Department of Information Technology
Seton Hall University

2018-19 Annual Report
Contents

An Overview of Information Technology .................................................... 3

Mobile Computing Program ...................................................................... 5

Teaching, Learning, and Technology Center ............................................ 7

  Online/Hybrid Course Development ....................................................... 9
  Assessment ................................................................................................... 13
  Engagement and Retention Projects ....................................................... 15
  Instructional Technology Projects ............................................................ 23
  Faculty Development, Employee and Student Training ......................... 27
  Classroom Technology Support ................................................................. 30
  Technology Support .................................................................................... 34
  Web Development ...................................................................................... 34

IT Governance ........................................................................................... 38

  Administrative Computing Steering Committee ........................................ 39
  Teaching, Learning, and Technology Roundtable .................................... 40

Information Technology Services ........................................................... 42

  Administrative Computing Project Portfolio ............................................ 44

An Overview of IT Operating Budget ....................................................... 45

IT by the Numbers ...................................................................................... 45

Organizational Chart ................................................................................. 45
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 as well as several public safety projects, including the replacement of the end of life 911 system as well as the deployment of Alertus (Pirate Alert system) to the Nutley campus. Other projects include the replacement of the Cisco campus firewall with a Palo Alto system, the deployment of Cybereason, a malware detection and response tool, and the implementation of infrastructure needed to install additional video cameras on the campus perimeter.

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

The University's Mobile Computing 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 to enhance teaching and learning.

The University’s Stewardship Committee, inspired by the Huron Report, charged a working group to investigate the continuing need for the Mobile Computing Program. This working group, co-chaired by the Provost and Vice President for Administration developed and administered two survey instruments, one for students and one for faculty, to determine the satisfaction and preference of these two groups toward the Mobile Computing Program. Student results indicate that there is a strong preference, 69%, to keep the program and fees as they are rather than reducing fees and moving to a Bring Your Own Device (BYOD) program. While a Mac choice is also preferred by the student population the cost of the Mac hardware and support for that hardware would increase costs to either the student, the University or both.

The Chairs of the Mobile Computing Task Force have charged a smaller subcommittee that is looking at ways to change the program while still meeting the goals of the program and keeping costs the same or lower. The subcommittee is investigating the effects of eliminating the two year refresh, allowing choice with greater fees and the feasibility of an opt-in option for the program.
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.
O **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.

O **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. 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.

**College of Arts & Sciences**

- Catholic Studies
  
  Courses completed: CAST 3003/CORE 3983/THEO 3585 Science and Creation - Father Joseph Laracy
• The Department of Mathematics and Computer Science Program
  Courses under development:
    o ISCI 4021 Project in Cybersecurity - Joseph Ingemi
    o DASC 6911 Big Data Analytics - Manfred Minimair
    o DAVA 9311 Capstone Project - Manfred Minimair
    o DAVA7111 Text Mining - Nathan Kahl
  Course completed:
    o CSAS 3211 Networking - Bert Wachsmuth
    o DAVA 6010 Data Mining - Manfred Minimair
    o MATH 6611 Operations Research - Kobi Abayomi

• History
  Courses under development: HIST 3121/HIST 6121 Digital Humanities for Cultural Heritage - Amanda Mita

• Philosophy
  Courses under development:
    • PHIL 1105 Ethics - Abe Zakhem

• Public Administration - The Department of Political Science 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:
    o PSMA 7800 Ethical Challenges of Big Data - Matt Hale
    o PSMA 7992 Capstone - Roseanne Mirabella
    o PSMA 83XX Social Entrepreneurship – Michael Taylor
  Courses completed:
    o PSMA 7314 Financial Management for Nonprofit Organizations - Stuart Mendle

Stillman School of Business
• Accounting - The Department of Accounting is developing two online graduate programs, Master of Science in Accounting (MSAC) and a Master of Science in Professional Accounting (MSPA). Each 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:
    o BFIN 1003 Personal Money Management - Elvin Riley
    o BMKT 7640 Corporate Branding Strategy - Daniel Ladik
    o BQUA 7720 Data Analytics 1 - Rob Weitz
  Courses completed:
    o BACC 7101 Financial Statement Analysis - David Gelb
    o BACC 7210 Forensic Accounting - Darryl Neier
• BMBA 9458 Information Technology - Benjamin Pearl  
• BACC 7136 Big Data - David Goldstein  
• BFIN 7230 Portfolio Analysis - Anthony Loviscek  
• BMBA 9461 Business Consulting - Jim Modlin  
• BMKT 7633 Cases in Strategic Marketing - Hector R Lozada-Vega  
• BMKT/BITM 7652 Interactive Marketing - Daniel Ladik

**College of Communication and the Arts**

- Public Relations
  - Courses completed:
    - COPR 6002 Global Perspectives - Kristen Koehler  
    - COPR 8003 Strategic Planning and Practical Application - Faculty developer: Kristen Koehler  
    - COPR 6000 PR Research and Reporting - Kristen Koehler  
    - COPR 6003 Theory and Principles of PR - Kristen Koehler

**College of Education and Human Services**

The College of Education and Human Services is developing online courses that will meet the needs of the students in the online Catholic School Leadership and National Online Leadership programs.

- Course under development:
  - ELMP 6005 Statistical Methods - Richard Blisset

**School of Diplomacy and International Relations**

The School of Diplomacy is planning to launch a Master of Science 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 6155 Advanced Economic Aspects of the International Relations - Omer Gokcekus  
  - DIPL 6622 China's Foreign Relationships - Zheng Wang

- Course completed:
  - DIPL 6277 Global Health, Bioterrorism, & International Security - Yanzhong Huang

**School of Health & Medical Sciences**

- Occupational Therapy
  - Courses under development:
    - GMOT 6170 Occupational Therapy Practice Skills (hybrid) - LaMar Bolden  
    - GMOT 6260 Cognition, Perception, Vision and Function (hybrid) - Karen Hebert  
    - GMOT 6770 Interventions for Adults (hybrid) - Karen Hebert

- Courses completed:
  - GMOT 6700 Professional Formation III - Meryl Picard  
  - GMOT 6750 Health and Medical Complexities of Adults - Karen Hoover  
  - GMOT 6850 Health and Medical Conditions for Pediatrics and Adolescence - Karen Hoover
• Athletic Training

Courses under development:
  o GMAT 7005 Biomedical Ethics - Vicci Lombardi and Steven Kanter
  o GMAT 7231 Pharmacology in Athletic Training (hybrid) - Vicci Lombardi and Steve Kanter

Courses completed:
  o GMAT 7211 Psychological Issues in Athletic Training (hybrid) - Vicci Lombardi and Tony Testa

College of Nursing

The College of Nursing at Seton Hall University is redesigning four graduate programs, Heath 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:
  o NURS 7236 Acute Care Theory I - Moira Kendra
  o NURS 7333 Graduate Practicum I: Acute - Catherine Loughery and Maryellen Roberts
  o NURS 7348 Graduate Practicum II - Moira Kendra

Course completed:
  o NURS 7243 Specialty Theory - Donna Jeskey-Lowry
  o NURS 7349 Specialty Practicum II - Donna Jeskey Lowry
  o NURS 7370 Advanced Health Assessment and Clinical Decision Making - Catherine Loughery/ Maryellen Roberts

Immaculate Conception Seminary School of Theology

The School of Theology is taking their 42-credit Catholic Diaconate program and is offering an online version of the program to expand their outreach to other dioceses.

Course under development:
  o PTHO 6603 Ministry of Justice and Charity - Rev. Jerome Bracken
  o STHO 6207 Ecclesiology - Jeff Morrow
  o STHO 6504 Sacramental Theology General - Rev. Thomas Dente

Courses completed:
  o STHO 6202 Revelation and Faith - Jeffrey Morrow
  o STHO 6205 Christian Anthropology - Patrick Manning
  o HSTD 6809 History of Christianity - Msgr. Raymond Kupke
  o CETH 6130 Major Themes in Christian Ethics - Justin Anderson
  o STHO 6888 MA Seminar: Deacons and Christian Worship - Msgr. Gerard McCareen and Andrew Saunders

Continuing Education and Professional Studies (CEPS)

• 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-Seton Hall 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.

- Social Media Certificate
  The College of Continuing Education and Special Programs wishes to move their social media certificate to a hybrid format to gain more enrollment. The program is scheduled to launch in February 2019 - Faculty developer: Dan Ladik

Cybersecurity Bootcamp
The Cybersecurity program is a voluntary program where undergraduate students interested in cybersecurity can take a face to face immersion workshop and hybrid courses. 37 students participated in the five-day face to face program in Network +. The second part of the bootcamp is online and takes place from October to January. students will learn how to perform analysis to determine intrusion, compromise or vulnerability in IT systems and prepare to take the CompTIA Security+ certification test, giving them a second valuable credential for future employment.
The hybrid course is called Security +: Intro to Cybersecurity
Subject matter experts: Joe LaGanga, Keith Barros, Paul Fisher

Assessment

Freshman Pre and Post Assessments - The Freshman Pre-Assessment survey is distributed to freshmen at the beginning of their first semester at Seton Hall. The survey is designed to gather feedback on students' access to technology prior to attending Seton Hall, including use of their laptop received during Pirate Adventure, the summer before their first semester. The Freshman Post-Assessment survey is distributed to freshmen at the end of their first semester and is designed to gather feedback on the experience with the Seton Hall laptop during the fall semester. The goal is to provide feedback to the Mobile Computing Program planning team to continually improve the quality of the program.

The Freshman Pre-Assessment was created in Qualtrics and distributed via email to 1,380 freshmen on August 27, 2018. The survey closed on September 5, 2018, with 438 students responding for a response rate of 31.7%. Email reminders were sent on August 31 and September 4 to students who had not yet responded to the survey. The Post-Assessment is scheduled to be distributed in early December 2018. Once the results are obtained from the Post-Assessment, an executive summary will be prepared.

Pre Assessment Executive Summary
Response Rate:
A total of 1380 students were polled via email in the Fall of 2018 with 455 responding to the survey for a response rate of 33%. Of the respondents, 438 completed the survey in its entirety for a completion rate of 96%.
**Technology Ownership:**
Seventy-seven percent (77%) of students owned their own computer prior to arriving at Seton Hall. An additional 16% used a family computer. Only 2% of students did not own a personal or shared family computer prior to SHU. Fifty-eight percent (58%) of students reported that their prior computer was two years old or older. Approximately 80% of students owned or had access to a tablet. The iPad represented 60% of these tablets.

**Use of Seton Hall Laptop Received at Pirate Adventure:**
Students received one of two Lenovo model options during their Pirate Adventure orientation session. Sixty-three percent (63%) of the respondents received a Lenovo Yoga, while 37% received a Lenovo T480. Over 80% reported being satisfied or very satisfied with the battery life, weight, storage space, form factor, and screen size of their SHU laptop. Approximately half (52%) of the students who received a Yoga use the stylus that came with it. The graph below illustrates how often students used their SHU laptop over the summer for various tasks. Email, PirateNet/Blackboard, and surfing the Internet were the most popular tasks.

![Graph: Seton Hall Laptop Activities Prior to Arriving]

**Satisfaction with SHU IT Services:**
The graph below illustrates student satisfaction levels with the following features and services offered by SHU IT Services. Satisfaction levels for the SHU Website, SHUmobile App, Blackboard, PirateNet, Microsoft services, and the laptop overall were at or above 80%.

![Graph: Student Satisfaction with SHU IT Services]
Laptop Distribution Process:
Approximately 93% of students reported that the laptop distribution session that took place during Pirate Adventure contained useful information regarding technology support at SHU. Additionally, 90% of students felt that the technicians and trainers at the training session were helpful. Ninety-five percent (95%) felt that the session allowed them to set up their laptop easily. Ninety-four percent (94%) reported being satisfied or extremely satisfied with the process of receiving their SHU laptop.

Student Feedback:
The mobile app is close to perfect as I use it everyday. The laptop is also another tool I use daily but I’m happy I have the app for easy access.

I was extremely satisfied with my laptop’s performance and the setup process.

This laptop is awesome! I love how versatile it is, being able to be used both as a laptop and a tablet. It truly makes taking notes in class a lot smarter, easier, and more accessible.

The technology training helped me to be able to use the laptop’s features more effectively.

The people helping distribute the laptops were very nice and patient.

I think Seton Hall did a great job supporting their students along with giving them enough help to start their journey here at Seton Hall.

I enjoy the laptop provided by Seton Hall and has been a great help in my education.

Conclusion:
The results from this survey indicate that almost all students owned their own or shared a family computer prior to arriving at SHU, and this computer was at least a year old for most students. Likewise, a high percentage of students owned or had access to a tablet.

Students report having a very positive experience with the laptop distribution process and being satisfied with many different aspects of SHU IT Services. Additionally, they are satisfied with physical aspects of the laptop received at Pirate Adventure. As reflected in the data, 92% of students report being satisfied or very satisfied with their SHU laptop overall.

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.
Counseling and Psychological Services (CAPS)
The Digital Media Team is continuing work on material for the "What's Up Doc" series. It’s worth noting that the Association of University and College Counseling Center (AUCCCD), the largest organization of campus mental health leaders in the world, has awarded Seton Hall University the 2018 Media Award for one of the videos in the series: [http://www.shu.edu/news/seton-hall-wins-national-award-campus-mental-health-2018.cfm](http://www.shu.edu/news/seton-hall-wins-national-award-campus-mental-health-2018.cfm)

The latest published video in the series is an animated informational video to take help students learn what CAPS is, and where they can go to get help. The animation style used in this video differs from the rest of the series in an attempt to make the video more casual and easier for students to approach the subject. [https://vimeo.com/setonhall/review/318322705/3a509570b8](https://vimeo.com/setonhall/review/318322705/3a509570b8)

Basic Needs Website and Graphic Design
Material were created for Student Affairs for a new website to address the issues surrounding providing basic needs to the University Community. The goal for this site is to connect students with the resources, both on-campus and off-campus. Ideally, the resources will have a direct impact on the overall well-being and their ultimate academic success.

Words Matter Presentation
Preliminary work has begun with Student Services on a new educational program called Words Matter. The Digital Media team will produce a multimedia presentation with accompanying branding for the campaign.
“What Great Minds” Video Series
The Digital Media team from the TLT Center continues its work with the Office of Undergraduate Admissions on the highly successful campaign titled *Great Minds*, profiling members of the University Community. Eight segments were filmed during the term and are at various stages in the editing and finishing process. Five previously filmed segments were completed and posted online:

Kylie Lan Tumiatti - [https://www.youtube.com/watch?v=O5QYGGT7jE8](https://www.youtube.com/watch?v=O5QYGGT7jE8)
Victoria Blakey Padilla - [https://youtu.be/J0zQZo7ZGIY](https://youtu.be/J0zQZo7ZGIY)
Angeli Fernandes - [https://www.youtube.com/watch?v=tA4f6MxCCUE](https://www.youtube.com/watch?v=tA4f6MxCCUE)
Charlie Mule - [https://www.youtube.com/watch?v=Lx_aaBynqM](https://www.youtube.com/watch?v=Lx_aaBynqM)
Joshua Steier - [https://www.youtube.com/watch?v=wm3rlczl32Y](https://www.youtube.com/watch?v=wm3rlczl32Y)

360 Degree Room Tours for Housing and Residence Life
Working with Housing and Residence Life, the Digital Media team is creating a series of 360-degree videos showcasing on-campus and off-campus University housing. Eight videos featuring the underclassmen dorms have been completed while several videos highlighting the upperclassmen and off-campus housing options will be filmed in the Spring.
[https://www.youtube.com/playlist?list=PLppHCkhATHuUHSMEsOFdFEUZwhYb6FkX](https://www.youtube.com/playlist?list=PLppHCkhATHuUHSMEsOFdFEUZwhYb6FkX)

Office of International Programs Instructional Videos
The Office of International Programs requested the Digital Media team create a series of instructional videos to supplement their orientation process. The video initiative will help to cut down on the volume of questions and will better reach students regarding complex topics. The two latest videos have been produced for this series deal with the topics of “Study Abroad” and “Optional Practical Training”.

[![COMMUNICATION WHILE ABROAD](image)](image)
Bethany Hall Interactive Touch Screen “Digital Jukebox”
TLT Center staff, at the request of the Office of Undergraduate Admissions, have completed the “digital jukebox” project and is pleased to report the device in Bethany Hall is available for full public use. This interactive touchscreen has also been updated to contain all videos from the highly successful “What Great Minds Can Do” campaign. Videos from the campaign are divided into several categories from which the public may select their video of choice. The image below displays student profiles chosen from the School of Diplomacy.

Bethany Hall Video Wall Updates
The video team has completed an update to the nine-panel video wall in Bethany Hall to feature the “What Great Minds” student highlights campaign.

Career Center Navigator Videos
The Career Center initially approached the TLT Center staff looking for help with a persistent problem. They needed to draw attention to and help students work their way through one of their most complex and powerful tools, Navigator. This tool’s primary focus is to aid Seton Hall University students in securing internships and jobs but was underutilized due to a high learning curve for use. A series of straight-forward videos were developed to aid in this process and to help the community better engage with this application.

Videos
https://youtu.be/ZP8AdG87fJ0
https://youtu.be/iS2j6LmgRI4
https://youtu.be/j2rzORJW18A
IT Promotional/Informational Materials
Promotional/informational posters and graphics were created to support the Universities IT initiatives.

Sustainability Video Series
A series of videos documenting several facets of Seton Hall’s sustainability initiative were created.

The latest video in this series is entitled Growing a Greener Campus: Students Connect & Grow Outside in Nature.  
https://vimeo.com/setonhall/review/329661130/136f6f8ae1

“What Great Minds” Video Series
Working with the Office of Undergraduate Admissions videos were created for on the highly successful campaign titled What Great Minds, profiling members of the University Community. Eight segments were filmed and are at various stages in the editing and finishing process.

Andrew Aguilera -  
https://www.youtube.com/watch?v=3sAvsJzobjI
**Pirate Adventure 2019 T-Shirt Design**
The Digital Media team worked with the Division of Student Services to create a t-shirt for Pirate Adventure. This shirt and associated materials are to be used in promotional and social media campaigns.

**Commencement 2019 Marketing and Media Support**

- SHMS Commencement – Thursday, May 16
  [https://youtu.be/LDDCoenU1Jc](https://youtu.be/LDDCoenU1Jc)

- Academic Award Ceremony – Sunday, May 19
  [https://youtu.be/rLyyL8FRy68](https://youtu.be/rLyyL8FRy68)

- Commencement – Monday, May 20
  [https://youtu.be/CFXCBnPtcQc](https://youtu.be/CFXCBnPtcQc)

**Student Leader Awards 2019**
Continuing an annual partnership, our team again filmed and edited promo pieces highlighting some of the amazing student leaders on campus to be honored at the annual Student Leader Awards.

**Continuing Education Spotlight Video**
Currently in production, our video team is working with Continuing Education and Professional Studies to build a small series of Spotlight videos with a goal of highlighting their programs. The first, slated for release late-Fall 2018, will detail a leadership course offered at the University.

**Counseling and Psychological Services (CAPS)**
The Digital Media Team is continuing work on material for the award winning "What's Up Doc" series. The Association of University and College Counseling Center (AUCCCD), the largest organization of campus mental health leaders in the world, has awarded Seton Hall University the 2018 Media Award for one of the videos in the series: [http://www.shu.edu/news/seton-hall-wins-national-award-campus-mental-health-2018.cfm](http://www.shu.edu/news/seton-hall-wins-national-award-campus-mental-health-2018.cfm)

The latest published video in the series, dealing with Grief and Loss, presents the staff of CAPS together with Father John Dennehy discussing the process of grief and loss and offers ways to cope that may be helpful for the Seton Hall Community. [https://youtu.be/m4UWzyup_6M](https://youtu.be/m4UWzyup_6M)

The next video in the series will deal serve as more of an introduction aimed at students who may not know what CAPS is, and who may be afraid to seek their help and services. The style of this video is
departure from the rest of the series as it aims to provide a more casual, animated style in an effort to be more appealing to the student audience.

Law School: New & Redesigned Courses – Videos and Graphics

Courses slated to launch in September 2018
- Patent and Trade Secret Law (8 weeks)
- Global Corruption: Regulation, Compliance & Enforcement (8 weeks)
- Consumer Privacy Law (4 weeks)

Courses slated to launch in November 2018
- Financial Crimes Compliance (8 weeks)
- Regulating Depository Banks (4 weeks of edits)
- Trademarks (5 weeks of edits)
- Workplace Privacy (4 weeks of edits)

Office of International Programs Instructional Videos

In an effort to better reach their students regarding complex topics, as well as cut down on the volume of questions related to these topics, the Office of International Programs enlisted staff from the TLT Center to create a series of instructional videos to supplement their orientation process. A condensed Orientation video was produced for those unable to attend the in-person gathering as well as videos, linked below, covering the topics “How to Obtain a Driver’s License” and “How to apply for a Social Security Number”. Our staff will continue to work with the program in the coming months and produce additional videos detailing topics such as the “Study Abroad” program and “Optional Practical Training”.

https://youtu.be/OxRfVL7g6NU
https://youtu.be/e8cDw7S3DMA
SHUmobile Application Update
A focus group conducted in February 2018 by the Dean of Students, the Applications Development team along with TLT Center staff made several changes to the SHUmobile app. These changes included an overhaul of the user experience featuring a graphical update and the addition of several new features including the Laundry View monitoring system, updated news and events feeds, as well as an interface with the University Bookstore. The new iOS version of the app launched in June, prior to Pirate Adventure, and the Android version followed later in the summer prior to the start of classes.

In the July – October reporting period, the app has a 10% increase in users and a 3.7% increase in average session duration. The app audience is 98% returning users. 85% of users are using an iOS device and 15% are on Android. Users primarily view schedules and course overviews.

Seton Hall Weekend - Media
Working with a drone flying over 200 feet above, TLT Center staff were on campus during Seton Hall Weekend to capture a live aerial view and publish the stream via the University’s social media channels. Staff also placed a 360-degree camera to allow online viewers the ability to take in the full view of all that was there on campus.

Stillman School Entrepreneur Hall of Fame Nominee Video
For several years, TLT Center staff has produced videos honoring the inductees to the Stillman School of Business Entrepreneur Hall of Fame. The nominees for 2018 are CPAs Ralph Evangelista, M.S. ’98 and Marylee R Evangelista, co-managing members of Frazer, Evangelista & Company, LLC. This wide-ranging video recounts the career of these two and asks what advice they would have for future entrepreneurial Pirates.

https://youtu.be/w2R2WdYfO6c
“What Great Minds Can Do” Video Series
The video team from the TLT Center continues its work with the Office of Undergraduate Admissions on the highly successful campaign titled *What Great Minds Can Do*, profiling members of the University Community. Multiple segments were filmed during the term and are at various stages in the editing and finishing process. The latest of these, featuring Nursing Major, Jonathan Throw, to be finalized and published may be found at: https://youtu.be/tC1SGXKJCI

Speech Language Pathology Video Series
In this video, graduate students in Speech Language Pathology at Seton Hall University demonstrate how parents can engage their child when reading. Examples are provided for how to engage both active and passive children when reading. https://youtu.be/VXnF3tkOtG4

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 Fellows – Digital Humanities for History
A $10,000 Digital Humanities grant was awarded to the History Department to further their exploration of technology tools and practices to further their individual research interests and to investigate how digital humanities could be infused into their classrooms. The TLT Center held workshops on the use of WordPress to build out history projects. Ongoing classroom projects are using WordPress in ww2.0 (https://blogs.shu.edu/ww2-0/) and History of New York sites (http://blogs.shu.edu/nyc-history/) The TLT Center also used VisualEyes, a Digital Humanities toolkit that combines timelines, mapping, and commentary on a web page. This was utilized in several
faculty presentations and in classroom demos. The group has also explored the use of data visualization for trend analysis but have not integrated for teaching and learning in the classroom.

Digital Humanities Seed Grants
Digital Humanities Seed Grants of $500 are intended to encourage Seton Hall faculty to plan or pilot a project using digital technologies at Seton Hall, or to engage in a collaborative project with faculty or other DH specialists (e.g., museum administrators, archivists) at another institution. Projects that will result in competitive external funding applications are encouraged. Projects can have, either a scholarship or course development focus. Innovation and experimentation are hallmarks of this grant.

These projects are developed during the summer, completing in the Fall of 2018. Grant recipients present on their project, as part of the TLT Roundtable Best Practices Showcase, in the Spring of 2019. The Teaching, Learning and Technology Center supports these faculty to develop and implement their project.

"Analyzing and visualizing the data from SAP ERP (enterprise resource planning) simulation games"
Sung Shim, Stillman School of Business
Final Report: (did not receive)

IHAD (ICPSR and Health Administration Datasets)
Nalin Johri, Ph.D., MPH, School of Health and Medical Sciences
Final Report:
The goal of this project was to identify and categorize health administration datasets available through the ICPSR website. Currently, the ICPSR website has a topic classification on ‘Health Care and Facilities’ with 255 data series listed. Dr. Johri categorized these data series to include access, relevancy, cost, outcomes, data format, variables, and latest year available. Shortlisted criteria were discussed with project advisors /mentors and a Qualtrics Survey completed of the data. He is currently finalizing results from the survey and will present results in the Spring.

Integrating Digital Humanities Tools into the Business Humanities Initiative,
Elizabeth McCrea, Stillman School of Business
Final Report:
Over the summer, Dr. Abe Zakhem and Dr Elizabeth McCrea worked on a 2018 National Endowment for the Humanities (NEH) Humanities Connections Planning Grant proposal to support the proposed Business Humanities Initiative. As part of this work, they explored the medical/health humanities literature, past Seton Hall University DHSGs, and other resources, like the DiRT directory, which “is a registry of digital research tools for scholarly use” (http://dirtdirectory.org/). Their goal was to identify Digital Humanities tools and approaches that might prove useful in the BHI.

They successfully submitted an NEH grant application on October 17, 2018. In the Fall of 2018, Dr. McCrea wrote a conference paper for submission to the Eastern Academy of Management (EAM) on how Digital Humanities tools can be used to support business humanities. The paper described the concept of Business Humanities and why it is relevant to Management faculty. This included specific DH tools and approaches used in other contexts (e.g., medical humanities), but may have relevance for business. For example, tools like e-
Portfolios and class blogs have been shown to “develop reflective capabilities and encourage self-directed learning” (Kemp & Day, 2014: 126) in the medical humanities; the potential parallels to Business Humanities are compelling. Digital storytelling, including “oral/aural histories, podcasting, interactive/locative narratives, multimedia narratives, and transmedia narratives (Barber, 2016) are well-suited for developing cross-disciplinary understanding, exploring complex issues and developing empathy with stakeholders in a business decision. Finally, the use of concept maps (see the “Use of Concept Maps to Enhance Meaningful Learning” by Viswa Viswanathan & Kelly Goedert), data visualization tools like Visual Understanding Environment (http://vue.tufts.edu/), and mind mapping tools, like Coggle (https://coggle.it/) and Bubble.us (https://bubbl.us/), can help business students manage the human complexity inherent in business situations, while supporting cross-disciplinary collaboration, and decision making that takes multiple stakeholders’ perspectives into account.

Martha Carpentier, Arts & Sciences, English Department
Final Report:
Students were given an assignment to choose 1-3 chapters of James Joyce’s Ulysses and “map” the movements of the main character(s) around the city of Dublin, pinpointing key locations on the Google map and illustrating those locations with photographs (circa 1904 if possible), relevant quotations from the novel, and a brief written explanation of the event or interaction at the particular site (i.e., Nelson’s Pillar, Glasnevin Cemetery, Howth Head, General Post Office, Dublin Bread Company, Ormond Hotel, Barney Kiernan’s Pub, St. Stephen’s Green, Grafton Street, National Library, etc.)
She provided the students with previous mappings. For this project Dr. Carpenter used Google “Tour Builder”.
No training was provided. Students reported that Tour Builder was intuitive and easy to use.
On November 16, students had an in-class “peer and prof critique” of the drafts with final projects due at the end of the semester.

Gregory Iannarella, Seton Hall English Department
Final Report:
In the Fall of 2018, students were given an essay assignment which asks them to analyze a piece of visual data. In the following assignment, students were asked to create their own piece of visualized data in Policy Map. Through the results of these two assignments, Dr. Iamarella was able to redefine his grant topic to: teaching rhetorical argument through data visualization. While his entry point is social justice issues, the ultimate goal was to show students how they can refine and test their rhetorical arguments by visualizing them. Students frequently have issues working with stacked data. He was seeking insight into how to teach this increasingly important skill. Some challenges were presented when he asked student to create a visualization, but he walked students through the process with great success.
Dr. Iamarella also collaborated with digital design at Norton. He helped them beta test their "They say/ I say" tool last semester and they’re interested in the work he is doing. Their tool will not be ready by Spring but it’s an interesting opportunity.
Dr. Iamarella will be able to present in the Spring of 2019 with some sample work of student visualizations, and provide a sample syllabus that other professors can use to pilot a similar project.
"Database of Scripture Citations in Jewish and Catholic Theological Responses during and after the Holocaust.", Gregory Glazov, Theology

Final Report:
The Teaching, Learning and Technology Center continues to work with Dr. Glazov with this seed grant. A number of challenges presented themselves because Dr. Glazov's data was in WordPerfect. He finished compiling and organizing his texts from Wrestling With God ed. by Steven Katz, Shlomo Biderman, and Gershon Greenberg, 2007, however, in at the end of January, 2019 he had more texts to work with. This project is ongoing.

Faculty Innovation Grants
The Instructional Design Team reached out to faculty in an effort to develop projects which increased innovation and to support faculty engagement. Eleven projects were submitted and five were funded. FIG projects are devoted to the cultivate innovation through the application of learning objects, resources, or innovative approaches by faculty members, with the support of the TLT Center, to infuse technology into courses scheduled to be taught at Seton Hall no later than one academic year after receiving the grant.

The awardees are:

- **AI Chatbot for Academic Advising Undergraduate Finance Majors** - Elven Riley, Stillman School of Business
  The primary goal of this project is to digitize the FAQ trivia known regarding the academic advisement process for the Undergraduate Finance majors, and surface that information in a chatbot that can answer student questions on-line.

- **Interactive Psychology Module** - Paige Fisher, Psychology
  The modules will include situations with diverse variables to illustrate the decision-making process involved when choosing to intervene. Students will be presented with a scenario via text, images, and video, and then will be asked how they would respond. Understanding factors that influence helping behavior supports students in their own decision-making when faced with the decision to help someone.

- **Use of VR to Teach Social Justice** - Juan Rios, Social Work
  Stanford University has offered to provide Seton Hall with a library of software programs that are compatible with the VIVE VR System. This is a purchase that would have to be made in order to collaborate with Stanford University. Purchase of other software programs will also expand the catalog of material that can be used throughout different Departments and Programs. Students will greatly benefit from this lab as it deepens the lectures viscerally and can build more empathy on social issues that otherwise may never be experienced. The use of virtual reality can bring students closer to the nuances of age-ism, discrimination, empathy, which can spark alternative ideas on how to create social change among various populations.

- **Gamifying the Journey** - Travis Stevens, CORE
  To encourage students to make use of supplemental materials, complete their reading assignments with a higher degree of retention and comprehension, and engage meaningfully in class discussions and written assignments, we propose "gamifying" one section of Journey of Transformation.

- **Exposure Therapy and Virtual Reality** - Pamela Foley, Psychology & Family Therapy
  Exposure Therapy and Virtual Reality is a project meant to explore and test the potential clinical application of virtual reality within Exposure Therapy or CBT. Working in tandem with the College of Education's Counseling department, the TLTG will conduct a study on how use
of virtual reality hardware like Oculus Rift, Google Dream VR, or HTC Vive Review, would be used in exposure therapy for patients in CBT using gaming software or Limbix software.

New Jersey Healthcare Executive Leadership Academy
The New Jersey Healthcare Executive Leadership Academy (NJHELA) is a 7-month certificate program involving about 30 participants, including doctors, health system executives, insurance executives, and several SHU faculty. This year marks the third cohort of participants. SHMS issues a certificate in advanced healthcare leadership to individuals that complete the program. There is an initial in-person retreat, followed by online activities via Blackboard. Faculty liaison - Dr. Terrence Cahill.

Education Leadership Escape Room
The TLT Center is working with the Education Leadership program, represented by Michael Demelfi, to create an Escape Room using the Breakout.edu kit and, potentially in Space154.

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

LinkedIn Learning - The Teaching, Learning and Technology Center has made LinkedIn Learning available to all employees, students, and staff on all three of its campuses. LinkedIn Learning is an on-demand learning solution designed to help people gain new skills when they have time to learn. In this reporting period (March – May 2019), Seton Hall faculty, staff, and students viewed over 670 hours of course material (a 8.4% increase from the previous reporting period) with an average time per viewer of 1 hour and 56 minutes. A total of 1,710 courses and 11,125 videos were viewed and 243 courses were completed. LinkedIn reports Seton Hall's license activation is 5% higher than other colleges and universities on the platform.

Student Training
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 course launched on June 22, 2018. An initial email was sent to all incoming freshmen with information about the course requirement on July 1, 2018. Several reminders about the course were sent throughout the summer to those who have not yet completed the course. The course due date was
September 7, 2018, and 1,433 out of 1,525 (94%) total students completed the course. Results from a Qualtrics survey indicated that students felt the course was very helpful. This course is currently being modified for use by the Seton Hall Law School.

**Student Technology Skills Courses**
The Tech Skills courses have successfully launched for the past twelve years. Each course covers various topics related to technology and tips 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 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, and technology support resources. The course launched on June 19 for the Class of 2022. The course content includes laptop information, as well as updated information about Microsoft OneDrive for Business, preventing identity theft, email security, avoiding malware, copyright, Office365 apps, accessing the Seton Hall Knowledgebase for self-help, and Compass. The Digital Media team also recorded a new laptop tour for the current models.

As of October 2, 2018, 922 students have completed the course. A Qualtrics survey indicates that students feel the course is helpful. For instance, over 70% felt that it was worth their time to take the course. Over 65% felt that they would be less likely to call the Service Desk for help with their laptop as a result of taking the course.

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.

**Design Classes Petersheim & Poster Production**
Members of Digital Media team taught several sessions regarding the design of poster presentations primarily for display during Petersheim 2019. Material was presented to students with an eye towards organizing their content and designing an effective research poster. Courses were offered on both the Main and the IHS campuses.

**Charter Week - March 25-29, 2019**
Events held in Space154 during Charter Week were:

- **SHUmazing Race:** Groups or individuals were given clues to find things on campus. Participants learned about the history and design of several spaces on campus. Prizes were given for the fastest competitor.
• Scenes from Seton Hall's Past and Present: Participants were taught how to insert themselves into old photos, edit photos to add some Seton Hall spirit or recreate classic Seton Hall photos with their camera using a green screen. Prizes were given for best/most creative works.

• The 1856 Maze: Participants learned to program a Sphero robot to navigate a maze designed to commemorate the year the University was founded. Prizes were awarded for fastest run through the maze.

• Raspberry Pi Game Console: Participants learned to build and program Raspberry Pi computers to play classic video games.

• Virtual Scuba: Participants learned how a member of the SHU faculty is using Virtual Reality to help students experience marine life in their Scuba class.

Employee Training

The Teaching, Learning, and Technology Center will be offering exciting sessions on a variety of topics during the 2019 TLTC Summer Series. Faculty, staff, and students are welcome to attend these free events. The May 22nd Online Teaching Certification session had 21 faculty attendees and the May 29th Tips, Tricks, and Techniques for Creating Engaging Videos for your Online, Hybrid & F2F Courses had 22 faculty attendees. The full Summer Series schedule is:

• **May 22 - Online Teaching Certificate**
  Online courses provide students with an opportunity to earn their degree at their own convenience while providing growth opportunities for departments and colleges. In this one-day workshop, participants will move through the course development process focusing on key components of successful online course development and teaching. Participants may attend one or all of the one-hour workshops. Participants who complete all five workshops and successfully submit their deliverables will earn the Online Teaching Certificate.

• **May 29 - Tips, Tricks, and Techniques for Creating Engaging Videos for your Online, Hybrid, & F2F Courses**
  Are you interested in incorporating dynamic video content into your courses? If the answer is yes, or even if you're just considering the possibility, then this session is for you! During this hands-on engagement we will discuss the various options for creating video content at Seton Hall, best practices for creating video content, and the advantages and limitations of each of these unique options.

• **June 5 - Secure Online Testing: Tools & Strategies**
  In this session, participants will learn how to use Respondus LockDown Browser, RPNow, and the Blackboard Exam tool to create/deploy exams and evaluate test results used in face-to-face, hybrid, and online courses.

• **June 12 - Game of Tools: An Army of Educational Apps & Technologies Wroth of Those Who Seek the Iron Throne**
  Learn about an assortment of educational apps and technologies that are meant to support the diverse needs of faculty and students. The tools covered will focus on enhancing teaching presence, social engagement, and collaboration. Elevate and energize student learning experiences by implementing any of these fun and engaging apps!

• **July 10 - Tools for Effective Communication**
  There are many tools that can help you communicate more effectively, such as Microsoft Teams, Outlook, Skype for Business, and Skype Meeting Broadcast. In this workshop, we will
analyze each of these communication tools and help develop your communication effectiveness.

- **July 17 - Using and Manipulating Data with Office 365**
  In this workshop, we will focus on manipulating data in Excel, creating a SharePoint site with multiple document libraries, and adding triggers and conditions in order to create a Flow.

- **July 24 - Storing, Sharing, and Managing Files**
  In this workshop, we will demonstrate how to install and setup the OneDrive for Business desktop client, how to build a SharePoint Site, create a Microsoft Team, and outline different file management techniques.

**Banner 9 Tutorial Videos**

Upon direction from Human Resources, the Digital Media team created a tutorial video for the Banner 9 system. This tutorial, allows users to understand the changes made to the timekeeping system required by changes in the sick leave laws for part time employees.

https://youtu.be/yHfgmIy81Jw

**Classroom Technology Support**

**Blackboard Learn**

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.

**Blackboard Ultra**

The Ultra Experience is the next generation of Blackboard's learning management system, focusing on improved workflows and deep integrations with a mobile-first design to better support teaching and learning. The Ultra experience is consistent in design across the learning management system itself, Blackboard Ultra Courses, Blackboard Collaborate, and the Bb Student mobile app.

Whether a design aesthetic or intuitive tools, the Ultra Experience provides a clear, personalized interface to focus on the learning process. Embedded analytics keep students informed about their progress and tell quantitative stories about learning. The new interface provides a more seamless transition between mobile and desktop, allowing students to move between app and browser.

The Ultra Experience will be taking place in two phases; Phase 1 is the roll out of the system interface - Ultra Navigation. The Ultra Experience is how the Blackboard system interface outside a course looks and which features and navigation appear. Phase 2 is the roll out of the course view - Ultra Courses. The Ultra Courses is how a faculty's individual Blackboard course looks and which features, tools, and navigation are available. During the transition, courses may appear in the original or Ultra styles, or a mix of both.
Ally
The Teaching, Learning and Technology Center has acquired Blackboard Ally, a course content accessibility plugin that allows instructors to understand and tackle accessibility in a way that benefits all students.

Using advanced machine learning algorithms, Ally generates a wide range of alternatives to the instructor’s original document files such as accessible PDF, HTML, audio, ePub (for reading on e-book readers) and electronic Braille. Students will now be able to access course materials in a variety of formats to better suit their learning needs.

The University compliances score in the first semester (Fall 2018) was 62%. The accessibility for Spring 2019 courses and documents was 71%. The Summer 2019 accessibility courses and documents are rated at 82%.

Lecture Capture
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
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.

Classroom Technology Upgrades
Classroom were identified as in need of technology upgrades due to projectors and other accessories that have reached end of life. The locations identified are: Fahy Hall 245, Alfieri Hall rooms ST120, ST121, ST122 and ST123. The new technology will provide a better user experience in the classroom by both the instructor and students.

• System Commissioning and Acceptance Testing
  Collaborated with contractors, end users, and departments on new installation projects in 27 spaces at the Interprofessional Health Sciences campus and to finalize renovation at existing locations. The IHS campus underwent two phases of acceptance testing and commissioning, ensuring functionality performed as intended and met the needs of the end users while complying with OSHA and ADA regulations and University Standards.

• Network Configuration
  Network configuration projects in four spaces on campus integrated audio/visual devices to the University’s VLAN segment and cloud management systems. Project included verification of IP address reservations, DNS Entries, MAC address logging, firewall ports are opened and managing the cloud infrastructure.

• Software/Firmware Updates
  Media Services, in collaboration with PCSS, updated software and firmware for various wireless displays and computer lab software to ensure equipment continues to work as intended. The updating required additional planning in the event a system is down for thorough testing or if a rollback is necessary.
• **Troubleshooting and Maintenance**
  Investigated the cause of device and system malfunctions in twelve spaces on campus. Troubleshooting typically involves inspection of points of failure and an analysis of error logs. Temporary workarounds are implemented as a more permanent solution is developed. There is an evaluation and report on the impact on the University and a cost analysis of the potential solutions, especially when an immediate repair is not feasible.

• **Major Event Support**
  Provided major event support for six events on campus. Work involves communicating with end user to assess the scope of the event, evaluate resource requirements, stage equipment and supplies, perform walk-throughs, event breakdown and a debrief.

• **Upgrade Planning**
  Planning was performed for seven spaces on campus to identify areas in need of equipment upgrades. The planning process consists of evaluation end user requirements, specifying equipment, construction, mechanical, furniture, electrical, networking, programming, and design needs as well as identifying costs and timelines.

TLTC Media Services in collaboration with Facilities Engineering and other members of the Seton Hall Community worked to identify and plan the installation of new technology and flexible furniture for 10 academic spaces that became available due to the School of Health and Medical Sciences and College of Nursing move to the IHS Campus in Nutley.

• **Corrigan Hall**
  Five classrooms in Corrigan Hall were outfitted with short throw Epson projectors, JBL speakers, Crestron push button controllers, wired and wireless display technology. Wireless display technology allows users to connect and stream information to any screen from anywhere within the room. Whiteboards and flexible style furniture, tables and chairs replaced the antiquated tablet arm chairs to allow for ad-hoc room configuration to support collaboration, small group work and lecture methods of teaching and learning.

• **Schwartz Hall**
  Four flexible learning classrooms in Schwartz Hall were designed to foster collaboration, problem and project based learning and traditional lecture style methods of teaching. The new flexible learning classrooms include at least one large projection screen, a Sony Laser Projector, a 7” Crestron control panel for source selection, wired and wireless display technologies, flexible furniture and a whiteboard. Depending on the configuration of the room, 60” monitors were also installed throughout some rooms.

• **Alfieri Hall (ST 27)**
  A learning studio in Alfieri Hall (School of Theology) was designed to foster collaboration and project-based learning. Two Sony Laser Projectors and screens were installed at both ends of the room, six 60” monitors installed at the long walls of the space for working in teams, a new 10” Crestron control panel for source switching, as well as wired and wireless display technology.
• **McNulty Amphitheatre**
  The Helen Lerner Auditorium underwent a total renovation over the summer. Modifications were made to accommodate a new Sony Laser projector and a 15’ HD projection screen. The room now features two 70” monitors, three HD cameras, an Echo360 Lecture Capture device, an ADA compliant lectern with display connections, a 10” Crestron Control Panel. When used as an event space, this room now has a feature added for overflow into the Atrium.

• **McNulty Atrium:**
  A multipurpose area was created in this space where small or large group gatherings can take place. This location can also serve as the overflow for when events take place in the Helen Lerner Auditorium. A large 90” monitor, Crestron control panel for source selection, wired and wireless display technology are installed at this location. When the space is not being used for small or large gatherings, the large monitor will also serve as digital signage, powered by Industry Weapon with content managed by the College of Arts and Sciences.

• **Language Resource Center**
  As language education shifts from a grammar-based approach to an emphasis on communication, Media Services, in collaboration with committee members, redesigned the Language Resource Center. Upgrades and renovations included: LED ceiling lights, new, modern design wall colors and Steelcase furniture.

  The Lab Space was fitted with two Epson Short Throw projectors, interactive whiteboards, and ceiling mounted speakers with two zone audio. A small entertainment space, with a 65” Samsung TV monitor was added with the ability to watch international TV. Web conferencing was added with two Vaddio USB cameras to capture both the presenter and the audience. At each tech location is a Crestron Control Panel or Crestron push button controller for source selection and switching. An all-region Sony Blu-ray player, Shure wireless microphone receivers and audio mixers, and Crestron DMPS AV switch were added to the AV rack. Wired and wireless display were added at each zone location along with Assisted listening devices.

  The Screening Room AV rack was rebuilt and the display and sound system was repurposed. The room now includes an all-region Sony Blu-ray player, satellite receiver for international programs, Crestron AV switch, Crestron AirMedia Wireless Display gateway and Crestron touch panel for source selection. The classroom was fitted with an Epson Short Throw Projector, interactive whiteboard, Crestron Air Media Wireless Display and AV Switch, and an all region Sony Blu-Ray player.

• **Corrigan Hall Music Room**
  At the request of the Dean of Communication and the Arts, Media Services updated the space to meet today’s technological standards. The room was fitted with an Epson short throw projector, interactive whiteboard, Crestron Switches and Wireless Display controllers, a Denon Blu-Ray player, and an audio amplifier. The room undertook a small facelift by removing raceways and covering cinderblock walls to create a clean and modern look.
Technology Support

ServiceNow Integration
To better serve the University Community, PC Support Services has completed a project to allow the Technology Service Desk personnel verify the identity of the caller, lookup hardware and software information about the caller’s equipment in real-time and reset a user’s password within the University’s ITSM platform, ServiceNow. This allows greater efficiency for the Service Desk personnel and the caller, resulting in shorter calls and increased satisfaction.

Technology Service Desk Call Center
PC Support Services has migrated the technology call center to Amazon Connect, a cloud service that allows the Technology Service desk to record calls for quality assurance, improve the level of service, control workflow for incoming calls, and generate better metrics for call duration, dropped calls and

ServiceNow User Experience Upgrades
Upgrades to several areas of the ServiceNow experience were implemented to improve the user experience. The survey that is generated after a request/incident is resolved was improved to increase the response rate.

Web Development

WSOU Site Redesign
Our staff met with students and professional staff from the award-winning radio station, WSOU, to begin work on a website redesign. The group settled on a minimalist and modern design with the mobile-first philosophy and framework. The redesigned site is slated for a late-Fall 2018 release and will feature mobile-friendly design, updated branding, easy to use navigation, design and modern multimedia features including a widget displaying content live on the air as the station broadcasts throughout the day.
**Video Background Render**

In an effort to constantly improve the visual appeal of the University website, our team has been testing the insertion of a video into the background of key areas of the website. This new, aesthetically pleasing functionality will display a video as the background of a frame on the website and will allow text or graphical content as an overlay. Currently the team is finalizing the code base and testing across multiple browsers with a tentative plan to roll this render onto the site in time for the annual Christmas message.

**Notable Website Updates**

- Updated the Okta Single Sign-On (SSO) widget with the latest version which decreases load time, increases stability, and increases security.
- Updated Java agent for New Relic, our monitoring software for the University website.
- Updated New Relic error handling to more specifically alert staff to poorly defined errors in real-time.
- At the request of Housing and Residence Life, removed the "tawk.to" chat app from the Housing and Residence Life website.
- Updated the backend of the Slate-driven forms on the University website to allow for more specific data coding and increased the number of displayed data fields on engagement forms.
- Applied patch to properly update links to pages in a renamed subsite. An Extended URL system field referenced in a formatted textblock may not render correctly, resulting in an invalid link.
- Applied patches to deal with graphical image errors including those related to invalid subsite bindings and improper meta-data.
- Applied patch to allow for seamless editing of content from a custom Datasheet. Bug was forcing administrative users to update all changes at the original point of entry.

**Department of Information Technology Status Page – Design & Branding**

Informing the University Community regarding the status of critical systems is essential to what the Department of Information Technology does. A design and layout which quickly and effectively communicates the status of almost a dozen monitored systems was implemented on the IT website.
Infographic element for shu.edu

Working with content contributors from several areas, our team developed an Infographic element for use across the University website.

Previous infographics appearing on the site were inefficiently and manually entered resulting in layout issues and were in need of a more modern and effective design. This new element affords our content contributors the ability to quickly choose from over 40 background images and quickly enter data into a sleek and predetermined layout increasing efficiency, readability and accessibility.

Web Upgrades

- **Video Background Render** – The Web team is working on incorporating eye-catching video to play in the background of several elements across the University website.

- **Upgrade of front-end framework for shu.edu** – The University website utilizes Foundation as its front-end framework for as well as Font Awesome to handle standard graphical fonts. Both the Foundation framework and the Font Awesome packages were updated to the latest releases ensuring the best possible user experience.

- **Open Graph metadata protocol added to CMS** – The Open Graph protocol enables any web page to become a rich object in one of several social media platforms. The Web team implemented the protocol to allow content contributors the ability to simply tag and post content which is then shared across several social media platforms.

- **Potential Replacement for Slider and Mega Menu** – Two of the main homepage elements are the images-based Slider and the large dropdown “Mega Menu”. Both currently serve our purposes but are a bit inefficient and can be problematic on some devices. The Web team is currently exploring solutions to replace these elements with an eye towards improving load time.

Great Minds “Spotlight” element for shu.edu

Building on the success of the Great Minds campaign, the Cross-Functional Web team is developing a web element on our site to highlight featured students. The advantage of creating an element allows content contributors the ability to easily utilize the content in multiple layouts across the entire platform.
Slate Application Style Update – Graduate Admissions
The Cross-Functional Web team collaborated with Graduate Admissions to update the style of the Graduate application to better conform with other University web properties.
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 Facility 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 polices and processes that govern the development and delivery of online & hybrid courses across the University.
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.

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 2018-19)

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anaplan - Budget Office</td>
<td>The University is moving to a new budgeting philosophy allocating overhead expenses to individual colleges and levying a &quot;tax&quot; to fund strategic projects. This will require the Budget Office to develop, track, and manage budgets in collaboration with college and department administrators in a more granular, real-time, and transparent manner.</td>
</tr>
<tr>
<td>Budgeting &amp; Planning Software Installation</td>
<td></td>
</tr>
<tr>
<td>Archibus System Upgrade</td>
<td>Provision a new server preferably in AWS, upgrade the infrastructure and upgrade the Archibus System adding new modules in Archibus to replace our existing Firebug and Warehouse Inventory programs.</td>
</tr>
<tr>
<td>Banner 9 Implementation</td>
<td>Implementation of 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.</td>
</tr>
<tr>
<td>BDMX Extender Migration to AWS EC2 and RDS</td>
<td>BDMS is used for scanning and cataloging paper documents. Strategic guidance to move Systems and applications that access Banner reside within AWS to simplify security, improve performance and reduce business continuity complexity.</td>
</tr>
<tr>
<td>Blackboard Transact to AWS</td>
<td>Blackboard Transact currently runs on old hardware on Seton Hall's campus. This project will move this application and database to Amazon Web Services.</td>
</tr>
<tr>
<td>Cognos 11.0.12 Upgrade</td>
<td>Cognos 11.0.12 Upgrade - Upgrade to the current institutional reporting system for ERP, COGNOS to the latest supported version.</td>
</tr>
<tr>
<td>Digital Measures Implementation</td>
<td>Implementation of Digital Measures, a web-based faculty activity reporting system. The project will launch the School of Business and then a plan will be developed to roll out with the other schools. With the elimination of several Lotus Notes databases a system is needed for gathering faculty data for Rank and Tenure, Merit and Reporting.</td>
</tr>
<tr>
<td>ePAF and Workflows for HR Transactions</td>
<td>HR would like to automate certain HR transactions, starting with terminations. We can use ePAFs (electronic personnel action forms) within Banner HR, including a delivered Luminis channel. We want to use Workflow to send notifications to various employees and offices involved in the process.</td>
</tr>
</tbody>
</table>


<p>| <strong>eTranscript Implementation</strong> | eTranscript 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. |
| <strong>eRezLife Implementation</strong> | 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). |
| <strong>Ethos Integration</strong> | An ever-increasing set of third party hosted/SaaS applications require access to our institution's ERP data. Ellucian has provided a solution that goes above and beyond the traditional feed file transfer and allows data exchange via an API calls to a central integration hub hosted by Ellucian called &quot;Ethos Integration&quot;. This hub acts as the go-between for calls from third party applications that request ERP data and lets us custom tailor what data we allow to be sent to specific third-party applications without needing to transfer feed files. This solution scales up to any third-party application that supports Ethos Integration which, hopefully, will be a large subset (if not all at some point) of our vendors. |
| <strong>ESM e-Procurement system</strong> | Implement the ESM e-procurement system comprised of 4 modules: e-sourcing, e-contract, e-purchase &amp; e-invoice solutions. Ensure the appropriate interface of information to the Banner Finance system. |
| <strong>FLAC Workflow for Non-Instructional Load</strong> | In support of the implementation of the Faculty Load and Compensation (FLAC) module in Banner, the Provosts Office is requesting that IT develop a Workflow application be developed in order for Academic Chairs and Deans to request, approve and enter the appropriate credits into Banner for Non-Instructional Workload (e.g. Advisor, Chair, Dean, Sabbatical, Mentor, etc.). |
| <strong>Law School Anonymous Grading</strong> | The Law School needs to have a method developed to have professors grade exams for certain courses using anonymous ID numbers (assigned to the student prior to the exam). The grades then need to be checked as a whole to make sure the curve is applied correctly. If a problem exists, the grades are then sent back to the professor to correct. When complete, all grades need to be uploaded to Banner. |
| <strong>Lenel Upgrade (version 7.4)</strong> | Upgrade Lenel to Version 7.4. This upgrade will include an upgrade of the application and database; an installation of the upgraded software on all workstations; recertification of Lenel scripts for Lenel 7.4; and an |</p>
<table>
<thead>
<tr>
<th><strong>Lieberman Project Implementation</strong></th>
<th>Installation of a second instance of Communication server for IHS campus.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lieberman Project Implementation</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>LCMS+ Implementation</strong></td>
<td>The School of Medicine (SOM) Office of Medical Education (OME) has determined that the LCMS+ cloud-based software is a better fit for the school's curriculum management, scheduling, evaluation and assessment needs than its current Medtrics software. Specifically, it provides more granular control over permissions, more comprehensive import and export options, and a broader set of features that will aid in supporting clerkships and other current and future SOM needs.</td>
</tr>
<tr>
<td><strong>Microsoft Enterprise Mobility Suite</strong></td>
<td>This will provide incoming freshmen with the ability to have their laptops delivered at home and be able to configure them off campus.</td>
</tr>
<tr>
<td><strong>Microsoft Office 365 - Sender Policy Framework Configuration</strong></td>
<td>The Sender Policy Framework (SPF) configuration adds an additional layer of security to anti-spoofing efforts in Office 365. Sender Policy Framework (SPF) is a Sender Authentication Mechanism which ties the domain used on the SMTP Envelope header to a specific sending server. It is possible for an attacker/spammer/spoof to use the domains which do not have Sender Policy Framework configured. The configuration of SPF is also required for the future configuration of Domain-based Message Authentication, Reporting and Conformance, which utilizes both SPF and Domain Keys Identified Mail (DKIM) to provide the most advanced anti-spoofing email functionality available within Office 365.</td>
</tr>
<tr>
<td><strong>Multifactor Authentication (MFA)</strong></td>
<td>Implement MFA for PirateNet</td>
</tr>
<tr>
<td><strong>Next Gen Portal</strong></td>
<td>The university portal is reaching end of life and a replacement is needed.</td>
</tr>
<tr>
<td><strong>NIST Compliance Project</strong></td>
<td>Seton Hall University is not NIST 800 - 171 Compliant which could possible expose the university to unnecessary security risks. This IT Security project is to ensure that we are in compliance.</td>
</tr>
<tr>
<td><strong>NuPark Implementation</strong></td>
<td>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</td>
</tr>
<tr>
<td><strong>Plate recognition for parking lot rounds, non-physical permits, integration with payroll and bursar).</strong></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td></td>
</tr>
<tr>
<td><strong>ODS/EDW 9.0 Upgrade</strong></td>
<td>Upgrade to the current BI Data Warehouse, ODS/EDW, from version 8.5 to version 9.0.</td>
</tr>
<tr>
<td><strong>SHUmobile version 6.0</strong></td>
<td>In an effort to continually offer better service to the University Community, teams from the TLT Center and Applications Development will work together to build the next version of the SHUmobile application for the iOS and Android platforms. The current application delivers access to Seton Hall University's mobile content and web portal from any iOS or Android device. The updated application will add more functionality via custom and third-party modules, handle profiles natively and significantly upgrade the user experience.</td>
</tr>
<tr>
<td><strong>Sick Leave Law Implementation</strong></td>
<td>New Jersey passed a Sick Leave law that requires leave accruals for all employees working at least 30 hours. This includes student workers, adjuncts, Graduate Assistants and faculty. The law was effective 10/29/2018 with the first usage is 2/26/2019.</td>
</tr>
<tr>
<td><strong>Slate (Admissions System)</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>Voice System Replacement</strong></td>
<td>The current NEC Voice solution is an aging system that is at EOL support, no new spare parts, high cost of Operation, and is unable to support the new requirements of the site. This project is meant to modernize the phone system, providing for significantly enhanced features and functionality, and positioning us for future integration into a desktop communication environment.</td>
</tr>
<tr>
<td><strong>Wireless Upgrade</strong></td>
<td>The purpose of this project is to redesign and implement a new Wireless Standard across the Wireless Infrastructure. The goal is to improve our level of redundancy and performance that allow all applications to remain in service during an outage of their primary connectivity, or failure of any single Wireless network component.</td>
</tr>
<tr>
<td><strong>Workflow for Registrar Office - Course Schedule Changes</strong></td>
<td>Workflow for Registrar Office - Course Schedule Changes. Using a newly created front-end web form, department chairs would be able to request updates to course sections housed within their department; i.e. change in enrollment caps, update to instructor, change in course status, etc. The submitted request would then go from the Department Chair to the Dean for approval, and then, if approved, from the Dean to the Office of Registrar for approval, and then upon approval by the Registrar, update the appropriate fields in SSASECT.</td>
</tr>
</tbody>
</table>
### Projects (Completed – AY 2018-19)

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>911 System Replacement</td>
<td>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.</td>
</tr>
<tr>
<td>Alertus Re-Architect for use with Medical School campus</td>
<td>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).</td>
</tr>
<tr>
<td>Camera Project – SHU Perimeter</td>
<td>Student Services is requesting that cameras are installed on the perimeter fences around campus. This includes multiple cameras at various poles that will be installed at the perimeter, and fiber cabling that will be trenched back to buildings. Switch, Storage and Server infrastructure is required for this project.</td>
</tr>
<tr>
<td>Campus Firewall Replacement</td>
<td>The purpose of this project is to replace the current older firewall hardware with an alternative that will position us with Next Generation Technology. The solution, install Palo Alto Firewalls to replace our current Cisco Firewall Technology. This will provide us greater functionality to what we currently have in place. It includes the basic firewall functions of filtering by source, destination, protocol and/or port, as well as deep packet inspection, while also providing the ability to position us with next generation functionality of internet security.</td>
</tr>
<tr>
<td>Cybereason Deployment</td>
<td>The Cybereason Incident Detection &amp; Response and Next-Gen Malware Protection platform provides automated detection, complete situational awareness, and a deep understanding of attacker activities, combined with next-gen malware protection. The Cybereason team has used an offensive mindset and applied adversarial methodologies to develop advanced technology to detect and respond to advanced malware, file-less attacks and other malicious operations. Cybereason analyzes millions of data elements every second – which enables the platform to automatically correlate data across the entire enterprise, think like an attacker, and automatically detect and protect against malicious activity.</td>
</tr>
<tr>
<td>Open Athens Implementation</td>
<td>Open Athens will partially or wholly replace the University Libraries instance of EZProxy.</td>
</tr>
<tr>
<td>TouchNet Implementation School of Medicine</td>
<td>Implementation of the TouchNet system for the School of Medicine. Implementation includes the Cashiering Business Office and the School of Medicine Bill Payment Suite.</td>
</tr>
<tr>
<td>ServiceNow upgrade to London version</td>
<td>ServiceNow London version offers many different new features and enhancements. London will give us ability to change the URL for ServiceNow and brand it to Seton Hall.</td>
</tr>
</tbody>
</table>
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 Wages: $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**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount ($000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY’18 Expense Budget (including fringe benefits)</td>
<td>22,420</td>
</tr>
<tr>
<td>FY’18 Revenues</td>
<td>(8,157)</td>
</tr>
<tr>
<td>Net (Expenses – Revenues)</td>
<td>14,263</td>
</tr>
</tbody>
</table>

**Summary of Projected FY’18 Revenues**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount ($000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile Computing Technology Fee</td>
<td>7,367</td>
</tr>
<tr>
<td>General (“non-mobile”) Technology Fee</td>
<td>670</td>
</tr>
<tr>
<td>IT Revenue</td>
<td>120</td>
</tr>
</tbody>
</table>

| Total                                            | 8,157         |
### Summary of FY’18 Expense Budget

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount ($000)</th>
<th>% of Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Salaries and Wages (with fringe)</strong></td>
<td>11,548</td>
<td>52%</td>
</tr>
<tr>
<td>Major Subdivisions in the Office of IT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Office of Information Technology</td>
<td></td>
<td>4%</td>
</tr>
<tr>
<td>IT Services – Administration</td>
<td></td>
<td>3%</td>
</tr>
<tr>
<td>Systems Administration (Systems Support)</td>
<td></td>
<td>6%</td>
</tr>
<tr>
<td>Production Control</td>
<td></td>
<td>4%</td>
</tr>
<tr>
<td>Web Services &amp; Development (Application Development)</td>
<td></td>
<td>5%</td>
</tr>
<tr>
<td>Client Solutions Group &amp; Security</td>
<td></td>
<td>4%</td>
</tr>
<tr>
<td>PC Support Services</td>
<td></td>
<td>7%</td>
</tr>
<tr>
<td>Service Desk!</td>
<td></td>
<td>1%</td>
</tr>
<tr>
<td>TLT Center (Faculty and Classroom Support)</td>
<td></td>
<td>13%</td>
</tr>
<tr>
<td>Telecommunications</td>
<td></td>
<td>5%</td>
</tr>
<tr>
<td><strong>Operating</strong></td>
<td>3,821</td>
<td>17%</td>
</tr>
<tr>
<td>Major Operating Expense Categories</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computers and Software (Faculty, Admin/Staff, Public Labs)</td>
<td></td>
<td>3%</td>
</tr>
<tr>
<td>TLT Center (CDI, Media Eq., Digital Media &amp; Web Dev., Instructional Design, PCSS, Service Desk, etc.)</td>
<td></td>
<td>1%</td>
</tr>
<tr>
<td>Telecommunications (Level 3, AT&amp;T, Verizon, Internet Connection)</td>
<td></td>
<td>5%</td>
</tr>
<tr>
<td>Computing Operations (UITS Operating – Banner, Oracle, etc.)</td>
<td></td>
<td>6%</td>
</tr>
<tr>
<td>Other (CSG and Office of CIO)</td>
<td></td>
<td>2%</td>
</tr>
<tr>
<td><strong>Mobile Computing Budget</strong></td>
<td>7,051</td>
<td>31%</td>
</tr>
<tr>
<td><strong>Total Expense Budget (with fringe)</strong></td>
<td>22,420</td>
<td>100%</td>
</tr>
<tr>
<td>Description</td>
<td>Amount ($000)</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------</td>
<td>---------------</td>
<td></td>
</tr>
<tr>
<td><strong>Computer Operations</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amazon Web Services (Cloud-based Data Center)</td>
<td>601</td>
<td></td>
</tr>
<tr>
<td>Banner Software Maintenance</td>
<td>569</td>
<td></td>
</tr>
<tr>
<td>Campus Firewall Maintenance (Palo Alto)</td>
<td>408</td>
<td></td>
</tr>
<tr>
<td>Oracle Software Maintenance</td>
<td>220</td>
<td></td>
</tr>
<tr>
<td>Telephone Service – Local and Long Distance</td>
<td>214</td>
<td></td>
</tr>
<tr>
<td>Banner/Slate consulting (Strata Information Group)</td>
<td>207</td>
<td></td>
</tr>
<tr>
<td>Active Directory Single Sign-On (OKTA)</td>
<td>166</td>
<td></td>
</tr>
<tr>
<td>Security Log Analysis Software (Splunk)</td>
<td>159</td>
<td></td>
</tr>
<tr>
<td>Information Security consulting (Sylint Group, BAI)</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Slate Admission Software (Technolutions)</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>OCLC (Library Catalog)</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Computer Hardware Maintenance</td>
<td>69</td>
<td></td>
</tr>
<tr>
<td>CommonSpot SW for web site</td>
<td>59</td>
<td></td>
</tr>
<tr>
<td>IT Leaders Advisor (Gartner)</td>
<td>59</td>
<td></td>
</tr>
<tr>
<td>Red Hat SW Maintenance</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>VMware</td>
<td>47</td>
<td></td>
</tr>
<tr>
<td><strong>Teaching, Learning, and Technology Center</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty Laptops</td>
<td>222</td>
<td></td>
</tr>
<tr>
<td>Faculty Support Initiatives (CDI, TLTC Faculty)</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Audio-visual Equipment in Labs and Classrooms</td>
<td>85</td>
<td></td>
</tr>
<tr>
<td>Printer Maintenance - Labs and Library</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>Renovation of Classrooms</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td><strong>Mobile Computing Program Budget</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lease Payments for Laptop Computers</td>
<td>3,500</td>
<td></td>
</tr>
<tr>
<td>Blackboard Software</td>
<td>532</td>
<td></td>
</tr>
<tr>
<td>Microsoft Campus Agreement</td>
<td>376</td>
<td></td>
</tr>
<tr>
<td>Internet Service (Level 3)</td>
<td>369</td>
<td></td>
</tr>
<tr>
<td>Contract Help Desk and Service Now Licensing</td>
<td>240</td>
<td></td>
</tr>
<tr>
<td>Cisco Systems Computer Hardware Maintenance</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>Temp staffing (Laptop distribution, beginning of Fall semester)</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td>Blackboard Remote</td>
<td>46</td>
<td></td>
</tr>
</tbody>
</table>
## Laptop and Desktop Support

<table>
<thead>
<tr>
<th></th>
<th>15-16</th>
<th>16-17</th>
<th>17-18</th>
<th>18-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Service Desk Calls*</td>
<td>10,843</td>
<td>9,997</td>
<td>6,486</td>
<td>3,662</td>
</tr>
<tr>
<td>External Service Desk Calls*</td>
<td>10,682</td>
<td>7,912</td>
<td>7,872</td>
<td>9,419</td>
</tr>
<tr>
<td>Field Support Visits</td>
<td>472</td>
<td>847</td>
<td>367</td>
<td>650</td>
</tr>
<tr>
<td>Laptop Repairs**</td>
<td>490</td>
<td>643</td>
<td>590</td>
<td>3,781</td>
</tr>
<tr>
<td>Remote Support Sessions</td>
<td>607</td>
<td>278</td>
<td>163</td>
<td>65</td>
</tr>
</tbody>
</table>

* 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.

** Laptop repair and support reporting method changed in 18-19.

## Training Session Attendance

<table>
<thead>
<tr>
<th></th>
<th>15-16</th>
<th>16-17</th>
<th>17-18</th>
<th>18-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty</td>
<td>446</td>
<td>149</td>
<td>207</td>
<td>228</td>
</tr>
<tr>
<td>Student</td>
<td>7</td>
<td>31</td>
<td>20</td>
<td>84</td>
</tr>
<tr>
<td>General</td>
<td>235</td>
<td>236</td>
<td>111</td>
<td>231</td>
</tr>
<tr>
<td>One-on-One Instruction</td>
<td>119</td>
<td>98</td>
<td>99</td>
<td>52</td>
</tr>
<tr>
<td>Special Group Training</td>
<td>768</td>
<td>243</td>
<td>489</td>
<td>728</td>
</tr>
</tbody>
</table>

## Instructional Technology Support

<table>
<thead>
<tr>
<th></th>
<th>17-18</th>
<th>18-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture Capture Hours*</td>
<td>5,798</td>
<td>31,522</td>
</tr>
<tr>
<td>New Surveys (Qualtrics)</td>
<td>1,334</td>
<td>1,046</td>
</tr>
<tr>
<td>Survey Responses (Qualtrics)</td>
<td>30,224</td>
<td>30,374</td>
</tr>
</tbody>
</table>

*reflects the number hours that recordings were viewed

## Media Services Equipment and Classroom Support

<table>
<thead>
<tr>
<th></th>
<th>16-17</th>
<th>17-18</th>
<th>18-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment Deliveries</td>
<td>6,095</td>
<td>2,406</td>
<td>3,666</td>
</tr>
<tr>
<td>Equipment Loans</td>
<td>(combined with above)</td>
<td>1,446</td>
<td>610</td>
</tr>
<tr>
<td>Classroom Support</td>
<td>908</td>
<td>209</td>
<td>528</td>
</tr>
<tr>
<td>Classroom Equipment Maintenance</td>
<td>(combined with above)</td>
<td>992</td>
<td>828</td>
</tr>
</tbody>
</table>

## IT Managed Rooms and Labs

<table>
<thead>
<tr>
<th></th>
<th>17-18</th>
<th>18-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT Managed Rooms (Hours)</td>
<td>3,722</td>
<td>4,155</td>
</tr>
<tr>
<td>Labs (Events)</td>
<td>13,012</td>
<td>990</td>
</tr>
<tr>
<td>Labs (Open Lab)</td>
<td>7,582</td>
<td>31,841</td>
</tr>
<tr>
<td>Mobile Carts (Events)</td>
<td>136</td>
<td>337</td>
</tr>
</tbody>
</table>
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 Soupios, 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