



Department of Information Technology

Seton Hall University

*2017-18
Annual Report*

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An Overview of Information Technology

Seton Hall University's Department of Information Technology (DoIT) was established in 1997 by the consolidation of the academic and administrative computing groups, formerly reporting to the provost and vice chancellor for finance, respectively. DoIT's mission is to support the University's strategic technology initiatives to enhance teaching and learning and improve the administration of the University.

Seton Hall University made a major commitment to Information Technology beginning with the University's 1996 strategic plan with the goal "to provide a technologically advanced learning environment for our students and faculty." Seton Hall subsequently developed a long-range technology plan and budget with the goal of "establishing a learner-centered, network-centric, mobile computing environment with a wide range of online teaching and learning resources, including a digital library, as the core of our network services". What followed was a remarkable transformation: through the University's Mobile Computing Program, all undergraduate students and faculty are issued a laptop computer; the campus was extensively wired, and then became completely wireless; faculty innovation in the use of technology to improve teaching and learning, extensively supported by the University's Teaching, Learning, and Technology Center, propelled the University to national recognition as a "most wired" campus; and, a long-term assessment of the impact of technology on teaching and learning at the University demonstrated that the intelligent use of technology can improve student engagement and learning.

Over the years, Seton Hall's IT organization evolved to keep pace with the ever-increasing demands for services and support. Seton Hall's commitment to using Information Technology to enhance teaching, learning, and the University's business processes continued in the University's 2003 and 2010 strategic plans and the 2013 Technology Plan. These plans resulted in our implementing a new administrative system (Banner), rewiring the campus network to provide redundant Internet connections and redundant network connections for most buildings, implementing a new Business Intelligence suite (Cognos) for Banner reports, implementing a Customer Relationship Management (CRM) system for Admissions, moving most of our data center to the cloud (primarily using Amazon Web Services), and a new emphasis on information security, including encrypting systems that contain our most sensitive data and requiring multifactor authentication (MFA) for off campus access to most of those systems.

This year we continued to support the University major transformative efforts. IT worked with our partners at Seton Hall and Hackensack Meridien Health to design and implement state-of-the-art teaching spaces and campus network for the new Interprofessional Health Science Campus (IHS) in Nutley, NJ. We supported the University's partnership with Wiley for online program management by working with Academic Affairs to develop and launch 29 courses for the MBA, Nursing, Professional Accounting, and Public Administration. Major projects in progress this year included upgrading our current Banner administrative system to Banner 9, providing a better user interface and enhanced security, and assisting Enrollment Services in replacing the current Banner Recruitment Manager with Slate, which will extend an admissions CRM system to the graduate programs in Academic Affairs.

Stephen. G. Landry, Ph.D.
Chief Information Officer

Mobile Computing Program

Ubiquitous Computing refers to programs aimed at making a computer available to every member of a learning community so that everyone in that community is able to communicate and access learning materials “any time, any place.” One of the most visible aspects of Seton Hall's technology plan is the University's *Mobile Computing Program*, Seton Hall's version of ubiquitous computing. This innovative academic program provides a computer to each undergraduate as part of their tuition and fees. The computers used in this program are replaced every two years, ensuring that students have state-of-the-art mobile computers. More than just a laptop lease program, Mobile Computing provides a range of quality support and network services, including training, support, and incentives to faculty to integrate Information Technology into their courses in order to enhance teaching and learning.

Through implementation of the Mobile Computing Program, Seton Hall has achieved high levels of student and faculty use of technology in their teaching and learning. Nearly all faculty regularly communicate with their students using email and the majority of faculty use the Blackboard Learning Management System, to supplement course material. All classrooms on the South Orange and Interprofessional Health Sciences campus have wireless network access and built-in audio and video projection systems. In addition to the laptop or tablets distributed to students and faculty, all majors in design, graphics, art and advertising are issued a MAC to allow those students to utilize the tools they will encounter when entering the job market.

Seton Hall University's Mobile Computing Program has received international recognition with our Lenovo partnership. Innovation through the support of partnerships has always been a hallmark of the University's Mobile Computing Program, and the University's technology partners have always enabled Seton Hall to provide a larger technology package that would not be possible without their support.

Leaders in both the Divisions of Administration and Student Services meet with student leaders annually to discuss feedback on current models and needs for future models. In January 2018, IT leadership displayed and spoke with students about current options from Lenovo. Over the past several years feedback has indicated that students would like more choice in the model laptop that is given to incoming students and rising Juniors. This current year, the Department of Information Technology offered students and faculty a choice between a Lenovo T480s Ultrabook and a Lenovo Yoga 380 pen-enabled tablet. This allowed for both students and faculty to choose the resource that best meet their needs in achieving their goals. Approximately 70% of the student body has chosen the pen-enabled tablet as their computer.

Starting in the summer during the Freshman Orientation sessions and running through the start of the Fall semester Seton Hall University's Mobile Computing Program anticipates distribution of 1,650 units to the incoming freshmen class, 1,139 to returning junior students, 155 to faculty and 200 to transfer students.

The program continues to be popular with the both the student body and the faculty as is evidenced in our annual surveys to measure satisfaction, use and perception of technology on the South Orange campus. The program provides the best technology at the most affordable price to the University while ensuring all students have equal access to the same technology regardless of their socio-economic status, leveling the playing field for all students and bridging the digital divide. The program also helps reduce the reliance on computer labs, freeing up space for other academic programming.

Teaching, Learning, and Technology Center

The TLT Center was created in 1997 through the merger of the former academic computing and media centers. One of the primary objectives of the TLT Center is to support the third component of the University's Mobile Computing Program by providing special support to faculty in their use of technology in their teaching. This is done through targeted services as well as internal grant programs administered by the TLT Center.

Seton Hall University's TLT Center consists of the following teams:

- The **Instructional Design Team** provides pedagogically sound support to faculty on the integration of technology into the curriculum. All of the TLT Center's six instructional designers hold master's degrees in instructional technology or a related field. Each instructional designer is matched with specific departments to be their principal liaison within the Department of Information Technology. In addition to the Instructional Designers, the ID team includes a Learning Systems Manager. Faculty are welcome to schedule appointments with their department's liaison to discuss uses of technology, new ideas, professional development needs and available software. The ID team also schedules training and informational meetings with departments to focus on specific needs.
- **PC Support Services Team** provides an all-inclusive technical support structure to all members of the University Community. PCSS is comprised of six areas that have a variety of different functions:
 - **Technology Service Desk** provides technical phone and email support to our entire community consisting of students, faculty, administration and staff, support is available 24/7/365. There are fulltime staff located at Seton Hall University and Blackboard (3rd party vendor) handles all of our telephone overflow, after hours, weekend and holiday support.
 - **Remote Support** provides technical support using remote tools to our entire community allowing for second level, expert help, without requiring the community member to be present.
 - **Technical Services** provides students, faculty, administrators, and staff computer hardware and software repairs and is staffed with seven fulltime PC Support Specialists. These specialists are responsible for completing warranty and non-warranty hardware repairs for SHU issued laptop and desktop computers, troubleshooting software issues, testing and installing computer applications, and providing computer support for all Seton Hall University initiatives and events.
 - **Asset Management** manages and assures accurate Mobile Computing laptop inventories by tracking, monitoring and reporting on these assets regularly. Responsibilities include defining asset tracking policies, establishing audit processes to ensure data integrity, acting as single point of contact for management on all asset issues, assisting technology refresh, and life cycle planning of the Mobile Computing Program.

- **Computer Labs Operations** maintain, supports, and updates all computer labs and public printers on campus. Through the employment of 50 student technology assistants, the department is able to ensure that all lab devices, (computer desktops and adjoining peripherals, laptops and printers) are fully functional at all times as well as provide lab users with software and hardware support. The department also serves as a liaison between PCSS and other department managed computer labs.
- **Desktop Engineering** provides 3rd tier application support to our entire community. This team is responsible for image creation, patch management and software package creation.
- The **Digital Media & Web Development Team** supports faculty in the creation of digital materials for their courses, ranging from audio and video production, web development, programming, and digital and print media as well as being a cross-divisional team with Public Relations and Marketing, maintains, supports and updates the University's Web presence. The TLT Center has ten full time Digital Media & Web Development specialists.
- The **Classroom Support Team** supports the audio-visual technology used by faculty in the classroom and our community at its events outside the classroom. All ninety-two general purpose classrooms at Seton Hall University have built-in audio and video projection systems and other technologies. The TLT Center has six full time media support specialists.
- **Computer Training Services** provides training to faculty and students in the use of the University's standard suite of software, including Microsoft Windows, Microsoft Office, Blackboard, and other standard tools. Computer Training Services has one full time technology trainer.

Online/Hybrid Course Development

The Teaching, Learning, and Technology Center (TLTC) supports all online course development initiatives for single courses as well as full programs. Courses are developed using the Quality Matters rubric which promotes and improves the quality of online education and student learning. In addition to course development, the TLT Center offers a variety of workshops focusing on best practices in course design, engagement strategies and tools.

Working with Academic Affairs and supporting the University's goal to increase graduate enrollment and geographic reach, the TLT Center has developed a long-term schedule to develop new online graduate courses and to redevelop existing online graduate programs to modernize and reinvigorate those programs. The TLT Center has also collaborated with Wiley for Online Program Management (OPM) to develop online and hybrid courses.

Wiley Online Program Management Courses

- Public Administration (9 courses)
- Accounting (3 courses)
- Master of Business Administration (9 courses)
- Primary Care – Nursing (4 courses)
- Acute Care – Nursing (4 courses)

College of Arts & Sciences

- Catholic Studies - The Department of Catholic Studies is putting a cross listed course online to meet the needs of the growing student base.

Course under development:

- CAST 3003/CORE 3983/THEO 3585 Science and Creation - Father Joseph Laracy

- Computer Science Program

A course that was part of the Provost's Summer 2017 Online Course Initiative was held for development in the Fall semester.

- CSAS 3211 Networking - Bert Wachsmuth

Computer networks have become ubiquitous, especially the "network of networks" called the Internet. This course provides an introduction to the topic and includes theoretical as well as practical and hands-on topics. The course will cover: Network Design Layers: physical layer, data link layer, medium access sublayer, network layer, transport layer, application layer; Network Design Issues; Client-Server Protocols; Client-Server Programming.

- Mathematics and Computer Science

Courses under development:

- CSAS 3211 Networking - Bert Wachsmuth
- DAVA 6010 Data Mining - Manfred Minimair
- MATH 6611 Operations Research - Kobi Abayomi

Course under QM review:

- MATH 6811 Statistics for Data Science - Kobi Abayomi

Course completed:

- CSAS 4081 Network Security (Data Security Certificate) - Charles Pak

- Public Administration

The Department of Political Science at Seton Hall University is developing an online version of the Masters in Public Administration program. The program will consist of courses that run online for 8 weeks in duration, allowing students to focus on one course at a time while completing two courses each semester.

Courses under development:

- PSMA 731X Nonprofit Fundraising, Development and Grant Writing - Roseanne Mirabella
- PSMA 8312 Nonprofit Advocacy/Social Change - Roseanne Mirabella
- PSMA 83XX Social Entrepreneurship - Michael Taylor

Courses under QM review:

- PSMA 7312 Leadership & Management of Nonprofits - Naomi Wish

Courses completed:

- PSMA 6002 Research Methods-Stat Analysis - Terrence Teo
- PSMA 73XX Nonprofit HR Management and Volunteer Management - Tiffany Williams (course not yet approved by EPC)
- PSMA 731X Nonprofit Fundraising, Development and Grant Writing - Roseanne Mirabella
- PSMA 8313 Nonprofit Law - Robert Pallitto
- PSMA 6001 Environment of Public Service - Matthew Hale

- PSMA 6004 Econ Environment Service Management - Michael Taylor
- PSMA 6011 -Cross Sector Collaboration and Cooperation - Roseanne Mirabella
- PSMA 7311 Foundations of Nonprofits & Philanthropy - Roseanne Mirabella
- PSMA 7715 Ethics in Public Service - Matthew Hale

- **Data Security Certificate**

Provost Boroff convened a cross-functional team from Arts and Sciences, the Stillman School of Business and the Department of Information Technology to investigate and create a cybersecurity certificate for undergraduates at Seton Hall University. As a part of the discussion the team discussed at length the industry credentials that were required for an individual to have a successful career in cybersecurity. Three certificates were identified and the team designed a Cybersecurity Bootcamp for students that would give them the necessary knowledge to obtain both the NET+ and Security+ certifications, two of the industry certifications that employment data show are required to be hired into a position in cybersecurity.

The Department of Information Technology hired a firm to conduct a week-long training to teach the first cohort of students. The Cybersecurity Bootcamp took place August 21-25, 2017 with 18 students participating. All students completed the week-long course work and are now eligible to take the certification exams.

As an additional part of this new initiative the Department of Information Technology gave the opportunity for all students to intern with the professional in the IT Security Office in the Department of Information Technology. Six students have opted to work with the University IT Security team and obtaining real world experience, working on tasks that will expose them to the work they would be doing in the profession, while at the same time helping the University to comb thru the myriad of reported threats.

The Department of Information Technology is working on licensing the content to repeat the Cybersecurity Bootcamp in the summer of 2018 with our staff as instructors and is working with Dr. Minimar on the creation of the Seton Hall University credential.

Course completed:

- CSAS 4081 Network Security - Data Security Certificate CSAS - Charles Pak

Stillman School of Business

The Department of Accounting at Seton Hall University is developing two online graduate programs, MSAC and MSPA. Each program will consist of courses that run online for 7 weeks in duration, allowing students to focus on one course at a time while completing two courses each semester.

Courses under development:

- BACC 7101 Financial Statement Analysis - David Gelb
- BACC 7136 Big Data - David Goldstein
- BACC 7210 Forensic Accounting - Darryl Neier
- BLAW 7314 Commercial Law - Jack Shannon
- BMBA 8009 Legal Studies/PQ - Jack Shannon
- BMBA 9454 Legal Environment - Jack Shannon
- BMBA 9458 Information Technology - Benjamin Pearl

- BMBA 9461 Business Consulting - Jim Modlin

Courses under QM review:

- BMBA 9451 Corporate Social Responsibility - Paula Alexander

Courses completed:

- BACC 6101/BMBA8010 Financial Accounting/PQ - David Gelb
- BACC 7100 Financial Reporting - David Mest and Abraham Fried
- BACC 7114 Cost Accounting - Wagdy Abdallah
- BACC 7127 Enterprise Wide AIS II - Sung Shim
- BMBA 8011 Economics/PQ - Kurt Rotthoff
- BMBA 8018 Mathematics/PQ - Matthew Geibel
- BMBA 8019 Statistics/PQ - Matthew Geibel
- BMBA 8020 IT Management/PQ - Viswa Viswanathan
- BMBA 9450 The Launch Experience - Dan Ladik
- BMBA 9452 International Perspectives - Jack Shannon
- BMBA 9453 Accounting for Decision Makers - Mark Holtzman
- BMBA 9455 Quantitative Analysis - Sheldon Epstein
- BMBA 9456 Management - Pamela Adams
- BMBA 9457 Marketing - Hector Lozada -Vega
- BMBA 9460 Financial Decision Making - Tony Loviscek

College of Communication and the Arts

Courses under development:

- COMM 2640 Organization Communication - Devon Gifs
- COMM 8004/BSPM7540 Reputation Management - Kristen Koehler

School of Diplomacy and International Relations

The School of Diplomacy is planning to launch an MS degree to extend its offerings to more students. The program will use courses from the previously developed Post-Conflict State Reconstruction and Sustainability Graduate Certificate Program and an additional 15 credits. The courses will each run for 10 weeks.

Course under development:

- DIPL 6277 Global Health, Bioterrorism, & International Security - Yanzhong Huang
- DIPL 6704 Economic Development in Africa - Fredline M'Cormack Hale

Course completed:

- DIPL 6005 Public International Law - Catherine Tinker
- DIPL 6104 Art and Science of Negotiation - Zheng Wang
- DIPL 6105 International Political Economy - Fredline M'Cormack Hale

School of Health & Medical Sciences

The School of Health and Medical Sciences is planning to offer their Occupational Therapy program in a hybrid format to meet the changing needs of their students. Theory courses will be taught online while the clinical courses will be hybrid.

Courses under development:

- GMOT 6700 Professional Formation III - Meryl Picard
- GMOT 6750 Health and Medical Complexities of Adults - Karen Hoover

Courses completed:

- GMOT 6301 Health and Medical Complexities of Older Adults - LaMar Bolden
- GMOT 6965 Health Care Policies and Organizations - Karen Hoover
- GMOT 6980 Wellness and Health Promotion II - Meryl Picard

College of Nursing

The College of Nursing at Seton Hall University is redesigning four graduate programs, Health Systems, Adult Gerontology Primary Care, Adult Gerontology Acute Care, and Psychiatric Nurse Practitioner. These programs will maintain their current format; each course will run for 15 weeks during the Fall and Spring semesters and 8 weeks for the summer session.

Course under development:

- NURS 7246 Advanced Specialty Theory - Donna Jeskey Lowry
- NURS 7359 Specialty Practicum III - Donna Jeskey Lowry

Course completed:

- NURS 7310 Managerial Internship in Health Systems Administration - Jamesetta Haley Boyce
- NURS 7366 Specialty Practicum IV- Mary Ellen Roberts
- NURS 7369 Specialty Practicum IV- Mary Ellen Roberts
- NURS 7470 Role Enactment - Mary Ellen Roberts

Immaculate Conception Seminary School of Theology

The School of Theology is taking their 42-credit face to face Catholic Diaconate program and is offering an online version of the program to expand their outreach to other dioceses. Development of the program begins Spring 2018 and is planned through Fall 2020.

Course under development:

- STHO 6205 Christian Anthropology - Patrick Manning

Courses completed:

- BIBL 6501 Synoptic Gospels - Jeff Morrow
- BIBL 6529 Spirituality of the Old Testament - Greg Glazov

Continuing Education and Professional Studies (CEPS)

- Evidence-Based Practice Concussion Recognition and Management Certificate Program
This project consists of a 2-hour online self-paced course offered by the Athletic Training Department in the School of Health and Medical Sciences. The course will include video lectures and assessment activities interspersed throughout. The course will be offered to non-SHU participants.
- Market Research Certificate Courses
This project comprises two Market Research courses to be offered through CEPS in collaboration with the Market Research Center and Stillman School of Business. Two online, self-paced Market Research Courses (Qualitative and Quantitative Market Research) will be offered for interested non-SHU participants. The aim of these courses is to teach the basics needed to conduct insightful qualitative market research.

Each course will require approximately 40 hours to complete and must be successfully completed within 90 days of registration. The successful completion of each course provides a

certificate in that respective subject and continuing education units (CEUs) from Seton Hall University. The successful completion of both courses earns students a Comprehensive Market Research Certification – Level 1.

School of Law

The TLT Center has been working closely with the Law School on developing their Master of Jurisprudence online program. The Teaching, Learning and Technology Center assists in the development of courses and videos in each of the Fall, Spring and Summer semesters. This year the Digital Media Team has started a project of redesigning the videos in the courses to make them more engaging. Redesigned courses are:

- Workplace Privacy
- Clinical Research and the Law I
- Clinical Research and the Law II

eCollege to Blackboard Course Conversion

The Online Educational Leadership Program had been using eCollege as their Learning Management System. To remove the additional cost of an external LMS, the courses are being converted from eCollege to Blackboard. Five courses have completed the redesign and Quality Matter's (QM) process with the remaining six courses in various phases of the conversion process.

Course under development:

- ELMP 8891 - Directed Research in Administration and Supervision
- ELMP 8983 - Leadership and Management Assessment
- ELMP 7310 - Ethical Foundations

Courses under review:

- ELMP 7763 - School Law
- ELMP 6761 - Finance in Administration
- ELMP 6665 - Curriculum Development and Evaluation

Assessment

The TLT Center collaborates with the University Assessment Center to help faculty successfully implement assessment projects to measure student learning outcomes in various programs. The following are projects that were worked on in the AY 2017-18.

Homiletics Lab - Student Sermon Assessment

The Homiletics Lab in Lewis Hall was redesigned and outfitted with new technology for students to practice giving Homilies. Students practice giving sermons and are provided with a recording for review and self-improvement. The Media Services team worked with the Immaculate Conception Seminary and vendors to identify the appropriate AV equipment to meet the needs to record students in the Preaching Practicum course. A video camera and wireless microphones were added inside the chapel to allow for tracking movement and recording video and audio of the students. Also installed at one of the pews is a monitor for the instructor to view the presentation.

Assessment of Core Proficiencies

The Core Proficiencies are an integral part of the core curriculum experience at Seton Hall University. Their development provides students with the tools for lifelong learning and equips them for life

beyond college. The proficiencies are infused into all core courses and are developed through additional courses throughout a student's curriculum at Seton Hall. These important proficiencies continue to be taught in advanced courses, both in the college core and in the major areas of study, so students can gain solid competency in these vital skills.

The assessment of Numeracy proficiency consisted of a Blackboard quiz being deployed to all 74 sections of University Life course. Freshman were asked to take the nine-question quiz during the first week of Fall semester. 1,286 freshmen completed the Math quiz.

The assessment of Reading proficiency required students in College English I to read an excerpt taken from the assigned summer reading, Margot Lee Shetterly's *Hidden Figures*, and answer three questions based upon this reading. Student's submitted their answers using the assignment tool in Blackboard. Blackboard Outcomes was used to collect 854 papers. A rubric was created in Outcomes and an evaluation session was created to randomly assign papers to 10 scorers. In total 235 papers were scored.

The assessment of Writing proficiency required students in College English I to write an essay that strongly argued their position on 1 of 3 posed questions. Student's submitted their essay using the assignment tool in Blackboard. Blackboard Outcomes was used to collect 859 papers. A rubric was created in Outcomes and two evaluation sessions were created. The first session contained only science majors and the second session contained all majors except science. There were 10 scorers in this assessment where 30 science students were scored in the first evaluation session and 215 non-science major students were scored in the second evaluation session.

The Oral Communication proficiency assessment was a Blackboard quiz deployed to all 28 sections of COST 1600. Freshman completed the quiz during the first week of the Spring semester. The quiz contained 4 questions and 386 students completed the survey out of 548 students.

Blackboard Analytics

Blackboard Analytics for Learn was designed to help improve student success by putting real-time information that helps identify patterns of student activity and performance directly into the hands of those who need to take action. It allows a wide variety of users immediate and customizable access to data at the school, department, course, instructor and student level. By easily enabling the discovery of student behaviors that correlate to successful educational outcomes, this application helps decision-makers focus limited resources on the policies and programs that promote positive student practices. TLT Center has been trained on the data model and is able to generate baseline reports. The project was completed and the TLT Center will now work with Academic Affairs on how to best roll out the technology to the schools and colleges.

Faculty IT Survey

The IT Faculty Survey has two primary objectives: to assess the impact of ubiquitous computing on the learning environment, and to provide prompt feedback to the Mobile Computing Program planning team to continually improve the quality of the program. The results of this survey will be shared, in aggregate, with the University community as well as the larger educational community.

A faculty committee was formed to review the survey distributed in 2016 and offer suggestions for revisions. The committee met with the Instructional Design team in March and suggested edits were incorporated into the 2018 survey. The survey launched on May 7, 2018, and there are 121 completed

responses as of May 16. A reminder message was sent on May 14, and additional reminders will be sent until the survey close date.

Engagement and Retention Projects

The TLT Center works closely with the Division of Student Services to help engage students and inform students with the goal to increase the retention of the student body.

Title IX Awareness Course

The purpose of this course is to inform all incoming students about the Title IX statute that prohibits sex discrimination, sexual harassment, and sexual violence in educational institutions that receive federal funding. The bulk of the content will be provided in video format, based on an existing course produced by SUNY. There are short quizzes and activities incorporated throughout the course, and participants receive an email confirmation upon completing the course. The course should take approximately 45 minutes to complete and will be accessed from the Freshman Studies organization in Blackboard. The anticipated launch date is Fall 2018. Once finalized, this course will aim to serve as a model for other NJ/NY institutions.

Five modules have been developed and narration was created by the Digital Media Team and added to the course. The course will be located in the Freshman Studies organization in Blackboard for the Class of 2022.

Bethany Hall - Video Wall Production

With the opening of Bethany Hall in February 2018, the TLT Center has worked with the Office of Undergraduate Admissions to create an informational video for display. This 4K video, designed to play across the 3x3 video wall in Bethany Hall, highlights all that Seton Hall University has to offer its prospective students and their families.

Video -

<https://vimeo.com/setonhall/review/255901915/8eb2c60d7f>

**OVER
90**
STELLAR
ACADEMIC
PROGRAMS



Bethany Hall Interactive Touch Screen Wall

At the request of the Office of Undergraduate Admissions, TLT Center staff have worked to create a “digital jukebox” for public use. This interactive touchscreen contains videos from the highly successful “What Great Minds” campaign and is divided by school and college. The team has worked through technical issues with the outside vendor and will test/deploy a new external player in early June.





Bethany Hall & Nutley Campus - Construction Documentation

Efforts continue by the Digital Media Team to document the ongoing construction at both Bethany Hall on the main campus as well as construction at the new campus in Nutley with still photos, video and drone footage.

<https://www.youtube.com/watch?v=fYFx1yjsbdw>

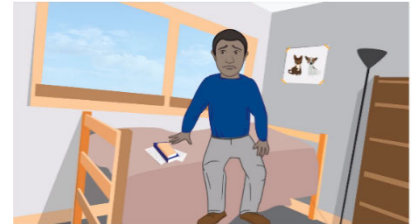
Counseling and Psychological Services (CAPS)

The TLT Center continues to work with Student Services to develop material for the "What's Up Doc" series. Content has been completed for the topic of "Panic Attacks" and work has begun on a material to encourage students to resolve their differences while "Talking Not Texting".



The team has also completed an administrative video regarding "How to Make an Appointment". This animated video, walks students thru the process of making an appointment with Counseling and Psychological Services. An animated style was chosen to make the video more inviting, and less intimidating.

<https://www.youtube.com/watch?v=VqygwvhkWLc>



Counseling & Psychological Services
MOONEY HALL - 2nd Floor - Room 27

The team also produced a video detailing the services and location of Counseling and Psychological Services. The video can be viewed at the link: <https://youtu.be/mpqVHfgEjtw>

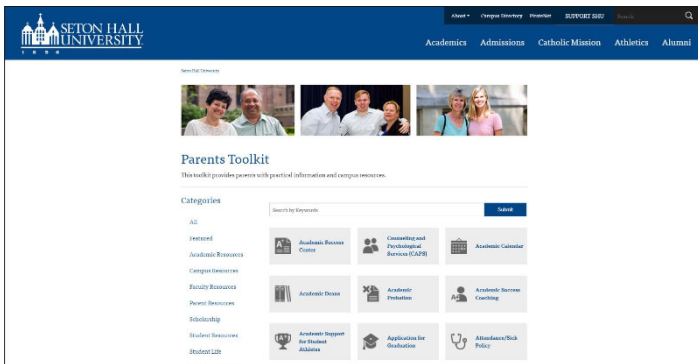
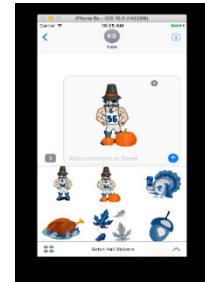
Bethany Hall Vertical Information Board

The TLT Center has worked with various event sponsors to create event content for the vertical information board in Bethany Hall. This digital sign gives participants of events in Bethany Hall information about the current event happening in the building, including, agendas, directions or a simple welcome message.



iMessage App Updates

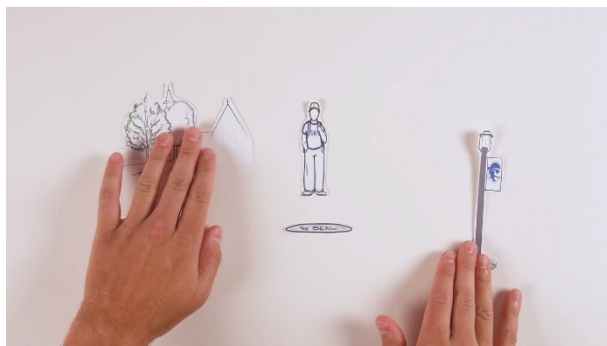
The design staff at the TLT Center have completed another round of updates to the digital sticker set for the popular iMessage app on the Apple platform. These Seton Hall themed sets, are available in the iOS store and are targeted at Pirates of all ages.



Toolkits – Parents, Students & Faculty

The Web Development team is working with the Department of Student Life to produce a series of online toolkits designed to provide resources in an easy to use format. This project will help distribute custom tailored information to parents, faculty, and students regarding their Seton Hall experience.

<http://www.shu.edu/parents/toolkit.cfm>



Welcome Week – Interactive Video

The TLT Center's Digital Media team again worked with staff from the Office of Student Affairs to update existing and create new segments for the interactive video programming presented to incoming students during the University's annual Welcome Week.

This engaging presentation uses an audience response system and video vignettes on topics

ranging from getting along with your roommate to hazing to drug and alcohol use to speak frankly with students about the do's and don'ts of life at Seton Hall University.

<https://www.youtube.com/watch?v=n1gGV-L8rjA>

Sustainability Video

The Digital Media Team continues work on a video detailing the sustainability efforts at the Seton Hall campus. When completed later this summer, the video will highlight sustainable campus features such as the community garden and focus on events and initiatives by the campus community. The team has filmed several short interviews with community members as well as events surrounding Earth Day on campus during the current term.

“What Great Minds” Video Series

Following on the heels of the *Meet Our Leaders* campaign, the video team from the TLT Center is continuing work with the Office of Undergraduate Admissions on the campaign titled *What Great Minds* which again profiles members of the University Community. Seven new segments were filmed during the term with one to be completed for the end of May 2018.



The Monsignors Thomas Kleissler and Thomas Ivory Symposium on Parish Renewal

A live webcast of the all day event on Parish Renewal from Bethany Hall. The live webcast was simulcast to parishes across the world and can be viewed at the link:

<https://youtu.be/cdqMF9mgLWM>



Keynote: Innovation and the Future of a Rapidly Evolving Industry

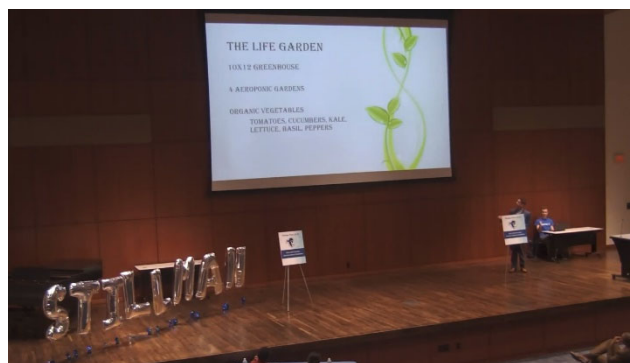
Working with the Stillman School of Business, the College of Communication and the Arts and the Law School, our team filmed the keynote address at the Sports Business and Media Ethics symposium entitled: Innovation and the Future of a Rapidly Evolving Industry. The event's keynote speaker was David Stern, Former NBA Commissioner. The video can be viewed at the link: <https://www.youtube.com/watch?v=sZGuFIxcEwQ>



Pirates Pitch 2018

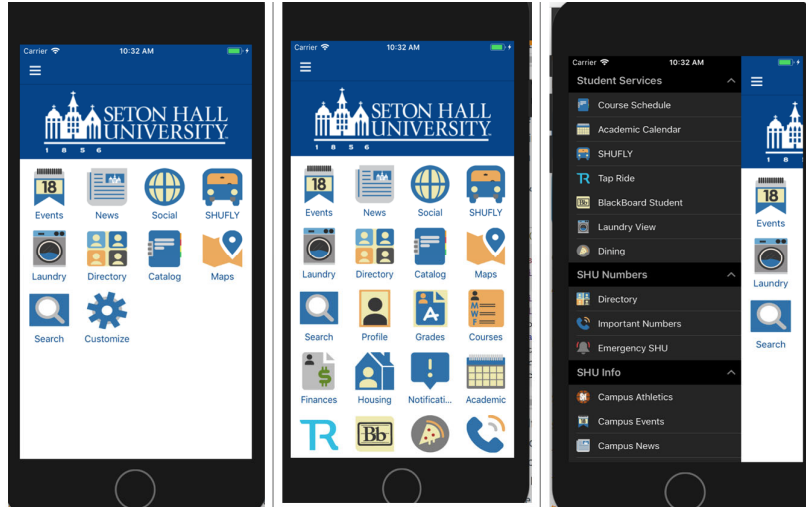
Pirates Pitch 2018 is the 8th annual Seton Hall University Venture Fund Competition, sponsored by the Center for Entrepreneurial Studies in the Stillman School of Business. The competition, which awards \$15,000 in prizes, is open to all matriculated students at SHU. The contest kicked off in January 2018 and finished with the Finals round on Friday April 6 in Jubilee Hall Auditorium. The Digital Media team filmed the event which can be viewed at the link:

<https://youtu.be/Qcgy29jCgMs>



SHU Mobile Application Update

In February of 2018, our developers, along with the Dean of Students, held a focus group with current students, to get a sense of the types of changes they would like to see in the SHUmobile app. Based on this feedback, TLT Center staff worked with the Applications Development group to make several changes to the SHUmobile app. These changes primarily include a re-imagining of the User Experience featuring a graphical overhaul. The new iOS version of the app will launch in June, prior to Pirate Adventure. Development of the Android version progress through the summer with a launch planned prior to the start of classes in the Fall.



Commencement 2018 Webcast/Graphics/Marketing

In addition to webcasting the 2018 Commencement ceremonies live from the Prudential Center, the Digital Media team produced graphics for both social media and those for view inside the arena during the ceremony.



Instructional Technology Projects

Digital Humanities

Digital Humanities represent the intersection of research and teaching with technology in the disciplines recognized as part of the humanities or liberal arts. The Provosts Office, in collaboration with the Digital Humanities (DH) committee, awards grants to faculty focused on DH work. The grants support the integration of DH in teaching and learning at Seton Hall University. The TLT Center worked with the individual faculty to develop and implement their project.

Digital Humanities Faculty Fellows

The Digital Humanities committee's Faculty Fellows grant program is in its third year. The theme for the 2018 Digital Humanities Faculty Fellows cohort is "Building Core Competencies in the Digital Humanities." The grants support the integration of DH in teaching and learning through reimagining course projects or creating new ones using digital pedagogies and technologies. The goal is to fund projects that will contribute to a future Digital Humanities Certificate. Innovation and experimentation are hallmarks of this grant program. The grant period runs from February - August 2018 with a final best practice showcase during the Fall 2018 semester for Faculty Fellows to share their experiences with colleagues.

The grant recipients are:

- Designing for Inclusion - Christine Lhowe, Instructor, Department of Art & Art History, College of Communication and the Arts
- Digital Humanities for Public History - Amanda Mita, Archives & Special Collections, University Libraries
- Digitization of the Seton Hall Qur'an Manuscript - Youssef Yacoubi, Ph.D., Assistant Professor, Department of Language, Literature, and Culture, College of Arts & Sciences
- Integrating Science and Theology with the Web - Stacy Trasancos, Adjunct Professor, Department of Catholic Studies, College of Arts & Sciences
- Law, Culture, and Society: Visualizing the Connections - David Opderbeck, Ph. D, Professor, Seton Hall Law School
- Strategic Leadership Communication - Devon Gifis, Instructor, Public Relations, College of Communication and the Arts
- Web-Based Mentoring - Susan Scherreik, Director, Center for Entrepreneurial Studies, Stillman School of Business

Digital Humanities Support

In addition to supporting the Digital Humanities Grants, the TLT Center is an active participant in the Digital Humanities process at the university. The TLT Center supports the Digital Humanities committee by creating a template to assist faculty in developing Digital Humanities projects for use in the classroom. The template utilizes best practices for identifying learning objectives, instructional materials, learning interaction, and project technology.

The Digital Humanities Committee will repeat the series of Digital Humanities Workshops for graduate students to be held in Space154. Workshop topics include:

- Digital Humanities & Your Career
- Digital Humanities Hack-a-Thon
- DH Project Presentations

Evidence-Based Practice Concussion Recognition and Management Certificate Program

This project consists of a 2-hour online self-paced course offered by the Athletic Training Department in the School of Health and Medical Sciences (SHMS). The course will include video lectures and assessment activities interspersed throughout. The Digital Media Team created links to videos in Vimeo, and the Instructional Designer created the course in Blackboard. Continuing Education and Professional Studies (CEPS) is working with SHMS to provide access to course reviewers and registrants and to determine a process for granting completion certificates.

Exam Management Solution

The College of Nursing and Physician Assistants program are utilizing ExamSoft, an exam management technology. ExamSoft allows the creation of secure assessments that are more flexible, allows the use of question pools so each student gets an entirely different test and uses real-time performance reports to address learning weaknesses. These reports identify exactly where students struggle using question level analysis.

The TLT Center has finished the integration of this tool with the University's Learning Management System and the College of Nursing has expanded its use of the tool rapidly. All NUTC and NUTH courses totaling over 60 sections are currently using the system with 347 students actively taking exams.

FERPA Course for Psychology Teaching Assistants

The FERPA module from the Data Security Course was made available to undergraduate and graduate student teaching assistants in the Department of Psychology. Faculty in the Department of Psychology will track student completion of the course.

Remote Proctor

To support academic integrity in the online environment, the TLT Center has investigated several software options to ensure the security of online exams as well as verify the identification of students participating at a distance in online courses. Products were piloted during the Spring and Fall 2017 semesters. Students that participated in the pilots were surveyed about their experience and the ease of use if the tools. Based on feedback from faculty and students, as well as a cost comparison of products, RPNOW was selected as the preferred solution.

RPNOW is currently being utilized by the online MBA and online Accounting programs and several faculty from the Stillman School of Business have requested to use the service in other programs as well. It is expected that RPNOW will be available for the entire University with the start of the new fiscal year providing faculty with a way to ensure academic integrity in the online modality.

Space154

Space154 is a collaborative place where faculty, students, and the Seton Hall community can come to participate in a variety of experiences. Part learning space, part digital creation space, and part discovery lab, it is a dedicated space on the ground floor of Walsh Library with flexible and café-style workspaces for teams or single users. It features technologies including a 3D printer and Autodesk software, Arduino and Raspberry Pi kits, and text mining/analysis software.

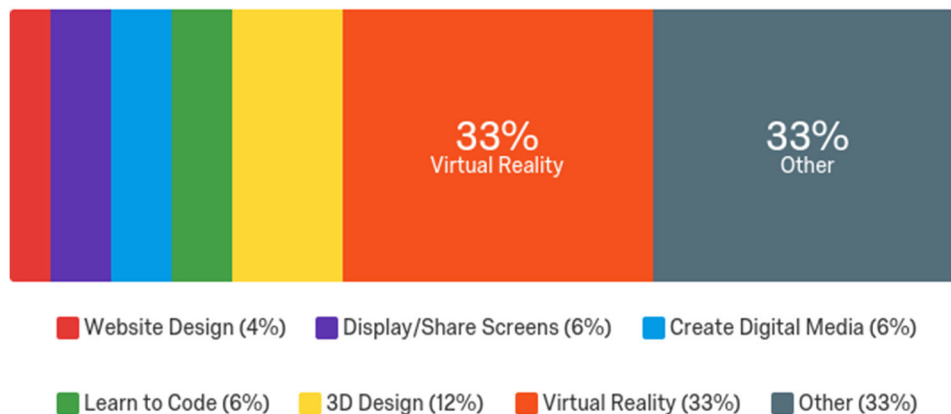


Space154 hosted several events during the summer semester that helped develop the direction for the 2017-2018 academic year. The Instructional Design team initiated a Space154 Advisory Board comprised of a mix of Faculty members across all schools/colleges, Librarians, and Instructional Designers to provide feedback and guidance for the mission of the Space.

Initiatives and activities from the summer and fall semesters are:

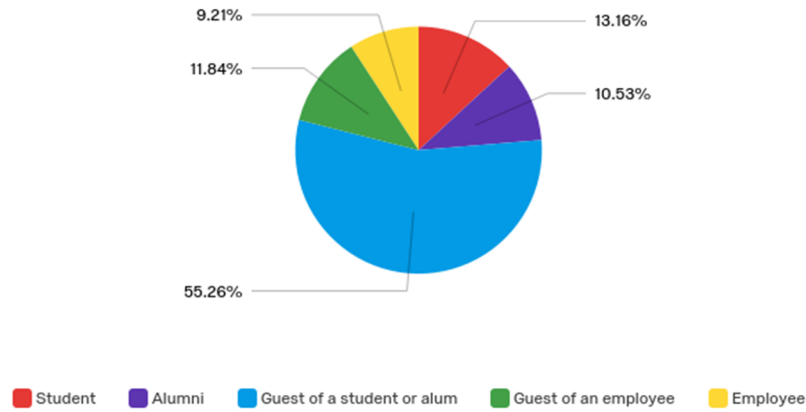
- Professor Meryl Piccard partnered with the Instructional Design team and Space154 for her summer GMOT 6989 course. Three sessions were held where students were introduced to the design thinking process and 3D design to better help the students think creatively when developing solutions or activities for their clients. The final project for the course was to create either a podcast, PSA, or infographic for the community groups they were working with during the summer. Students were successfully able to integrate their practical experiences with the elements of design thinking (listening with empathy, ideation, prototyping, and gathering feedback) to develop their final projects. The 3D design session enabled students to think how they can use emerging and more readily available technologies such as a 3D printer to customize solutions for clients based on individual needs.
- Space154 Open Labs have seen a 50% increase in visitors from Fall 2016 to Fall 2017 with a total of 62 unique visitors. Of the 62 visitors, almost a quarter of them have been back to Space154 multiple times this semester to work on ongoing projects or continue to explore the technologies in the space. Virtual Reality is the most popular technology this semester. The high percentage of "Other" reflects the usage of the space for the Digital Humanities Colloquium.

What brings you to Space154?



- The Fall 2017 semester has seen an uptick in usage and awareness of Space154 in the student and faculty community. In just the first two months of the Fall 2017 semester, Space154 has seen a 60% increase in faculty reserving the space for course projects. Usage of Space154 related to academic courses varies with the following colleges/professors represented:
 - School of Business - Jack Shannon
 - College of Education and Human Services - Grace May
 - Arts & Sciences - Rob Pallito & Aruna Sanyal
 - Diplomacy - Catherine Tinker

- Space154 held an open house during Seton Hall weekend and was able to introduce 76 members of the Seton Hall community to the mission and technologies highlighted in the space.



Faculty Development, Employee and Student Training

The TLT Center offers computer training and professional development to the entire University community. This includes University supported software such as Microsoft Office (Excel, PowerPoint, Word, Publisher, OneNote, Publisher) and Office 365 tools that provide anywhere access. In addition, other training opportunities include managing email, cloud storage, Blackboard Learn and various teaching/learning tools. View the list of available courses: <https://www.shu.edu/itevents>

Faculty Development

Online Teaching Certificate Program

The purpose of the Online Teaching Certificate Program is to prepare faculty to develop and facilitate online courses; to further increase instructor-to-student engagement and satisfaction in online and hybrid courses, and to provide technical skills and resources to increase faculty confidence while teaching. The TLT Center partnered with the Center for Faculty Development in offering the program and will jointly offer the Certificate upon completion.

The Online Teaching Certificate Program is comprised of five one hour workshops that incorporate best practices in online course design and teaching and align with Quality Matters™ standards. Participants will complete a deliverable within one week of the workshop.

The workshops include:

- Competencies in Online Teaching - created by Larry Ragan, Penn State
- Engagement Strategies
- The Inclusive Classroom
- Quality Matters, Blackboard, and Course Design
- Blackboard – Grade Center

During the Fall 2017 semester, forty-nine faculty attended the Online Teaching Certificate workshops. This includes individual faculty members as well as The Department of Occupational Therapy and The Department of Physician Assistant, who worked with the TLTC to tailor the times of the workshops to meet their specific departments' needs. Of the forty-nine faculty, thirty completed the program. Certificates were awarded to those who completed the program and a news article was posted on the Seton Hall website listing the faculty by college. This spring, the TLT Center has already offered two complete training programs; one for the MHA program and another for general faculty. The TLT Center is offering another program in April. Assessment of the fall attendees was positive with several inquiring as to an advanced teaching certificate. Other suggestions included longer workshop and integration of discussion board for further discussions. An Advanced Online Teaching Certificate is being planned for Fall 2018.

Student Training

Augmented Reality Scavenger Hunt - SHU-Mazing Race

The Instructional Design Team hosted a student competition during the Petersheim Academic Exposition on April 24. The activity was advertised as: "Who doesn't like a little friendly competition and fun among friends? Grab your fastest friends and challenge other peers as you "race" through campus on an adventurous technology scavenger hunt. Use your smartphone to capture virtual items and clues and receive points along the way. Photograph and tweet your stops to earn bonus points. Prizes such as Bluetooth speakers, 3D VR headsets, and charging blocks will be given to each team member of the three teams with the highest points. (The fastest completion time will break any ties.) Teams can't exceed three people."

Student Technology Skills Courses

The Tech Skills courses have been successfully launched for the past 11 years. Each course covers various topics related to technology and tips for using technology to help students build their technology skills. The courses are developed in four sections and are taken sequentially starting in the Freshman year. Tech Skills I is a requirement in the Freshman Studies, University Life course and is taken online over the summer prior to their first semester. Tech Skills II – IV are voluntary courses that teach students how to keep their computers safe from viruses and malware, use Library and internet resources and finally how to begin to prepare for life as a professional. Students who successfully complete Tech Skills II – IV are given a \$100 rebate on their technology fee for the semester in which they pass the course.

- **Tech Skills I:** The first course in the Tech Skills series covers information related to the computer hardware/software, caring for the laptop, safe computing/avoiding viruses and spyware, appropriate use (passwords, staying safe online, copyright), the web (Internet processes), and technology support resources. The course is being updated for launch in June 2018 for the incoming freshman Class of 2022. Students must go through each page of the course before they can move forward and they must pass each module quiz with a minimum score of 80% before moving forward.
- **Tech Skills II:** Course was revised and launched April 10, 2018. Topics covered include features and functions of PirateNet (including a virtual walkthrough tour), cloud storage and notetaking apps, mobile apps for SHU and Blackboard, as well as open educational resources. As of May 16, 692 students have completed the course.

- **Tech Skills III:** Course was revised and launched April 10, 2018. Topics covered include collaborative tools, communication tips when working with groups, and resource sharing. The course was completely revamped this year. As of May 16, 407 students have completed the course.
- **Tech Skills IV:** Course was revised and launched April 10, 2018. Topics covered include professional development tips, technology tips after leaving SHU, and creating a brand for yourself in the professional world. As of May 16, 425 students have completed the course.

Classroom Technology Support

The TLT Center is committed to supporting faculty and the SHU community in the classroom and with special programs and campus events.

Instructional Technology Support

The University's Learning Management System, **Blackboard Learn**, is used by more than 80% of the faculty to either supplement their face to face course or to deliver education completely online. A part of the suite of tools included in Blackboard Learn is **Blackboard Collaborate**, a synchronous collaboration and video conferencing tool to allow faculty and students to hold real-time online sessions for a lecture, discussion or group work.

Lecture Capture technology allows faculty to capture their lectures live in class, giving students the opportunity to revisit content that they may have found difficult to grasp during the class period.

Qualtrics is software tool that allows the entire community to create surveys and collect data from the both the internal Seton Hall community or to an external population.

The Classroom and Event Support team in the Teaching, Learning and Technology Center is responsible for support the audio visual needs of the University community for all classrooms, special events and the use of portable equipment either on or off campus.

Computer Lab Operations is responsible for the staffing, maintenance and management of the two computer labs on the South Orange Campus and the two mobile carts that allow for the setup of a computer lab temporarily in certain areas around the campus.

Technology Support

PC Support Services, the unit responsible for supporting the University's laptop, desktop and print environment, has continued and/or completed work on the following projects:

Technical Services Area – Scheduling Application

To improve efficiency and user support, the Web Development team is working with PCSS staff to create an application which will allow the University community to schedule an appointment for service with staff in the Technical Services Area (TSA) located in Corrigan Hall.

The application displays open appointment slots and allows the user to choose appropriate availability based on the issue with their device. The goal of this application is to efficiently manage the flow of

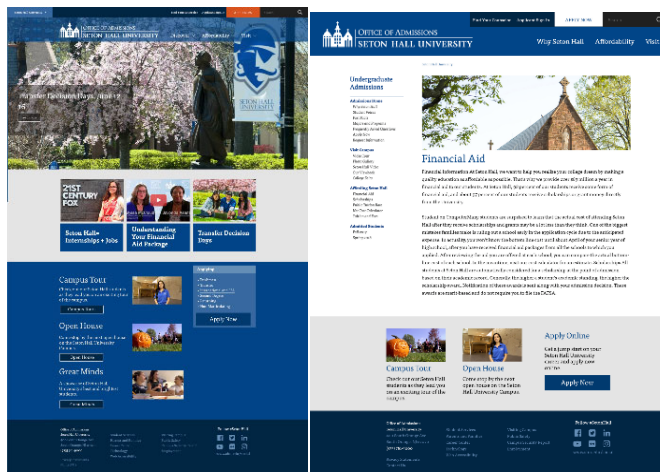
customers in the TSA while decreasing lines and wait times, increasing customer satisfaction and promoting service excellence. Primary development and testing of the application were completed during the summer of 2017. The TSA staff will pilot the project with the Service Desk during the fall of 2017 with a plan to roll unlimited access to the University community in the early part of 2018.

Project Name	Business Case	Status	Target Date
Legacy Laptop Upgrade	Upgrade SHU users with legacy machines to computers that are under warranty and running Windows 10 along with the updated SHU standard software	Work in Progress	12/29/2017
Create Standards for ServiceNow	Make ServiceNow, the university's IT service ticketing system, more user friendly so it is easier to navigate and use.	Work in Progress	7/6/2018
Manage Lenovo Driver Updates	In order to ensure all device drivers are up-to-date, we are looking to implement a process where all the Lenovo drivers are installed and updated automatically.	Work in Progress	12/31/2017

Web Development

Admissions Website Redesign

The Web Development staff have completed the redesign of the admissions.shu.edu site. This new site, developed under the guidance of the Office of Enrollment Management, is consistent in design with the University main site while adding several appealing and engaging features for the potential Seton Hall student including several call to action items and a mobile-friendly user experience.



Internship Website

Staff at The Career Center have asked the TLT Center to help rebuild the website for the Internship Program. This redesign removed existing content from their previous site hosted on a difficult-to-manage platform, restructured the content for ease of use and migrated the content to our current blogs.shu.edu

platform. The result is a site which offers better information architecture, more features, improved access for content contributors and an eye-catching user interface.



<http://blogs.shu.edu/internships/>

Sites of British Modernism

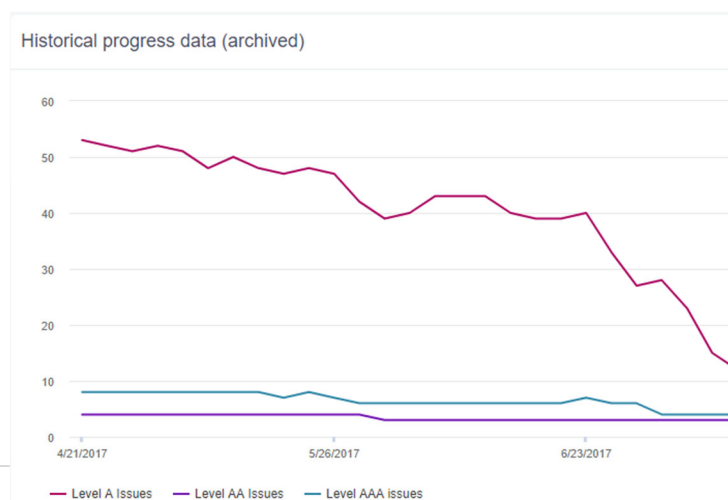
Working with Martha Carpentier from the English Department, TLT Center staff has created a website for mapping key locations of British Modernism, ca. 1900-1939, including sites such as Bloomsbury, Garsington, Hogarth, Charleston, Monk's House, etc. This site is under construction and will first be used in Professor Carpentier's undergraduate class in modern British literature during the Spring 2018 semester.

<http://blogs.shu.edu/british-modernism-undergraduate/>



Website Accessibility Testing and Updates

The Web Development team worked to update production level code, cascading stylesheets as well as web content to make several University web properties, including the www.shu.edu, www.admissions.shu.edu and www.advancement.shu.edu websites more user-friendly and accessible to meet the WCAG 2.0 AA standard for all users. Using a web based tool, SiteImprove, the team identified issues not meeting the appropriate standard and worked to resolve them as quickly as possible. The majority of this work was completed in the late spring of 2017 and continues as an ongoing process due to the nature of web-based content.



IT Governance

IT Governance is the process by which the University endorses institutional decisions about IT systems, services, priorities, projects, and policies; the individuals who are assigned responsibility for endorsing those decisions; and, the organizations in which those individuals meet to discuss those decisions.

Through IT Governance we seek to align IT systems and services with the University's strategic vision; to manage the portfolio of IT services across the University by prioritizing IT requests, services, projects, and systems; to ensure legal and regulatory compliance across all IT systems and services; and to ensure the effective and efficient allocation of roles, responsibilities, and resources for IT systems and services across functional areas.

The IT Governance Structures at the University are:

- Banner and Admin Computing Steering Committee
- Teaching, Learning and Technology Roundtable

Administrative Computing Steering Committee

The Administrative Computing Steering Committee serves as the primary IT governance organization for the Banner Administrative Systems (Banner Finance, Banner Financial Aid, Banner HR/Payroll, Banner Student, and Banner Relationship Management), IT systems that support, feed or rely on those systems (e.g., the Banner Operational Data Store [ODS], the Banner Enterprise Data Warehouse [EDW], the Cognos reporting system, the Blackboard Commerce System, the various payment gateways, and the like) and those IT systems that affect the University's financial and business processes.

The Administrative Computing Committee consists of executives and decision makers. It includes the management team responsible for the direction of the Banner data stewards. Additional representatives may be appointed by the University's president and vice presidents.

The Administrative Computing Committee typically meets monthly, although it can meet more or less frequently depending on the committee's workload and other scheduling considerations. To facilitate scheduling, from September through June the committee usually meets bi-weekly. The work of the committee is supported by the committee's MS SharePoint site, which contains the committee's meeting agendas, documents, and decisions.

Other Banner IT Governance Structures:

- Banner Production Meeting - The Banner data stewards and the IT units that support them meet weekly in the Banner Production Meeting to coordinate their activities across the various Banner systems. This is a tactical meeting intended to schedule work and troubleshoot issues surrounding the various Banner systems. The work of this group is supported by their MS SharePoint site, which includes detailed notes from each meeting. The members of the Banner Steering Committee will also be given access to this SharePoint site to facilitate their understanding and management of the Banner environment.

- Banner Reporting and Data Standards Group - The Banner data stewards, representatives from Institutional Research, and the IT units that support them meet regularly to develop and implement the rigorous data standards that are essential to the Banner interfaces, file feeds and reports. This group is currently co-chaired by the Director of Institutional Research and the CIO. This group has been meeting at least monthly since last fall, when the Banner Operational Reporting Improvement Project was launched, aimed at re-implementing all Banner institutional reports in the Cognos / ODS reporting environment. The work of this group is supported by their MS SharePoint site, which includes a lot of valuable information about the implementation of Cognos and ODS, as well as tools to support the development and enforcement of good data standards for the Banner systems. The members of the Banner Steering Committee will also be given access to this SharePoint site to facilitate their understanding and management of these important initiatives.

Teaching, Learning, and Technology Roundtable

Established in 1995, the Teaching, Learning and Technology Roundtable is composed of representatives from academic and administrative areas of the University. Sponsored by the Office of the Provost and the Department of Information Technology, the Teaching, Learning & Technology Roundtable (TLTR) is a consortium of faculty, administrators and students who, on behalf of the University, meet and discuss the interests of enlightened use of technology for teaching and learning. The Roundtable is comprised of action teams (subcommittees) which meet regularly to discuss institutional issues related to teaching, learning, and technology. The TLT Roundtable makes recommendations in support of the University's Strategic Plan as outlined by stakeholders such as the Faculty Senate, Academic Affairs, Student Affairs, Division of Administration, and other key organizations or groups.

The Provost's Charge to the TLTR

- To serve as a forum and meeting place for discussion of institutional issues related to teaching, learning, and technology
- To create action teams to achieve essential short term goals deemed necessary by the Executive Committee of the TLT Roundtable, and by their constituencies, advancing to the cabinet recommendations as they emerge from these teams
- To provide a forum for discussion and recommendations to enhance the long-range technology goals through representative participation by various stakeholders such as the faculty, students, Faculty Senate, Academic Affairs, Student Services, Department of Information Technology, and other key organizations or groups.
- To communicate regularly with all segments of the campus on the TLT Roundtable's activities and progress
- To stay informed of national trends in technology integration in higher education and introduce these trends to the University community.

Standing Committees of the TLTR:

- **Innovative Technology Committee** (chaired by Steve Landry) – identifies new and emerging technologies and investigate their usefulness in teaching and research.
- **Copyright Committee** (chaired by John Buschman and Lisa Rose-Wiles) – will educate the University community on copyright rules and regulations; the application of educational fair use; hold workshops and events to help the University community understand their rights

under the DMCA of 2000 and the TEACH Act; work to help students understand the pitfalls of pirating music and movies.

- **Faculty Development & Best Practices** (chaired by Mary Balkun, Renee Cicchino and Lysa Martinelli)– will showcase exemplars of good teaching and student engagement across all schools and colleges at Seton Hall University.
- **Mobile Computing Committee** (chaired by Joan Guetti and Steve Landry) – gathers and evaluates data from students and faculty on the mobile computing program to determine the further directions of the Mobile Computing Program.
- **Classroom Technology Committee** (Deirdre Yates and Eva Rosmaninho – will work with the Senate’s Faculty Committee to determine classroom technology needs and develop plans to modernize general purpose classrooms and large classrooms.
- **Online Education Committee** (chaired by Joyce Strawser and Renee Cicchino) – will help to formulate institutional policies and processes that govern the development and delivery of online & hybrid courses across the University.

Classroom Technology Committee Report

Goals and Objectives:

- The purpose of the Classroom Technology Committee is to determine classroom technology needs and develop plans to modernize general purpose classrooms and large classrooms (e.g. McNulty & Jubilee Auditorium)

Summary of Activities/Decisions:

- The committee focused on future direction for the vacated rooms due to the Nutley campus move – a total of 16 classrooms.
- Discussion at our meetings concentrated on faculty teaching needs.
- We reviewed the Faculty Senate survey and determined we needed to get more faculty input on our committee before making recommendations.
- We also worked on level-setting rooms and had multiple meetings with Communication and the Arts faculty to work on level-setting for Fahy 58A and Corrigan 75.

Recommendation:

- The committee will continue its analysis of the Faculty Senate faculty survey to develop a list of recommendations for direction on classroom upgrades.
- Additionally, in seeking to expand the faculty representation on our committee we will be reaching out for additional members.
- Work continues on completing the level-set in Corrigan – projector should be installed over Fall break 2018.
- Work on Fahy 58A requires more direction from the faculty in the Communication program. We will be following up with the Chair this semester.

Online Learning Committee Report

Recommendation #1 – Provide resources for online students and faculty

- Resources for students, including the Online Student Readiness Questionnaire, will be linked from all academic pages including the <https://online.shu.edu/> page (needs to be reviewed by Wiley).

- Resources for faculty, including video tutorials, will be located on a Common Spot page linked off of the Center for Faculty Development web page and linked off of the Instructional Design pages.
- Promotion of resources will be done through news stories, blog posts and other social media outlets. The promotion will repeat at the start of each semester and will be included as part of New Faculty Orientation. Information will be sent to Deans for inclusion into their respective Adjunct Handbook no later than August 1.

Recommendation #2: “Online Faculty of the Year” and “Hybrid Faculty of the Year” awards

- The yearly call for online and hybrid course awards would come out of the Provost’s Office as part of the existing faculty recognition program.
- Eligible courses would be those developed with the TLT Center that have gone through a Quality Matters review and have been taught at least once.
- A committee of prior awardees would evaluate the courses based on a provided rubric. The rubric would include categories such as engagement, creative assignments, comments from the QM review, and other best practices. (see: http://www.blackboard.com/resources/catalyst-awards/bb_exemplary_course_rubric_apr2017.pdf)
- Faculty awardees would give a workshop as part of the TLTR sponsored “Online Learning Day” on how they developed and taught their course.

Recommendation #3: RPNow Usage Guidelines

- RPNow should only be used for “high-stakes” testing and not for low-stakes tests or “quizzes”.
 - “High-stakes” tests are defined as any test which makes up a significant part of a student’s grade. They are often cumulative and summative in nature. There are generally one to two high-stakes exams in a course (mid-term and final exam).
- RPNow should be used in online and hybrid courses and programs only.
- Faculty wishing to use RPNow should include a statement of use in their syllabus.
- Faculty should be required to attend training the semester prior to using RPNow in their class.

Recommendation #4: Faculty development for those teaching online or hybrid courses

- Require faculty who are new to teaching online or hybrid courses to complete the Online Teaching Certificate Program within 6 months of being hired to teach an online or hybrid course.
- Partner new faculty with a mentor (within their department) to demonstrate high interaction and engagement standards.
- Faculty with online or hybrid teaching experience should be given an assessment prior to teaching online/hybrid courses on technology skills needed to successfully facilitate an online or hybrid course within Blackboard. These skills include posting an announcement, submitting feedback and entering a grade, editing text in Blackboard.
- Online/hybrid courses should be reviewed every three years by faculty members within the department to encourage collegial feedback.

Copyright Committee

The Copyright Committee met their obligations under the TEACH Act for the 2015-16 Academic year by hosting the Copyright event: “Cautionary Tales in Copyright” on November 27, 2017. In collaboration with the Center for Faculty Development sessions were held as part of the Faculty Luncheons and addressed a mix of topics including copyright, intellectual property and scholarly communication.

Committee Notes:

We do not necessarily have to have “an event” to meet our TEACH obligations. We can do that but we can do other things as well or maybe instead. Some suggestions that we can work on next year are:

- Include a copyright handout in new faculty orientation packets
- Insert a copyright piece in new student orientation digital packages (we could probably use the flyer that we have)
- Consider and keep track of events where copyright is an element (e.g. electronic dissertations and theses presentation)
- Make copyright announcement on library or TLTR blog (point to copyright libguide, copyright policy)
- Discuss ideas with other institutions.

Information Technology Services

Seton Hall's technology infrastructure has been a key element of the University's success in using technology to enhance and transform teaching and learning.

The University has a Cisco network backbone that provides redundant connections to most campus buildings, ensuring continued access to the campus network in the event one link is disrupted. The campus wireless network covers 100% of the campus, including many outdoor locations. The South Orange and Interprofessional Health Sciences campuses each have two 3 gigabit circuits to the Internet provided by Level 3, a premier, national Internet Service Provider; these circuits are redundant to provide backup in the event of an outage to one circuit and are upgradeable to 10 gigabits per second to accommodate future growth.

The Interprofessional Health Sciences (IHS) campus has redundant Palo Alto firewalls and a state-of-the-art Cisco Voice-over-IP (VoIP) telephone system, supported by a RedSky E911 system to provide the caller's location to 911 dispatchers. The IHS campus has been the testbed for the development of these new firewall and telephone systems. It is expected that IT Services will upgrade the South Orange campus to Palo Alto firewalls in AY'2018-19, and begin the multiyear upgrade of the twenty year old Private Branch Exchange (PBX) telephone on the South Orange campus to a Cisco VoIP system beginning in AY'2019-20.

The University currently runs Ellucian's Banner® Unified Digital Campus as its administrative suite of student, financial aid, and finance systems. It is an integrated suite of proven, scalable, enterprise-wide applications on a single database, designed to support self-service faculty, student, and employee transactions, institutional research, and enrollment management. In addition to Banner, major components of the Banner Unified Digital Campus installed at Seton Hall include the Luminis portal, providing a single point of access for key IT services, the Banner Document Management System (BDMS) enabling scanning and electronic storage of paper documents, and the Banner Business Intelligence Suite, which includes the Cognos reporting environment and a data warehouse that enables end-user access to a variety of Banner reports. Seton Hall uses the Okta directory for Single Sign-on between supported systems. The Fischer Identity Management System links directories with Banner, providing automated account provisioning and deprovisioning for most University systems. The University has Microsoft Office 365 for email, calendaring and document sharing. Seton Hall uses Blackboard's Learning Management, Content Management, and Learning Analytics systems to support a variety of academic and administrative activities.

With the move of our Banner systems to Amazon Web Services (AWS) in December 2015, the University has moved most of its data center to AWS. Our AWS data center has significantly extended our data management capabilities, including improved disaster recovery such as failover to the west coast in the event of a disruption of services, improved data security such as database encryption, application firewalls, and automated defense against Denial-of-Service (DoS) attacks, and improved server management. The University's AWS data center has positioned us well to complete the upgrade of Banner to Banner 9 this fall. Banner 9 provides a much-improved student and faculty experience but requires many new application servers; the pending move to Banner 9 was one of the deciding factors in implementing our AWS data center. The move to Banner 9 needs to be completed by the end of 2018, the current date for Oracle to end support for Oracle Forms, one of the technologies on which Banner 8 was built.

University IT Services includes a systems support group that implements and maintains the University's central systems (e.g. email, file and print services); an application development group that supports the

University's administrative system and develops new technologies to improve process, workflow and the ability of the community to interact with our information systems; a production control group that provides database administration for the University's Banner system; a networking and telecommunications group that manages the campus network and telephone systems; an information security group to manage the firewalls and security systems that keep our data safe and respond to information security incidents; and, a project management group to assist the University community with requesting new technologies to improve the University's efficiency and effectiveness.

Seton Hall University's IT Services consists of the following teams:

Application Development

This eight-person team supports the University's administrative applications ERP system through integrations with third party vendors, workflows, and scheduled tasks, and creates interactive and static content for the university's portal, PirateNet.

IT Security

IT Security assists the University in protecting its computing and information assets and complying with legal and regulatory requirements.

Networking and Telecommunications

This eleven-person team supports the campus network and phone systems.

Production Control

This six-person team manages the University's production and test environments for the Banner administrative systems and its ancillary applications, Reporting Data Warehouse, and various reporting tools as well. It also manages University's test and production SQL Server databases.

Project Management

This two-person team helps gather requirements for IT service requests, and supports the progress of projects from initiation through completion.

System Support

This eleven-person team supports the University's physical and virtual databases, email system, applications and web servers and enterprise storage.

Administrative Computing Project Portfolio

Project Management team coordinates the integration of technology into the University's business and academic environments and oversees the Project Management process.

The Department of Information Technology implemented a Project Request Process that facilitates initiation of new technology initiatives and projects that enhance the administration of the University. All technology projects requiring IT Services resources must go through this Project Request Process to be approved by the CIO and IT Executive Management.

The following table provides a high-level overview of projects underway and completed in the 2017-18 academic year:

Projects (Work in Progress – AY 2017-18)

911 System Replacement	The current Amcom Extend911 system has reached end of life and requires replacement. This project will cover the vendor selection, acquisition, implementation and go live of a replacement campus wide E911 system.
Alertus Re-Architect for use with Medical School campus	Public Safety would like to extend its use of Alertus (the Pirate Alert system) to the Medical School campus, controlling any outgoing messages from the South Orange campus. Alertus is currently installed on-premises (South Orange).
Banner Communication Management (BCM) Install	<p>This project is intended to get BCM installed and usable by multiple departments on campus. BCM will provide an easy-to-use solution to send scheduled messages to current students. Where BRM is being desupported, and its replacement, Slate, does not support messages to current students, BCM will pick up the slack. It will be used by Student Services and Financial Aid, but perhaps other offices as well, to send simple, scheduled messages to Banner populations. Alternatives include AppWorx and Workflow, both of which are currently in use and remain options going forward, but BCM provides a much simpler, easier to use solution.</p> <p>There is no hardware purchase involved. The software is already owned by Seton Hall. Consulting services may be required. Some minimal training may be necessary as well.</p>
Banner Enrollment Services Workflows	Registrar processes, such as requesting and approving grade changes or curriculum changes rely on paper forms, require multiple signatures and routing, and then manual input into Banner. This project will make the process electronic and much more efficient.
Banner 9	Implementation of eleven Banner 9 modules. The replacement of the Banner 8 administration pages is time sensitive, as support for Oracle Forms ends 12/31/2018. We are on target to have these forms replaced by 10/31/2018.
eTranscript Implementation	eTranscripts is a secure interface between a client's transcript vendor and the Ellucian administrative system that the client institution uses. It facilitates real-time movement of transcript ordering data into the Ellucian system

	(including student identification and holds notifications), eliminates manual intervention, provides end-to-end efficiencies and ensures consistency throughout the process.
eRezLife Implementation	eRezLife will replace Adirondack Housing Director (THD), our current Housing and Residence Life software platform. eRezLife will handle those functions currently handled by THD (housing application, selection of roommates, student selection of meal plans, room assignment, duty night log reports, staff weekly reports, student interaction logs) as well as some that may or may not be handled currently by THD (room condition reports, conflict mediation reports, student-at-risk assessment, staff progress reports, overnight guest tracking, staff selection services). eRezLife is vendor-hosted solution (housed on AWS servers).
Interprofessional Health Sciences Campus	The University has leased space in Nutley, NJ for the School of Medicine, School of Health and Medical Sciences and the College of Nursing. The Department of Information Technology has been tasked with the design and implementation of the IT systems on floors 0 - 3 plus half of floor 4.
Lieberman Project Implementation	Implement Lieberman RED, a Privileged Identity Management System that enhances secure access by privileged users to servers, databases and appliances. RED will reduce the risk of compromised administrative level passwords by requiring the checkout of passwords that are complex and rotated on a daily basis. In the event if a compromised account, an attacker would not be able to crack the password within the 24-hour window in which the password is rotated.
Microsoft Enterprise Mobility Suite	This will provide incoming freshmen with the ability to have their laptops delivered at home and be able to configure them off campus.
Multi-Factor Authentication (MFA) Expansion	This project is an expansion of the previous Multi-factor Authentication project having the following business case/problem statement: Passwords alone are not adequate to protect high value IT assets. MFA requires a confirming text message, email, or phone call as a second verification of the user's identity and is an effective practice to secure high value IT assets. MFA is currently a requirement for off campus access to Banner administrative forms and other sensitive systems. This next phase will expand MFA to the SHU portal for all faculty and employees.
NuPark Implementation	NuPark will replace Bosscars, our current Parking Services software platform. Bosscars is dependent on Oracle Forms, and Banner 9 will not use Oracle Forms, so we needed to select a new solution. NuPark will handle those functions currently handled by Bosscars (application for parking permits for students, faculty, admin, and staff; issuing of permits; tracking of citations; reporting on permits and citations; accepting of payments for permits and citations) as well as offer additional functionality (license plate recognition for gate entry, license plate recognition for parking lot rounds, non-physical permits, integration with payroll and bursar).

Slate (Admissions System)	Academic Affairs, Enrollment Services, and IT are working to replace the Banner Recruitment Management (BRM) system, which is as end of life this year. Slate was chosen by a cross functional team from the three areas. The target date is to have Slate operational for undergraduate admissions in September 2018 and for graduate admissions in May 2019.
SOM Banner Configuration	Accommodating the School of Medicine's classes, faculty and students in our Banner ERP system requires several significant enhancements to the configuration (e.g., setting up HMM employees as SHU faculty in Banner, etc.)
TouchNet Implementation School of Medicine	Implementation of the TouchNet system for the School of Medicine. Implementation includes the Cashiering Business Office and the School of Medicine Bill Payment Suite.
Tracking Base Pay / Equity Pay / Merit Pay in Banner	Academic Affairs needs to separately keep track of base pay, equity pay, and merit pay in Banner.

Projects (Completed – AY 2017-18)

AWS Infrastructure Management	The focus of the project is on a selection of standard tools including language, repository, and automation tools. These standardized tools will then be used to create a copy of our infrastructure (VPC, networks, subnets, firewalls, ACLs, etc) in AWS Virginia to AWS Oregon, and maintain the copy on a weekly basis. This allows us to rapidly decrease the time it would take to failover/move services from one side of the country to the other and can be replicated in other AWS data centers. From our research and testing in this project will come automation templates for all our infrastructure.
Fischer International IAM Solution Implementation	Implementation of Fischer International IAM Solution to replace the current production systems/workflows
Lenel 7.2	Upgrade to stay current with security/access control software, implement new functionality, and maintain Oracle patching.
Lenel App Server & Client Machines, Oracle Client 64-bit upgrade	Lenel client machines continually lose connection to the Lenel database (every few hours). Lenel has determined this is due to incompatible 32-bit Oracle on Lenel app server and client machines, and suggests we install 64-bit Oracle instead to resolve the issue.
Lenel: Move to AWS	Lenel app server and database will need to be moved to AWS. All client machines (residence halls, public safety, a few personal machines, and any Workspace installs of Lenel) will need to be updated to point to any new app/db servers (IP address and/or firewall updates). Lenel currently receives feeds from Banner and Adirondack Housing Director, so continuing those feeds needs to be included. Potential remote connection to app server by Kratos (Lenel support contractors) may be necessary with assistance from Systems.

Linux Print Queues for Banner Transcript Printing	This project would 1) move Blackboard Transact from a SHU server to a Blackboard-hosted service, and 2) eliminate the need for a T1 connection with the Newark campus.
PCI Compliance Submission (IT Component)	SHU is required to complete and submit the Payment Card Industry Data Security Standard (PCI DSS) Self-Assessment Questionnaire (SAQ) Level D and Attestation of Compliance (AOC) documents upon request to the requiring banks. There are sections of this questionnaire that pertain specifically to the IT Services department.
Server Hardening	Provide the University community with a reliable and secure server based operating environment. The goal is to enhance the security posture of the on-premise and cloud-based server farm. This includes preventing unauthorized access, unauthorized use and service disruptions.
ServiceNow Upgrade	Upgrade to the latest release (Kingston) of ServiceNow the IT Service Management system.
Slate Implementation – IT Portion	The University has chosen Slate as the replacement for BRM, which is being de-supported by Ellucian. The Undergraduate Admissions Office is leading this project and is working with Graduate Admissions and IT to implement Slate. This ticket will cover all the tasks that will be assigned to IT resources.
SOM Application Software (AMCAS)	AMCAS is the application software system used to apply to approved medical schools (provides verified source data to schools); We need to install and train on the software prior to receiving our accreditation notice.
TimeClock Plus Implementation	<p>TimeClock Plus is a time and attendance software that will be used by approximately 500 employees. Data will be fed from Banner to TimeClock Plus so jobs and supervisors are accurate. Data will be sent back to Banner for payroll processing.</p> <p>Employees paid on the biweekly payroll currently use Kronos for time and attendance. The current version requires a Java Plug in which will no longer be supported as of September 30, 2017. TimeClock Plus will replace Kronos for this population of employees.</p>
Welcome Center Building	The University is building a new Welcome Center in the current parking lot of Cabrini Hall. This building requires wired, wireless, and telecom equipment, including a wireless design for a 750 seat auditorium, VoIP for offices in the building, and redundant fiber optic connections.

An Overview of IT Operating Budget

The Department of Information Technology at Seton Hall University is charged with ensuring that the University’s vision, goals, and objectives for the use of information technology are achieved. It is the role of the Department of Information Technology to provide leadership, technical expertise, and technical support for all academic and administrative departments within the institution.

Annual Operating Budget:	\$22,420,000
Salaries and Benefits:	\$11,548,000
Mobile Computing Program Budget	\$7,051,000
General Operating Budget	\$3,821,000

Full Time Employees:	100
Employee Breakdown by Functional Area:	
Office of CIO	6
IT Security and Project Management	5
University IT Services Administration	3
Systems Support	11
Network and Communications Support	11
Application Services & Development	10
Production Control	6
Teaching, Learning, Technology Center	28
PC Support Services	20

Expenses vs. Revenues	Amount (\$000)
FY’18 Expense Budget (including fringe benefits)	22,420
FY’18 Revenues	(8,157)
Net (Expenses – Revenues)	14,263

Summary of Projected FY’18 Revenues	
Description	Amount (\$000)
Mobile Computing Technology Fee	7,367
General (“non-mobile”) Technology Fee	670
IT Revenue	120
Total	8,157

Summary of FY'18 Expense Budget

	Amount (\$000)	% of Budget	
Salaries and Wages (with fringe)	11,548	52%	
Major Subdivisions in the Office of IT			
Office of Information Technology		4%	
IT Services – Administration		3%	
Systems Administration (Systems Support)		6%	
Production Control		4%	
Web Services & Development (Application Development)		5%	
Client Solutions Group & Security		4%	
PC Support Services		7%	
Service Desk		1%	
TLT Center (Faculty and Classroom Support)		13%	
Telecommunications		5%	
Operating	3,821	17%	
Major Operating Expense Categories			
Computers and Software (Faculty, Admin/Staff, Public Labs)		3%	
TLT Center (CDI, Media Eq., Digital Media & Web Dev., Instructional Design, PCSS, Service Desk, etc.)		1%	
Telecommunications (Level 3, AT&T, Verizon, Internet Connection)		5%	
Computing Operations (UITS Operating – Banner, Oracle, etc.)		6%	
Other (CSG and Office of CIO)		2%	
Mobile Computing Budget	7,051	31%	
Total Expense Budget (with fringe)	22,420	100%	100%

Summary FY'18 Major Operating Expenses	Amount (\$000)
Description	
Computer Operations	
Amazon Web Services	601
Banner Software Maintenance	569
Campus Firewall Maintenance	408
Oracle Software Maintenance	220
Telephone Service – Local and Long Distance	214
Banner/Slate consulting	207
Active Directory Single Sign-On	166
Security Log Analysis Software	159
Information Security consulting	100
Slate Admission Software	115
Library Catalog	90
Data Center Software/Maintenance	171
Website Platform	59
Teaching, Learning, and Technology Center	
Faculty Laptops	222
Faculty Support Initiatives (CDI, TLTC Faculty)	200
Computer Lab and Classroom Technology Maintenance	250
Student Print Program	54
Mobile Computing Program Budget	
Lease Payments for Laptop Computers	3,500
Blackboard Learn	532
Microsoft Campus Agreement	376
Internet Service	369
Contract Help Desk and Service Now Licensing	240
Network Maintenance	200
Temp staffing (Laptop distribution, beginning of Fall semester)	68

IT by the Numbers

Laptop and Desktop Support

	15-16	16-17	17-18
Internal Service Desk Calls*	10,843	9,997	6,486
External Service Desk Calls*	10,682	7,912	7,872
Field Support Visits	472	847	367
Laptop Repairs	490	643	590
Remote Support Sessions	607	278	163

* Internal Service Desk Calls were routed to the external service desk for the first point of contact in 2018. All follow-up calls and classroom support inquiries still direct to the internal service desk.

Training Sessions

	15-16 Scheduled Sessions	15-16 Attendees	16-17 Scheduled Sessions	16-17 Attendees	17-18 Scheduled Sessions	17-18 Attendees
Faculty	74	446	130	149	33	207
Student	4	7	28	31	8	20
General	47	235	32	236	7	111
One-on-One Instruction	118	119	96	98	99	99
Special Group Training	59	768	21	243	49	489

Instructional Technology Support

	Total
Lecture Capture Hours*	5,798
New Surveys (Qualtrics)	1,334
Survey Responses (Qualtrics)	30,224

*reflects the number hours that recordings were viewed

Media Services Equipment and Classroom Support

	16-17	17-18
Equipment Deliveries	6,095	2,406
Equipment Loans	(combined with above)	1,446
Classroom Support	908	209
Classroom Equipment Maintenance	(combined with above)	992

IT Managed Rooms and Labs (July 2017– February 2018)

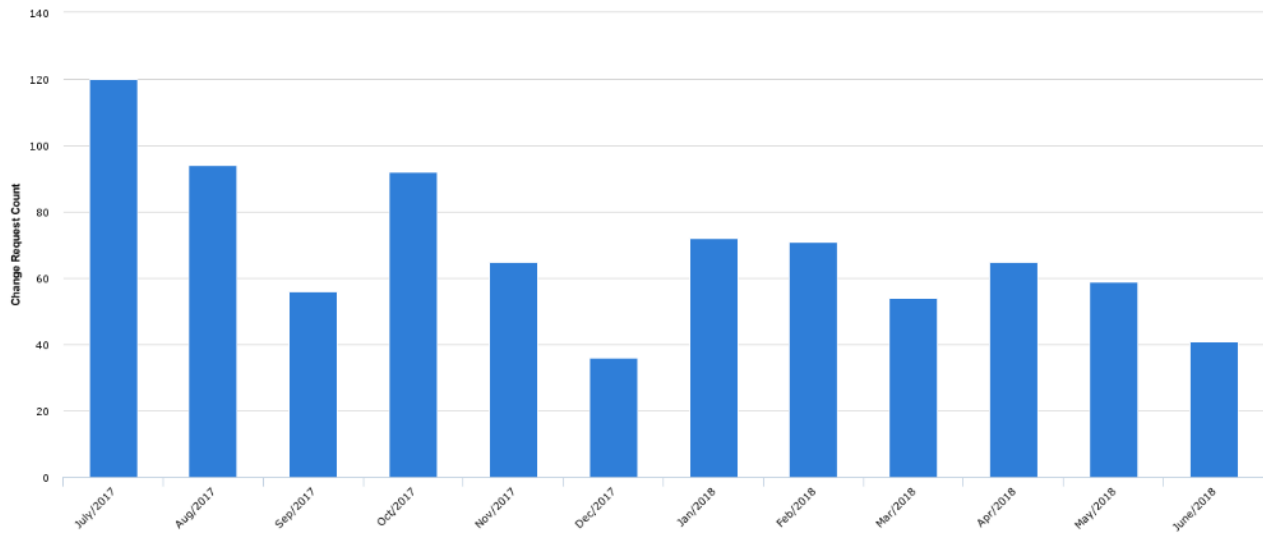
	Total
IT Managed Rooms (Hours)	3,722
Labs (Events)	13,012
Labs (Open Lab)	7,582
Mobile Carts (Events)	136

Change Management

Change is the addition, modification, or removal of hardware or software in the production environment, and in the IT context refers to infrastructure and applications.

Standard	<ul style="list-style-type: none"> • low risk and routine • well defined and documented • associated pre-existing process flow to perform • can be performed during normal hours of operation
Minor	<ul style="list-style-type: none"> • less than 4 hours to implement • affects only one department or one non-business critical system • less than 5 minutes outage during business hours if change fails • can be backed out during maintenance window if necessary
Major	<ul style="list-style-type: none"> • greater than 4 hours to implement • affects more than one department or system, or any business-critical system • greater than 5 minutes outage during business hours if change fails • backout cannot be completed during maintenance window
Urgent	<ul style="list-style-type: none"> • requested to be done before the next available change window • implemented outside normal maintenance windows
Emergency	<ul style="list-style-type: none"> • required to restore a disrupted service • implemented outside normal maintenance windows • require executive approval

Annual Report of Closed Changes per Month



Organizational Chart

Stephen G. Landry
Chief Information Officer

- **Project Management**
Jepthaw Scipio, Project Portfolio Manager
Georgianna Maroulakos, Project Coordinator

Paul Fisher
Associate CIO

- **Teaching, Learning and Technology Center**
Renee Cicchino, Director
Provides support to faculty in their use of technology in their courses.
 - **Blackboard System Administrator**
Amy Phillips, System Administrator
Provides Blackboard support to the SHU campus.
- **PC Support Services**
John Fernandes, Director
Supports the University's laptop and desktop computers. Manages the University's public computer labs.
 - **Technology Service Desk**
Vivek Ajvalia, Associate Director
 - Provides phone support for IT-related questions and problems. Available by calling 973-275-2222 or via e-mail at servicedesk@shu.edu.
- **Digital Media and Web Development**
Michael Souprios, Director
Supports the development and use of a wide variety of digital media.
- **Media Services**
Eva Rosmaninho, Director
Provides media services support for classes and events.
- **Project Management**
Lysa Martinelli
Provides Project Management supports to the TLT Center.
- **IT Communications**
Milan Stanic, Director
Develops and coordinates implementation of the Department of Information Technology's communications.

Bernd Walter
Executive Director University IT Services

- **Associate Executive Director IT Services**
Matthew Stevenson
 - **Networking and Telecommunications** John Pannorfi, Director
Supports the campus network and phone systems.
- **Application Development**
Satish Reddy, Director
Supports the University's administrative applications ERP system through integrations with

third party vendors, workflows, and scheduled tasks, and creates interactive and static content for the university's portal, PirateNet.

- **Production Control**

Robert Vignes, Director

Manages the University's production and test environments for the Banner administrative systems and its ancillary applications, Reporting Data Warehouse, and various reporting tools as well. It also manages University's test and production SQL Server databases.

- **System Support**

Frank Sweigart, Director

Supports the university's physical and virtual database, email system, applications and web servers and enterprise storage.

Keith Barros

Senior Director IT Security & Service Management

Supports the University community in the planning and implementation of technology solutions to improve processes and services.

- **IT Security**

Eric Lopez, Security Analyst

IT Security oversees the SHU community's efforts to protect its computing and information assets and to comply with legal and regulatory requirements.

Frank Polansky

Director IT Budget Office

Provides budget support to all areas of DoIT

Frank Forte

Director of IT Operations for the IHS Campus

Assessment Report



Department of Information Technology Assessment Report AY 2017-18

Mission Statement:

The mission of the Department of Information Technology is to provide high quality technology services in a cost-effective manner to support teaching, learning, research and the management of the University. The department works with the University community to enable innovative uses of technology that support the University's strategic plan while also providing reliable and secure networking and computing services. The department serves as a leader in the application of technology in the wider higher education community.

Goal 1 - Provide secure state-of-the-art technology systems in support of the University's mission and strategic plan to support teaching, learning, research and the effective management of the institution.

University Strategic Goal(s) Supported:

Goal 4: Enhance key support areas including the library and technology

Goal 6: Enhance and expand opportunities for student success

Goal 12: Diversify and increase sources of revenue

Means of Assessment

1. Annual IT Audit

The University's external auditors, Grant Thornton, conduct an annual audit of IT systems and processes to ensure the integrity and reliability of the University's critical IT systems. Audit findings are reported to the University's Board of Regents, along with a remediation plan, if necessary.

Results: The last completed audit, for FY' 2017/18, had no findings in the University's key IT systems and processes.

2. Annual Penetration Testing

The University contracts an external IT security firm to conduct an annual "ethical hack" of the University's IT systems to assess and identify potential vulnerabilities.

Results: In August of 2018, the Department of Information Technology contracted Coalfire to conduct this external penetration test. The test identified 20 medium vulnerabilities during the various testing phases. IT Services has remediated all of the vulnerabilities and SHU Information Security has verified the remediation.

3. Regular Qualys Scans

In addition to the annual external penetration test, the IT security team conducts a periodic internal scan of all systems to discover IT security vulnerabilities using a leading security scanning firm, Qualys. These assessments are conducted monthly.

Results: The information received from these scans are reviewed with the IT management team monthly to inform the priority of routine system patching and plans for upgrading or decommissioning IT systems. This is an ongoing process.

4. **Change Control Board**

Best practice in IT security and reliability is to carefully control changes to the network and IT systems, since changes may inadvertently introduce IT risks such as system downtime, data corruption or security vulnerabilities. University IT Services policy is to review and approve all changes to IT systems. Changes are initiated by various areas in the University, including (but not limited to) Enrollment Services, Finance, HR, IT and Student Services. All changes must be reviewed and approved by a Change Advisory Board (CAB) consisting of the directors of IT and the functional data stewards in Enrollment Services, Finance, HR and Student Services.

Results: 825 changes were submitted, 11% decrease from previous year, and no changes applied to production systems needed to be backed out due to a problem with the applied change. 52 changes were classified as urgent and 34 were classified as emergency, a 1% and 0.85% increase from previous year, respectively. While this is a small increase, year over year, IT management will monitor this to ensure emergency and urgent changes do not grow further.

Goal 2 - Provide high quality, highly available technology services to the University's faculty, students and administration

University Strategic Goal(s) Supported:

Goal 4: Enhance key support areas including the library and technology

Goal 6: Enhance and expand opportunities for student success

Goal 12: Diversify and increase sources of revenue

Means of Assessment, Summary and Use of Results

1. **Mission Critical Application Uptime Report**

The Department of Information Technology continually monitors the critical business applications for the University to ensure the University's applications are highly available to the community. The metric used to assess this is the monthly uptime report and the goal is 98% uptime.

Results: The uptime report shows that the University's critical applications have an overall up-time of **99.9%**, surpassing the stated goal of 98% and unchanged over last year. The Mission Critical Application Uptime Report is attached as Appendix A.

2. **Perception, Satisfaction and Use Survey (Faculty)**

Since the inception of the Mobile Computing Program the Department of Information Technology has conducted an assessment to ensure the program is meeting its stated goals and objectives. The Perception, Satisfaction and Use Survey is conducted each year, to faculty in even years and to students in odd years. The goal of the survey is to measure the use of existing technologies that the University has invested in, satisfaction on the services provided by the Department of Information Technology and perceptions on how technology has helped faculty and students meet their teaching and learning goals. The data from these surveys is used in the following academic year to

adjust services and technologies available to the University community to better serve the faculty and students.

Results: The results from this survey indicate that almost all faculty use some form of technology in their teaching, and most view it as having a positive impact on not only student learning, but also their ability to teach more effectively. Blackboard is used almost universally, mostly as a way to provide access to course materials, post announcements, allow for submission of assignments, post student grades/provide feedback, and facilitate participation and discussion in their courses. Finally, faculty are overwhelmingly opposed to eliminating the Mobile Computing Program as they feel that this program is a great benefit to students and its elimination would have a strong negative impact on teaching and learning.

The Mobile Computing Assessment Program: An Overview

When Seton Hall University (SHU) began planning for its Mobile Computing Program in 1995, the University recognized the need to systematically assess the value of the program in support of the University's teaching and learning objectives. With the first large scale pilot of the Mobile Computing Program in 1997, the University launched the Mobile Computing Assessment Program. In the beginning, the Mobile Computing Assessment Program had two primary objectives: (1) To assess the impact of ubiquitous computing on the learning environment at SHU, and (2) To provide prompt feedback to the Mobile Computing Program planning team to continually improve the quality of the program.

As the program has grown and evolved over the past 23 years, the goals have also expanded to include the following:

- To evaluate the community's level of satisfaction with technology services at the University
- To measure the extent of faculty technology use and policies regarding computer use in the classroom
- To examine how faculty are using the instructional technology resources at the University, including the specific tools and functions of the learning management system and other instructional technology tools available.
- To assess faculty perceptions regarding technology's impact on teaching and learning
- To identify ways that technology services can be improved and expanded to meet the demands of faculty and students

In order to meet these objectives, annual and biennial surveys are administered to both students and faculty. The results presented in this report are based on the Spring 2018 Faculty IT survey distributed via email on May 7, 2018. The results of this survey are shared with the University community as well as the larger educational community through conferences and publications.

Highlights from the 2018 Survey Results

Demographics and Technology Ownership:

A total of 608 full-time faculty were polled via email in the Spring of 2018 with 170 responding to the survey for a response rate of 28%. Of the respondents, 138 completed the survey in its entirety for a completion rate of 81%. Slightly more females (48.9%) than males (40.2%) responded to the survey (11% not specified) with 70% reporting that they are over the age of 40 years. Arts and Sciences faculty were the largest responding group at 49.6%, followed by the School of Health and Medical Sciences (13%), Stillman School of Business (9%), College of Education and Human Services (7%), College of Communication and the Arts (5%), College of Nursing (4%), School of Theology (3.6%), School of Diplomacy (3%), and School of Law (1%).

Approximately 14% carry the rank of Full Professor, 39% are Associate Professor, 21% are Assistant Professor, 7% are Faculty Associate, 6% are Term Appointment, 4% are Lecturer, and 6.5% are Instructor.

Through the Mobile Computing program, we know that most faculty are issued a laptop computer, and this survey has informed us that almost all the responding faculty (96%) use their SHU provided device, either as

their only device (65%), or in combination with a personal laptop (31%). Additionally, over 84% are satisfied overall with their SHU laptop. Also, of note, 93% report using a smart phone in at least one of four places (in class, in office, at home, on the road), while 68% use a tablet in at least one of these places.

Use of Technology in Courses Taught:

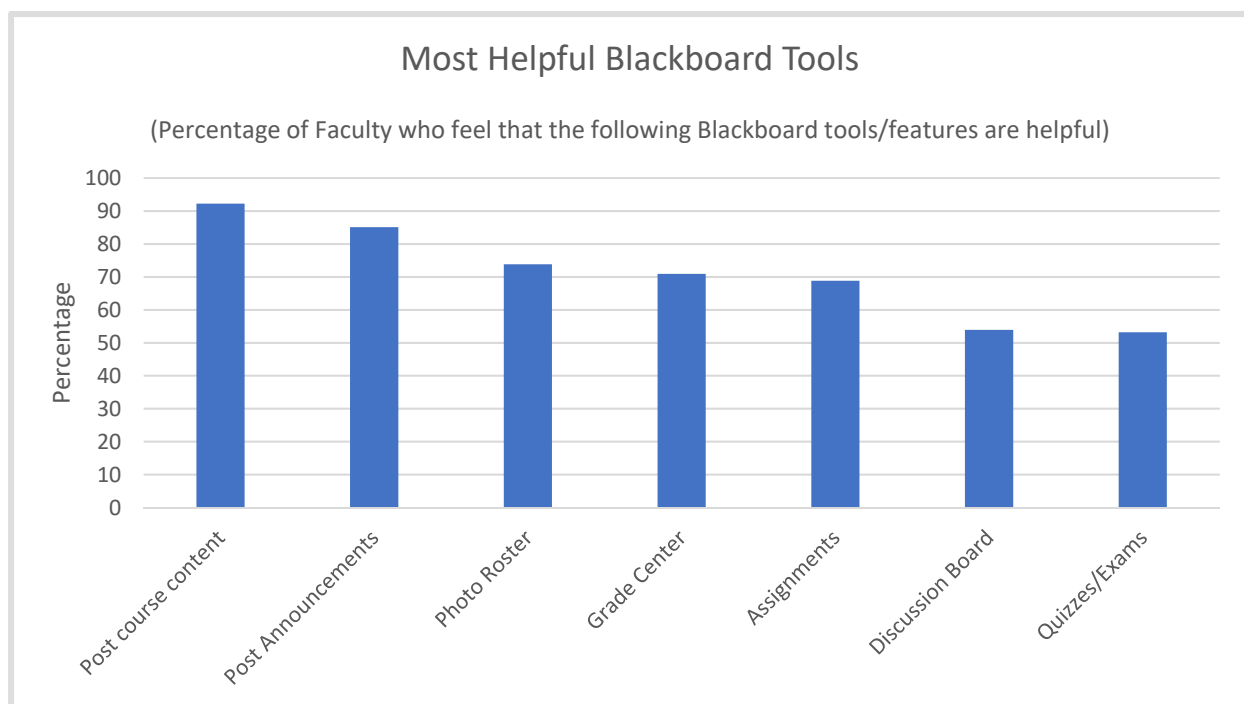
Eighty-three percent (83%) of the respondents teach at least one lecture course per year, while 26.5% teach at least one lab. Twenty percent (20%) report teaching at least one hybrid course, 19% teach at least one online course, and 48% lead at least one Seminar / Discussion course. Over 97% of faculty report using at least some technology in the courses they teach, a 7% increase from the 2016 survey. Only 7% report that they DO NOT allow student use of technology in the classroom, a 4% increase from 2016.

Self-Reported Technology Skills and Perceptions of Technology:

Most faculty report that they feel confident using technology and that it enhances their effectiveness as a teacher. Eighty-four percent (84%) of faculty responding indicated that technology “enhances my abilities and makes me a more effective teacher”, a 2% increase from 2016. More than 90% feel that they can effectively integrate technology into their teaching, that technology is “useful for academic purposes,” and that they “feel confident finding information using technology.”

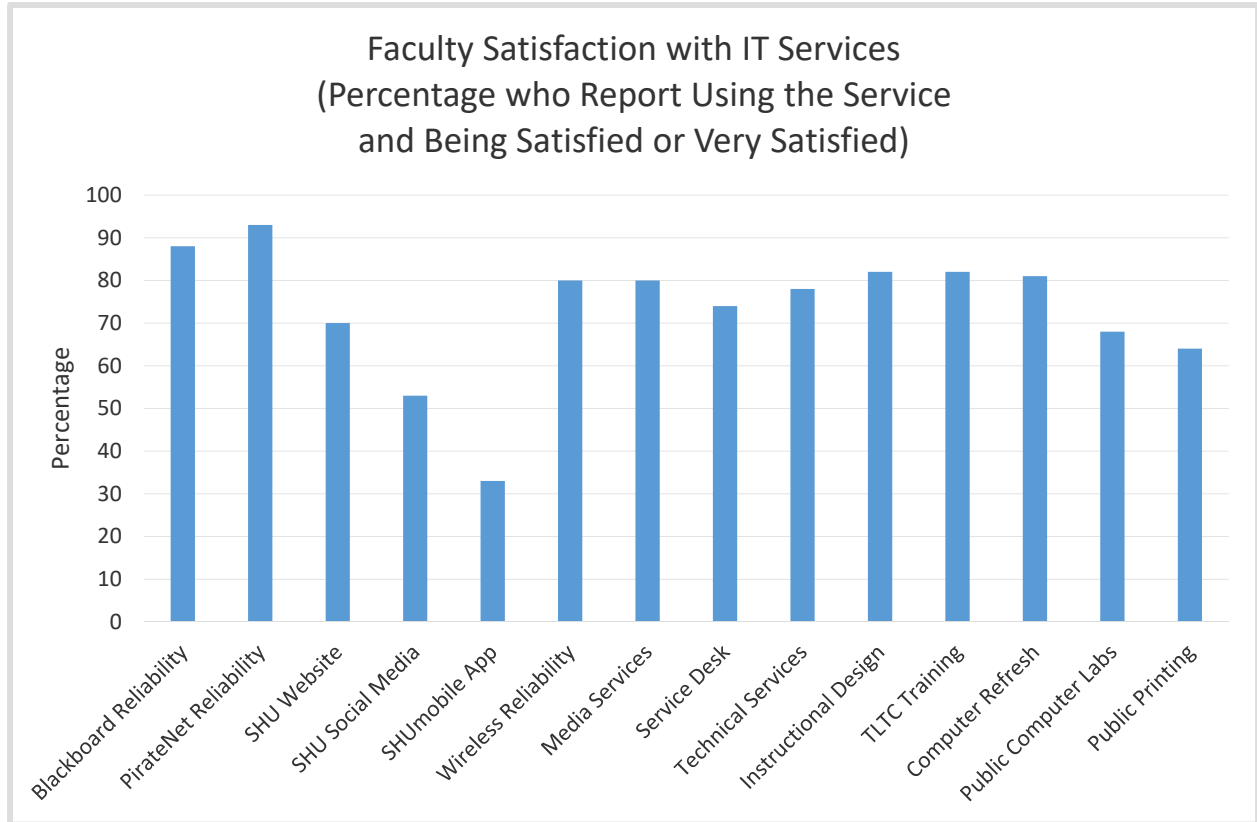
Blackboard Tool Use and Satisfaction:

Approximately 92% of faculty feel that the ability to post course materials in Blackboard is helpful, and 85% find the Announcement tool helpful. The graph below illustrates the percentage of faculty who find the following Blackboard tools/features “somewhat helpful” or “extremely helpful.”



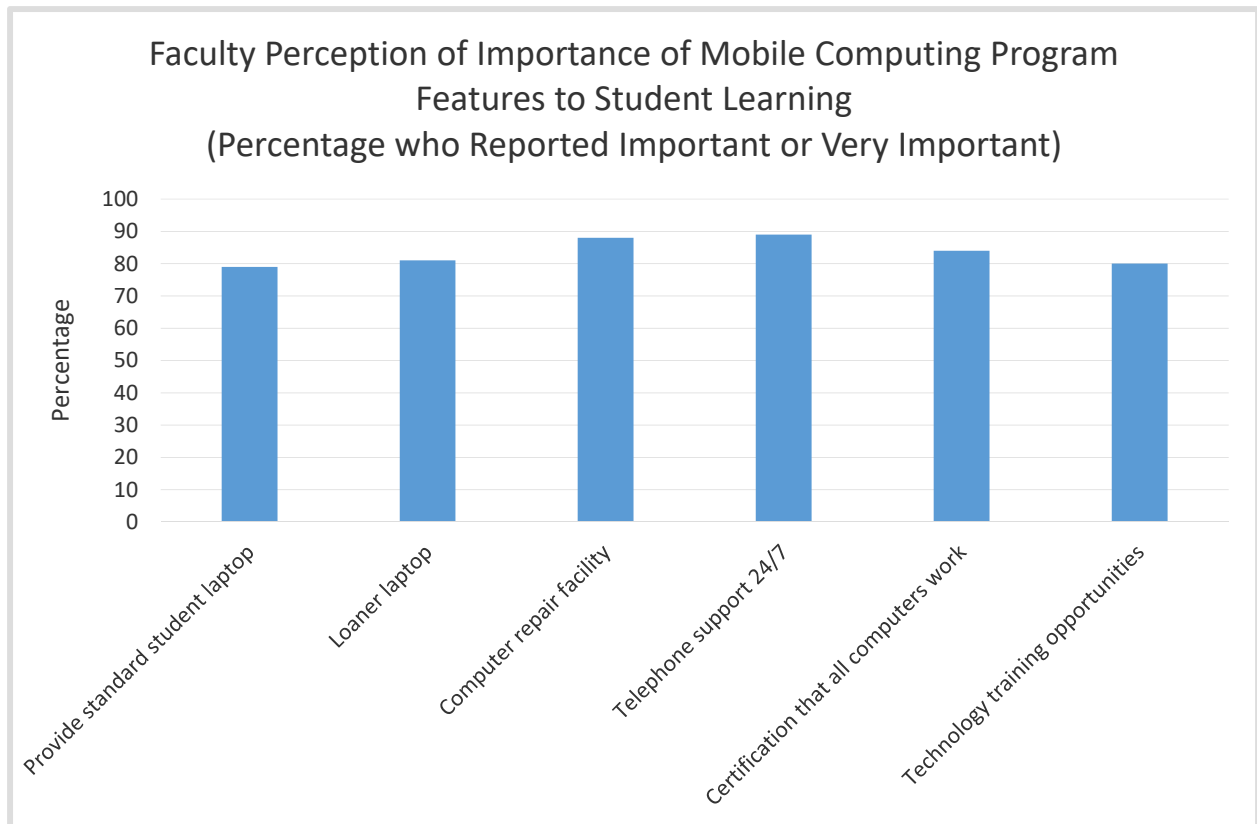
Faculty Satisfaction with IT Services and Facilities:

The graphs below illustrate various technology services/products and faculty satisfaction levels with each of those services for those who report using them. Please note that the graphs do not include those who report feeling neutral about the service.



Faculty Opinions Regarding Mobile Computing Program

In response to questions concerning Huron Consulting's proposed changes to the Mobile Computing Program, faculty report that it is "Very Important" or "Important" to have the following services and facilities currently provided: computer repair facility on campus (88%), laptop provided by SHU (77%), telephone support for technology available 24/7 (88%), technology training opportunities (88.6%), and certification that all student computers will work with University standard software (83%).



Additionally, 86% of faculty are opposed to eliminating the Mobile Computing Program altogether, 81% are opposed to providing a less capable computer, and 49% are opposed to eliminating the student refresh after two years. Below is a sampling of comments regarding changes to the program:

The institution of Mobile computing revolutionized my ability to actually teach & engage in the classroom.

Of any cost to cut this seems like the least ideal. A standard of technology across student and faculty is extremely important to creating a consistent learning environment.

I firmly believe the SHU approach to computers, media services, and technology support for faculty, staff and students, is something that our University does right, and it would be a shame to cut back on these services.

I think it is incredibly important to ensure that there is no digital divide among our students. It is important that all have access to technology, and can get loaner laptops if theirs is not in working order.

Impact of Technology on Student Learning:

A high percentage of faculty agree that student use of technology in their courses facilitates communication with the instructor (85%), increases student access to original resources (71%), facilitates student ability to do research (72%), and allows students to communicate with their classmates (59%).

Impact of Classroom Media Technologies:

Approximately 94% of faculty report using the technology available within the physical classroom spaces, a 4% increase from 2016 (e.g., projector, speaker, video player, etc.), and over 90% feel that it is easy to operate the technology available in the classroom, a 10% increase from the 2016 survey.

Conclusion:

The results from this survey indicate that almost all faculty use some form of technology in their teaching, and most view it as having a positive impact on not only student learning, but also their ability to teach more effectively. The use of technology by faculty in the classroom is 7% higher compared to the 2016 survey and over 90% feel that it is easy to operate the technology available in the classroom, a 10% increase from the 2016 survey. Blackboard is used almost universally, mostly to provide access to course materials, post announcements, allow for submission of assignments, post student grades/provide feedback, and facilitate participation and discussion in their courses. Finally, faculty are overwhelmingly opposed to eliminating the Mobile Computing Program as they feel that this program is a great benefit to students and its elimination would have a strong negative impact on teaching and learning.

Goal 3 - Leverage new technologies to enable best practices in teaching and learning, and the effective administration of the University at the lowest overall cost.

University Strategic Goal(s) Supported:

Goal 4: Enhance key support areas including the library and technology

Goal 6: Enhance and expand opportunities for student success

Goal 12: Diversify and increase sources of revenue

Means of Assessment, Summary and Use of Results

Established in 1995, the Teaching, Learning and Technology Roundtable is composed of representatives from academic and administrative areas of the University. Sponsored by the Office of the Provost and the Department of Information Technology, the Teaching, Learning & Technology Roundtable (TLTR) is a consortium of faculty, administrators and students who, on behalf of the University, meet and discuss issues and topics related to instructional technology. The Roundtable is comprised of action teams (subcommittees) which meet regularly to discuss institutional issues related to teaching, learning, and technology. The TLT Roundtable makes recommendations in support of the University's Strategic Plan as outlined by stakeholders such as the Faculty Senate, Academic Affairs, Student Affairs, Department of Information Technology, and other key organizations or groups. As a part of the Roundtable a standing committee of faculty and TLT Center staff are charged with identifying the growing technology needs in the University's classrooms.

Results: As a part of the Inteprofessional Health Sciences Campus project, the Classroom Technology Committee assessed the needs of the School of Health and Medical Sciences, the School of Medicine, and the College of Nursing to design a classroom to support active learning and problem-based learning. Working with the

faculty and Deans of each college, research was conducted and shared regarding best practices in utilizing technology in these scenarios. A set of recommendations was put together for implementation at the IHS campus and plans to create a prototype room on the South Orange campus for training and practice were developed.

1. **Banner Steering Committee**

The Banner and Administrative Computing Steering Committee establishes IT priorities for the University. The committee consists of the Vice Presidents for Administration, Advancement, Enrollment Services, and Finance, the Senior Associate Provost, the Associate Vice President of Finance, and senior leaders from the Department of Information Technology.

Results: In 2017-18, the Banner and Administrative Computing Steering Committee continued support for three multiyear projects: (1) implementing the Slate customer relationship management (CRM) for both undergraduate and graduate admissions (replacing Ellucian's Banner Recruitment Management system, which was desupported on December 31, 2017); (2) upgrading Ellucian Banner from Banner 8 to Banner 9 (Banner 8 is scheduled for vendor desupport on October 31, 2018); and, (3) technology support for the Interprofessional Health Sciences (IHS) campus in Nutley, NJ, which opened in May 2018 (which, in addition to outfitting new classroom, laboratory, and simulation spaces, required extensive reconfiguration of the University's firewalls, security, telephone, and payment systems to enable multi-campus operations as well as reconfiguration of Banner to support the unique academic and administrative needs of the School of Medicine). The Banner and Administrative Computing Steering Committee also approved several new projects for 2018-19, including implementing Ellucian Ethos, a new integration tool for Banner which promises to simplify integrating third party systems with Banner, and upgrading Blackbaud Raisers Edge, the Customer Relationship Management (CRM) system used by University Advancement, to Blackbaud NXT, their most advanced CRM product.

Goal 4 - Provide the most effective management of IT systems and services for the institution

University Strategic Goal(s) Supported:

Goal 11: Focus on priorities in resource allocation and reallocation

Means of Assessment, Summary and Use of Results

1. **Change Control Board**

Best practice in IT security and reliability is to carefully control changes to the network and IT systems, since changes may inadvertently introduce IT risks such as system downtime, data corruption or security vulnerabilities. University IT Services policy is to review and approve all changes to IT systems. Changes are initiated by various areas in the University, including (but not limited to) Enrollment Services, Finance, HR, IT and Student Services. All changes must be reviewed and approved by a Change Advisory Board (CAB) consisting of the directors of IT and the functional data stewards in Enrollment Services, Finance, HR and Student Services. Results: Of the 825 changes submitted, 6.3% were categorized as business urgent and 4.1% were categorized as an emergency to address a problem, a 1% and 0.1% increase from the previous year, respectively. Best practice indicates that these kinds of changes should be as close to 0% as possible as they often come with a greater risk to the institution. The total changes submitted decreased by 11 percent from the prior year, indicating that the

functional units are doing a better job at planning their changes in production systems and therefore lowering the risk to disruption of the enterprise.

2. Banner Steering Committee

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**Appendix A
Mission Critical Application Uptime Report**

	FY16	FY17	FY18
Network and Internet	99.9%	99.6%	99.9%
Website	100%	100%	99.9%
PirateNet Portal	100%	99.9%	100%
Banner Self Service	99.8%	99.9%	99.9%
MS Office 365	100%	100%	100%
Okta	100%	100%	100%
Total	99.8%	99.8%	99.9%