. NERCOMP Annual Conference
13. Virtual, Augmented, and Mixed Reality - NERCOMP

Client Services

1. Security + Training
2. Kace 1000 Training

Infrastructure & Security

1. ServiceNow
2. Intro to Office365 & OneDrive
3. WorkshopPLUS - Office 365: Security and Compliance
4. Free intro to Teams & collaboration multiple staff attended
5. Office365 Admin Support webinar.

6. MS Intune webinar
7. Office365 Admin Overview
8. ExtremeXOS Switching and Routing

2   Participation in University Groups / Activities

1. PSU Bargaining Committee
2. SA Governance Committee
3. DI Governance Committee
4. Better Together Program (President's Office Initiative)
5. Effectiveness and Efficiency Committee
6. Emergency Management Committee
7. F & A Council
8. Search Committee for GASF IT Director
9. Search Committee for Business Analyst II (2)
10. Search Committee for Manager, Application Administration
11. Search Committee for Enrollment Management Marketing Director
12. Desktop Consultant search committee
13. Desktop manager search committee
14. Telecomm Engineer search committee
15. Academic Technology Committee

3   Community Engagement

1. Roxbury Community College – Training faculty and students on MakerSpace Equipment; assisting with integrating it into the curriculum.
2. MakerSpace – bring your Children to work
3. MakerSpace – Day long activity with the International Visiting Scholars Academy (IVSA) Program from China - Office of Global Programs
4. Boston Library Consortium – Open Education Resources

ITS 2017-2018 Expenditures - General Operating Fund
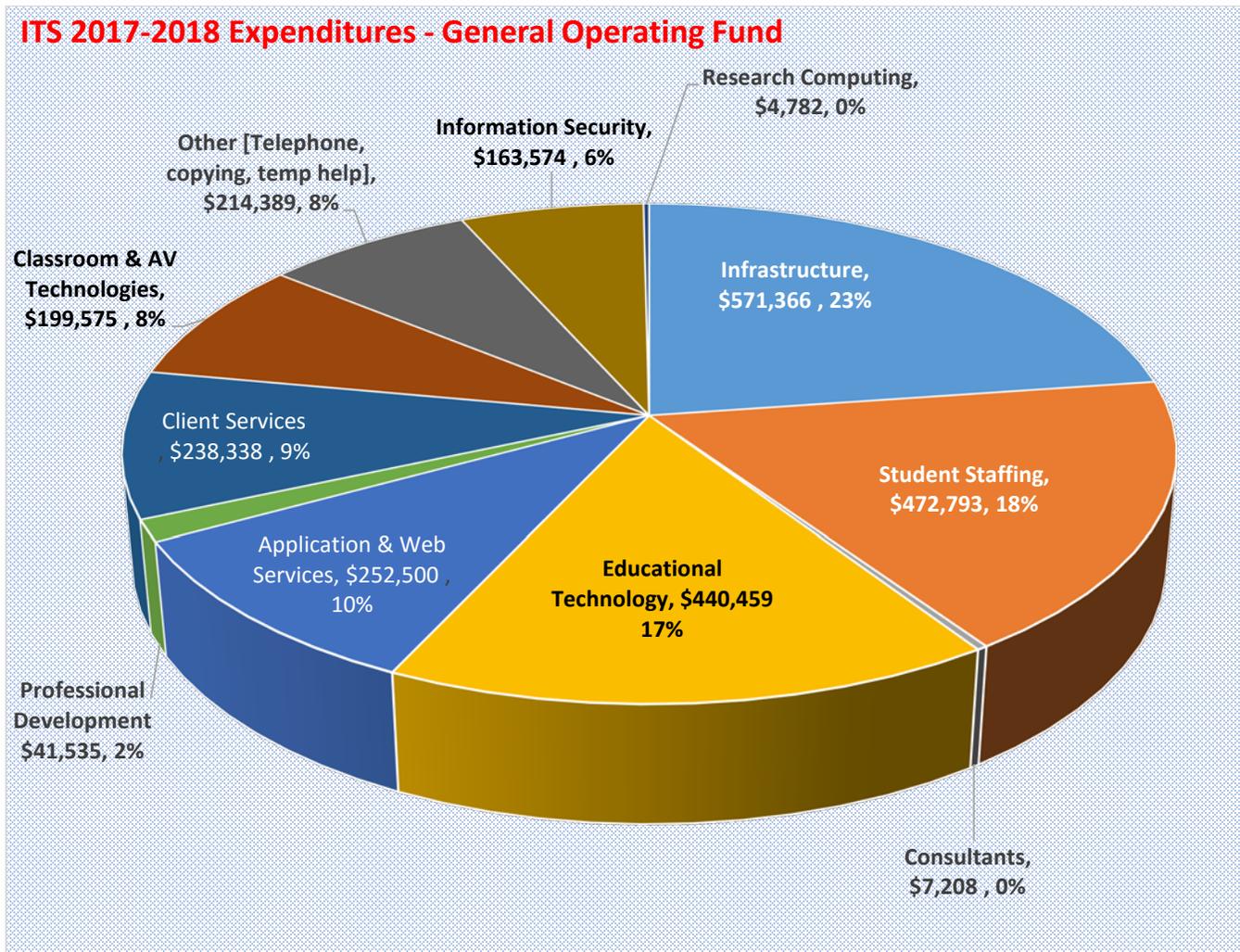
FY18 PROJECTED GENERAL OPERATING EXPENSES	Spend	% of Total
Infrastructure	$571,366	21.9%
Student Staffing	$472,793	18.1%
Educational Technology	$440,459	16.9%
Application & Web Services	$252,500	9.7%
Client Services	$238,338	9.1%
Classroom & AV Technologies	$199,575	7.7%
Other [Telephone, copying, temp help]	$214,389	8.2%
Information Security	$163,574	6.3%
Professional Development	$41,535	1.6%
Consultants	$7,208	0.3%
Research Computing	$4,782	0.2%
Total	**$2,606,520**	**100.00%**

C

Information Technology Services Org Chart – July 2018

Robert Weir – Vice Provost/CIO

- Salina Allen-Sharpp, Executive Assistant
- Christine Boseman, Administrative Assistant

Linda Modiste - Assistant Vice Provost Application Services

Peter Tierney, Manager, Application Administration
- Jeeva Arthur, Database Developer
- Bhavesh Shah, Database Administrator

Terence Phalen, Director IT Program Management
- Anthony Manibusan, Application Administrator II
- Tom McClennan, Business Systems Analyst II
- Lisa Moriarty, Business Systems Analyst II
- Mary Ryan, Business Systems Analyst II

Jim Wyse, Director IT Web Services
- Lisa Berelson, Senior Web Designer/Developer
- Jonathan Crawford, Web Designer/Developer
- Kevin Gerich, Web Designer/Developer
- Lisa Link, Senior Web Designer/Developer
- Peter Tattlebaum, Web Designer/Developer

Mikhail Nitko, Manager CRM Program

Wil Khouri - Assistant Vice Provost Communications and Infrastructure Services

Jamie Soule, Manager of IT Operations
- Kurt Charlton, Operations Technician
- Carmine DiFilippo, Technical Specialist II
- Damon Lassiter, Telecom Network Manager
- Robert Siebert, Staff Assistant
- John Tansey, Operations Technician
- Ruth Tremblay, Clerk IV

Brian Forbes, Manager, Systems and Networking
- Azadeh Aslani, Senior Network Engineer
- Maria Filoso, Systems Administrator
- Donald Foye, Senior Network Engineer
- Yuk Fung, Enterprise System Administrator
- Scott Gilbert, Senior Network Engineer
- Leonard Kroll, Linux/GIS Systems Administrator
- Daniel McDonald, Linux Web and HPC Administrator
- Jamil Moosavifard, Senior Systems Administrator
- Ellinor President, EDP Programmer V
- Chhorda Rorth, Enterprise System Administrator

Jamie Soule, Manager, Telecom Users Services
- Sereynita Altarejos, Administrative Assistant II
- Eduardo Luciano, Buyer II
- Mimoza Papargjir, Administrative Assistant I

David Gorfine, Infrastructure Project Manager

Security
- David Bonczar, Senior Information Security Specialist
- Alison Murray, Senior Information Security Engineer

Barbara Goguen - Assistant Vice Provost Client Services

VACANT, Manager, IT Desktop and IT User Services
- Andrew Arcadipane, Desktop Applications Support Consultant
- Scott Devillafane, Service Center Technician
- Quyen Ly, Desktop Support Consultant
- Daniel Mayer, Desktop Support Consultant
- Hung Nguyen, Desktop Application Support Consultant
- Quan Nguyen, Desktop/OS Windows Consultant
- Tam Nguyen, Desktop Application Support Consultant
- Daniel Okoh, Desktop Repair Technician
- Hung Van Ong, Desktop Support Consultant

Max Razdow, Manager, Lab Operations
- Dann Brown, EDP Programmer III
- Ananta Sinha, Supervisor, Comp Op System and Services
- Henry Lav, Mobile/iOS/Virtual Lab Supervisor
- Binh Ly, ITLC Systems Specialist
- Matt McCubbin, IT Accessibility Coordinator
- Lucille Nguyen, IT Lab Operations Student Supervisor
- David Wilson, Lab Supervisor

Peter Adams, Supervisor IT Service Desk
- Christine Carpenito, IT Service Desk Support Consultant
- Rocky Haggard, Software Support Specialist

Apurva Mehta - Associate CIO, Educational Technology and Learning

John Mazzarella, Manager, Training, Communication, and Marketing Commons
- Angela Carretta, Administrative Assistant I
- Katherine Ananis, Software Trainer

Gene Shwalb, Manager, E-Learning and Instructional Support
- Ellen Foust, Instructional Designer
- Irene Yukhananov, Senior Instructional Designer
- Jouliana Bosneva, Instructional Designer
- Kalindi Mehta, Senior Learning Management System Administrator
- Linda Sudlesky, Instructional Design/Sync Online Learning Specialist
- Michelle McIntyre, Senior Instructional Designer
- Paula Thorsland, Senior Instructional Designer
- Peter Tofuri, Jr, Learning Management System Administrator
- Rezarta Hyseni, Senior Instructional Designer
- Theresa Nelson-Miller, Instructional Technologist

John Jessoe, Manager, Classroom Technology and AV Services
- Jeffrey Wade, Chief Audio Visual Engineer
- Lauren Nogueira, EDP Systems Analyst I
- Mark O'Sullivan, Associate Production Coordinator
- Michael DiFilippo, EDP Systems Analyst I
- Rosa Oculto, Instructional Media Specialist
- Stephen Siteman, Instructional Media Specialist
- Vivian Tran, Instructional Media Specialist
- Zack Ronald, EDP Systems Analyst III

Neil Rosenburg - Assistant Vice Provost Business Operation
- Jiuan Mo, Business Manager
- Eleanor Brown, Assistant Business Manager

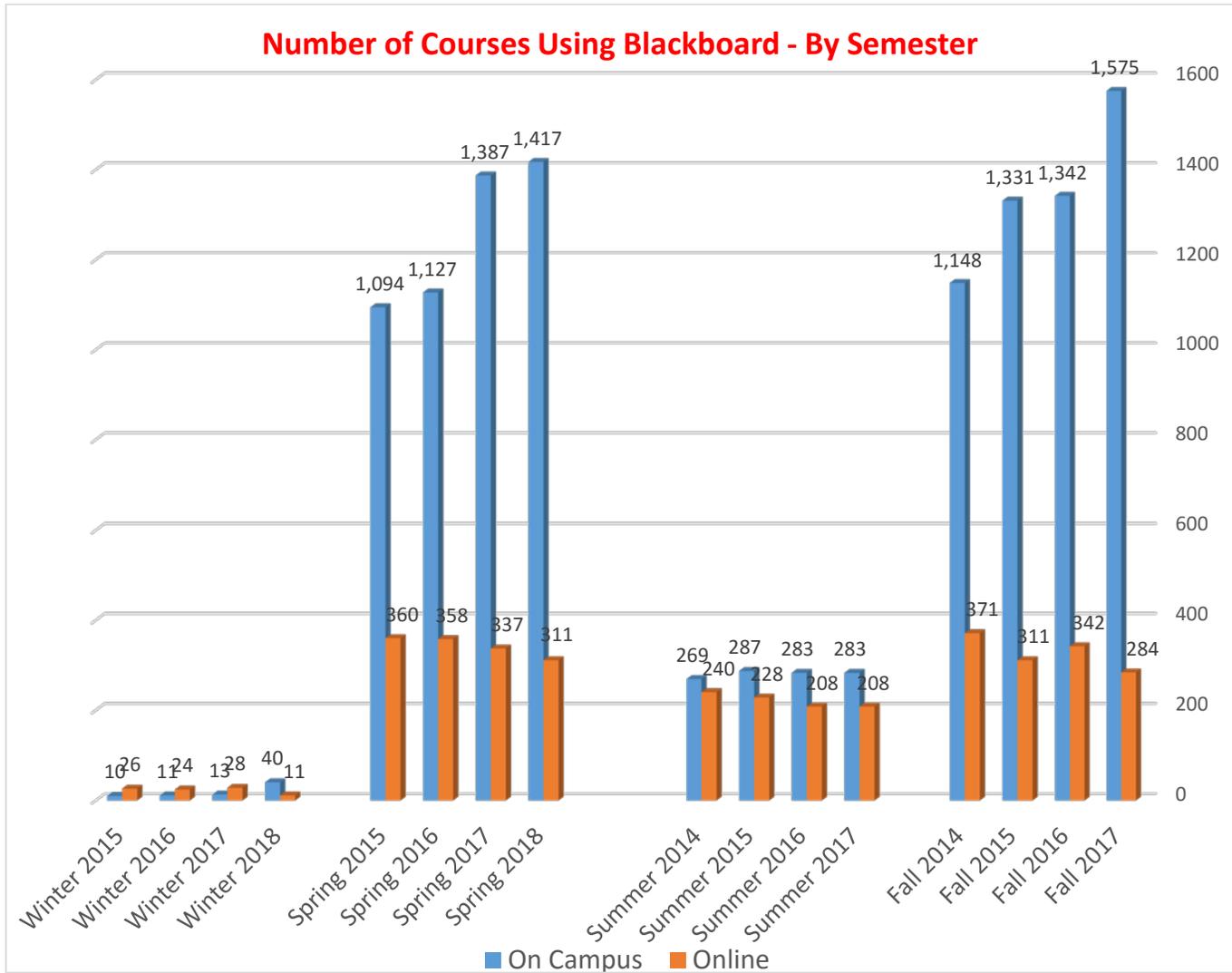### Jeffrey Dusenberry - Director Research Computing
- Runcong Chen, Research Computing Associate

IT Leadership Team

Bob Weir
Salina Allen-Sharpp
Jeff Dusenberry
Neil Rosenburg
Barbara Goguen
Wil Khouri
Apurva Mehta
Linda Modiste
Terence Phalen

Blackboard Courses – Adoption by Semester

Number of Courses Using Blackboard - By Semester

Semester	On Campus	Online
Winter 2015	10	26
Winter 2016	11	24
Winter 2017	13	28
Winter 2018	40	11
Spring 2015	1,094	360
Spring 2016	1,127	358
Spring 2017	1,387	337
Spring 2018	1,417	311
Summer 2014	269	240
Summer 2015	287	228
Summer 2016	283	208
Summer 2017	283	208
Fall 2014	1,148	371
Fall 2015	1,331	311
Fall 2016	1,342	342
Fall 2017	1,575	284

Legend: On Campus, Online

7. Acknowledgement

This report was compiled and prepared by Apurva Mehta with contributions provided by Bob Weir (CIO), the Associate Vice-Provosts, Managers and the ITS staff. A special thanks to Christine Carpenito and Jeff Dusenberry for proofreading and editing the text and to John Mazzarella for designing and formatting the report.

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Jamie Soule, Manager, Operations
Brian Forbes, Manager, Systems and Network
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