# Department of Information Technology

# Seton Hall University

*2019-20*
*Annual Report*

# Contents

An Overview of Information Technology

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

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

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

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

Mobile Computing Program

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

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.

Teaching, Learning, and Technology Center

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

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

- The **Instructional Design Team** provides pedagogically sound support to faculty on the integration of technology into the curriculum. All of the TLT Center's six instructional designers hold master's degrees in instructional technology or a related field. Each instructional designer is matched with specific departments to be their principal liaison within the Department of Information Technology. In addition to the Instructional Designers, the ID team includes a Learning Systems Manager. Faculty are welcome to schedule appointments with their department's liaison to discuss uses of technology, new ideas, professional development needs and available software. The ID team also schedules training and informational meetings with departments to focus on specific needs.

- **PC Support Services Team** provides an all-inclusive technical support structure to all members of the University Community. PCSS is comprised of six areas that have a variety of different functions:

  - **Technology Service Desk** provides technical phone and email support to our entire community consisting of students, faculty, administration and staff, support is available 24/7/365. There are fulltime staff located at Seton Hall University and Blackboard (3rd party vendor) handles all of our telephone overflow, after hours, weekend and holiday support.

  - **Remote Support** provides technical support using remote tools to our entire community allowing for second level, expert help, without requiring the community member to be present.

  - **Technical Services** provides students, faculty, administrators, and staff computer hardware and software repairs and is staffed with seven fulltime PC Support Specialists. These specialists are responsible for completing warranty and non-warranty hardware repairs for SHU issued laptop and desktop computers, troubleshooting software issues, testing and installing computer applications, and providing computer support for all Seton Hall University initiatives and events.

  - **Asset Management** manages and assures accurate Mobile Computing laptop inventories by tracking, monitoring and reporting on these assets regularly. Responsibilities include defining asset tracking policies, establishing audit processes to ensure data integrity, acting as single point of contact for management on all asset issues, assisting technology refresh, and life cycle planning of the Mobile Computing Program.

- 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
- Anthropology
  Course under development:
    - o ANTH 2910 Quantitative Research Methods - Rhonda Quinn
- Biology
  Course completed:
    - o BIOL 3199 Histology - Linda Hsu

- History
  Course under development:
    - HIST 1302 US History II - Sara M Fieldston
- Mathematics and Computer Science Program
  Courses under development:
    - DAVA 7000 Data Visualization - Manfred Minimair
    - MATH 2814 Computational Linear Algebra - Bert Wachsmuth
    - MATH 7111 Text Mining - Nathan Kahl
  Courses completed:
    - DASC 6911 Big Data Analytics - Manfred Minimair
    - DAVA 9311 Capstone Project - Manfred Minimair
- The Department of Political Science is developing an online version of the Master's 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.
  Course under development:
    - PSMA 7991 Internship - Matthew Hale
  Courses completed:
    - PSMA 7800 Ethical Challenges of Big Data - Matt Hale
    - PSMA 7992 Capstone - Roseanne Mirabella
    - PSMA 7993 Research Seminar - Roseanne Mirabella
    - PSMA 9002 Philanthropy and Film - Jeffrey Togman
- Religion
  Course under development:
    - RELS 2511 Christian Values and Health issues - KC Choi

Stillman School of Business
- 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:
    - BFIN 7215 Capital and Money Markets - Mark Schild
    - BITM 7127 Enterprise Wide Account Information Systems II - Benjamin Pearl
    - BMKT 7634 Marketing Metrics - Hector Lozada
    - BSAN 7011 Exploratory Data Analysis and Data Visualization - Viswa Viswanathan
    - BSAN XXX Project Management - Barry O-Brien
  Courses completed:
    - BMKT 7640 Corporate Branding Strategy - Daniel Ladik
    - BQUA 7720 Data Analytics 1 - Rob Weitz

School of Diplomacy
  Course under development
    - DIPL 6276 Global Health - Yanzhong Huang
  Course completed:
    - DIPL 6622 China's Foreign Relationships - Zheng Wang

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.

Courses under development:
- o CPSY 6103 Abnormal Psychology - Noelany Pelc
- o CPSY 6316 Group Counseling - Matthew Graziano

Course completed:
- o ELMP 6005 Statistical Methods - Richard Blisset

School of Health & Medical Sciences
- Healthcare Administration

Courses under development:
- o HCAD 7515 Global Health Management - Nalin Johri
- o HCAD XXXX International Capstone - Dr. Steve Wagner

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.

Courses under development:
- o NULD 6510 Epidemiology and World Health - Beth Jameson
- o NURS 6221 Healthy Concepts of Aging - Donna Jeskey-Lowry
- o NURS 6500 Detriments of Population Health: Nursing Perspectives - AnnMarie Sailsman
- o NURS 7236 Acute Care Theory I - Moira Kendra
- o NURS 7348 Graduate Practicum II - Moira Kendra

Course completed:
- o NURS 7333 Graduate Practicum I: Acute - Catherine Loughery and 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

Courses under development:
- o PTHO 6108 Introduction to Preaching for Deacons - Rev. Krzysztof Maslowski
- o STHO 6203 Christology - Larry Porter

Courses completed:
- 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

## Assessment

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 the laptop they received during Pirate Adventure the summer before their first semester. A Post-Assessment survey will be distributed to freshmen at the end of their first semester and gathers additional feedback on their experience with their SHU laptop and IT Services during the fall semester. The goal is to assess the impact of the laptop and technology services on the learning environment at SHU and to provide prompt feedback to the Mobile Computing Program planning team to continually improve the quality of the program.

As the Mobile Computing Program has grown and evolved over the past 24 years, the goals of this assessment have also expanded to include the following:

- To evaluate students' level of satisfaction with technology services at the University.
- To examine how students are using technology available at the University.
- To identify ways that technology services and practices can be improved and expanded to meet the demands of the Seton Hall community.
- To compare the results of the pre-assessment with the post-assessment.

The results presented in this report are based on the Fall 2019 Freshman Pre-Assessment distributed via email on August 20, 2019. The results of this survey are shared with the University community as well as the larger educational community through conferences and publications.

**Response Rate:**
A total of 1530 students were polled via email in the Fall of 2019 with 674 responding to the survey for a response rate of 44%. Of the respondents, 607 completed the survey in its entirety for a completion rate of 90%.

**Technology Ownership:**
Seventy-five percent (75%) of students owned their own computer prior to arriving at Seton Hall. An additional 14% used a family computer. Only 11% 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. Only 15% of students who owned their own or shared a family computer reported that it was less than one year old. Approximately 78% of students owned or had access to a tablet. The iPad represented 61% of these tablets.

**Awareness of Mobile Computing Program:**
Close to half of the students (45%) indicated that they first learned about Seton Hall's Mobile Computing Program at Pirate Adventure. About 20% learned about it during Open House, and another 15% learned about it during the application process. Five percent (5%) indicated that they have "always been aware of SHU's Mobile Computing Program." The final 14% responded that they were unsure or learned about the program through another method.

**Use of SHU Laptop Received at Pirate Adventure:**
Students received one of two Lenovo model options during their Pirate Adventure orientation session. Seventy-two percent (72%) of the respondents received a Lenovo Yoga, while 28% received a Lenovo T490. Over 80% reported being satisfied or very satisfied with the battery life, weight, storage space,

form factor, and screen size of their SHU laptop. Ninety percent (90%) 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. PirateNet/Blackboard, Email, and Surfing the Internet were the most popular tasks.
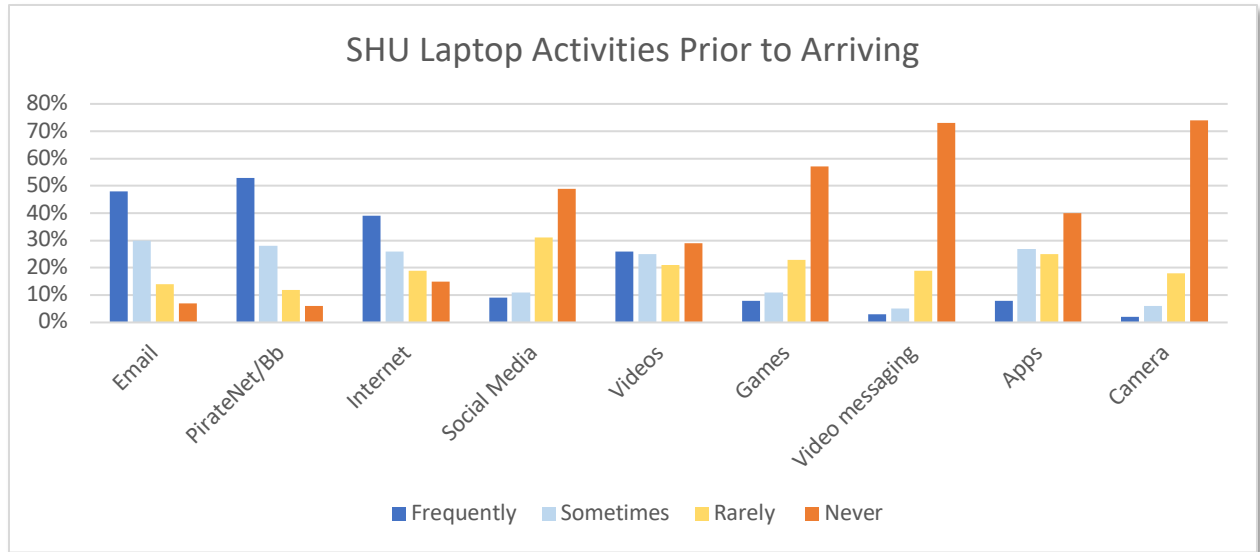


**SHUmobile App:**
Over 80% of students report using the SHUmobile app at least weekly, with 41% using it daily.

**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, Blackboard, PirateNet, Microsoft Email, Laptop Training, Preloaded Software, and the laptop overall were above 75%.

## Engagement and Retention Projects

**Involvement Fair – Sign-up Form**

Collaborated with the Division of Student Services to revamp the antiquated method of collecting student interest for clubs and organizations at the Involvement Fair. The paper method led to data entry errors and frustration among the student body. The TLTC staff developed an electronic data collection application that would be easy and quick enough for both the attending students and the organizations to handle with little intervention.

The system was based on QR codes which launched an online form that students could access from their phones as well as an extension built into the SHUmobile app. The application would not only signal a student's interest in a particular organization but would also email the student a receipt as well as create a daily digest for both the
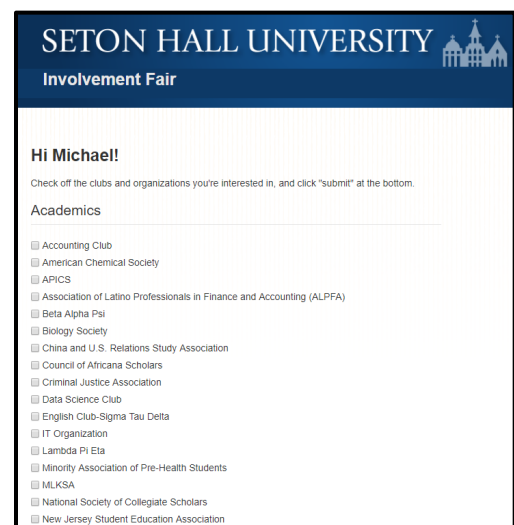
participating organizations and Student Services. The system was piloted at the 2019 Involvement Fair with over 2,000 registrations captured.
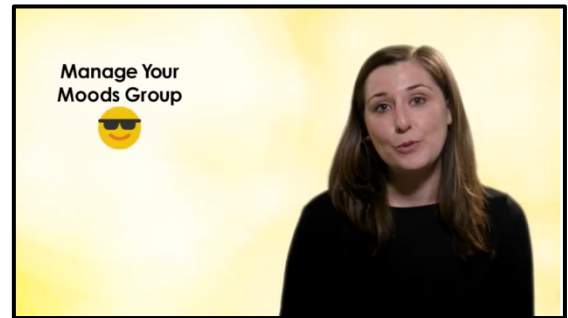
**Counseling and Psychological Services (CAPS)**
The Digital Media team has continued work on material for the award-winning "What's Up Doc" series. Two videos around the topics of dealing with "Test Anxiety" and understanding the benefits of "Group Therapy".



Group Therapy:
https://www.youtube.com/watch?v=EMFRMLtc90s

Test Anxiety:
https://www.youtube.com/watch?v=iAwDAMTfQHM

**Words Matter Presentation**
*Words Matter* is a presentation designed in conjunction with the Division of Student Services to teach students the power of offensive language and micro-aggressions on campus. The program launched at the start of the Fall semester and was very well received by both students and staff.



**IT Promotional/Informational Materials**
Promotional/informational posters and graphics were created to support the Universities IT initiatives. Separate versions of the Student Technology brochure were made for both the main campus and IHS campus.

The Digital Media team also created a 'wall graphic' for the e-sports room currently under construction in Jubilee Hall.



### Student Voices and Campus Tour Videos
The Student Voices video is a profile piece used around the country at high school and collegiate events to showcase the Great Minds initiative at Seton Hall University.  The Campus Tour video is played for prospective students at the beginning of an on-campus tour.

- **Student Voices - Rough cut:** https://vimeo.com/setonhall/review/364325995/349aa763fa
- **Campus Tour - Rough Cut:** https://vimeo.com/setonhall/review/368854849/b7089dc111

### Space154 Event Support
Members of our team created several graphics to showcase and advertise on-going events in Space154 including work on the Pirate Escape Room held during University Weekend.



### "What Great Minds" 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,* profiling members of the University Community.

The four latest segments are:
- Kira Williams - Oct 22
  https://www.youtube.com/watch?v=im4Zqu-O3xY
- Julia Lanuez - Oct 1
  https://www.youtube.com/watch?v=UYnGyiRKVzs
- Alonso Arbulu - Sept 12
  https://www.youtube.com/watch?v=2p097jBMBUM
- Gabrielle Hunt - July 8th

https://www.youtube.com/watch?v=FN3dogjVZFE

**Video Support -** Streams and recordings of major events around campus.
- An Afternoon with Dolores Huerta - Sunday, October 20
  https://www.youtube.com/watch?v=fId3qcd7-Rc
- Peacemaking Through Nonviolence Conference - Tuesday, October 1
  https://www.youtube.com/playlist?list=PLppHCkhATHuU_roI98LTj_NYrpLcgTYNi
- Forum on Modern Slavery - Event Recording – Friday, September 27
  https://www.youtube.com/playlist?list=PLppHCkhATHuVXP2GubOs2mNw6VYr1U495
- 2019 Faculty Convocation - Friday September 13th
  https://youtu.be/aowowYdQD9E

**Christmas at the Hall 2019**
For over ten years, the Digital Media Team has produced the University video Christmas Card and has begun preliminary work for the 2019 version.  In addition to creating the video released to faculty, staff, students and alumni around the world, our team will capture video from the Christmas Tree Lighting ceremony and create multiple graphics for several Christmas related events.

## Space154
**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. A beta test was conducted with feedback provided by participants. Feedback will be incorporated into the buildout.

**Welcome Weekend:  Exploring Space 154**
The TLT Center hosted parents and students in Space154 during Welcome Weekend on October 19. More than 200 attendees came to test drive all the technology that Space 154 has to offer, including Virtual Reality, Retro Gaming using a Raspberry Pi, using Sphero Robots to navigate our Space 154 – 1856 Maze, and much more. The Instructional Design Team created an escape room experience based on Seton Hall history for students and families. After the 55 participants successfully (or unsuccessfully) freed the Pirate, they were invited to take photos in our themed 'photo booth'.

**Halloween Trick or Treat Open House**
On October 31, Space154 hosted an open house where Trick-or-treaters could try out some of the technology and leave with treats. With October being Cybersecurity month Swedish Fish and Goldfish were given out to attendees.

**Open Lab and Tinker Tuesdays**
Students, faculty, and staff can now visit Space154 two days a week for an open lab session or every Tuesday for a Tinker Tuesday session. These sessions allow participants to explore all of the emerging technologies available in the space. Students have shown a strong interest in 3D printing, virtual reality, and coding. Due to popular demand, Open Labs will be expanded to three days a week in the Spring semester.

## Instructional Technology Projects

**Faculty Innovation Grants (FIG's)**
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 first round of projects were awarded in the Spring semester and are on target to be completed by May 2020. The projects are:
- **AI Chatbot for Academic Advising Undergraduate Finance Majors** - Elven Riley, Stillman School of Business
- **Interactive Psychology Module** - Paige Fisher, Psychology
- **Use of VR to Teach Social Justice** - Juan Rios, Social Work
- **Exposure Therapy and Virtual Reality** - Pamela Foley, Psychology & Family Therapy

In an effort to foster innovation and to support special faculty projects, the TLT Center and Faculty Senate held a call for proposals for another round of Faculty Innovation Grants. Nineteen proposals were submitted; seven were funded. The FIG's ranged in cost from $0 to $10,000.

**The awardees and their projects for this academic year are:**
- **Data Narrative Curriculum Development for Business Writing Primary - Gregory Iannarella, English**
  The goal of this project is to promote Data Literacy across campus by developing a Data Narrative Curriculum for required courses such as 1201, 1202, and Business Writing. This curriculum will consist of class activities, lectures, resources and formal assignments designed to simultaneously instruct proficiency in Data Literacy and Rhetorical Strategy. This work is a continuation of his Digital Humanities Seed Grant project where he used digital humanities resources to instruct English 1201 and 1202.

- **Dedicated 3D printing for Biological Sciences Primary - Erik Hill, Biology and secondary faculty participant Tina Chu and Angela Klaus**
  By using a newly purchased 3D printer with a biology priority, it would slash the time and costs needed to obtain multi-use plastic holders and storage devices improving student lab experiences. A biology priority printer would be incorporated in the course curriculum so students can gain tangible understanding of proteins and molecules as was used in the bioinformatics course. Having the capability to produce these biological laboratory specific plastic pieces can streamline laboratories for students, 'go green' by replacing and reducing some single-use plastics currently used in courses and provide students with a physical representation of otherwise invisible molecular/cellular structures they study as a part of their coursework.

- **Statistics Review Project - Eric J Podchaski, Psychology**
  The aim of this project is to create a system of interactive web-based tutorials for students to use to review statistical concepts both during core classes and when needed for review. The aim of this project is to create a system of interactive web-based tutorials for students to use to review statistical concepts both during core classes and when needed for review. The goal is to create a series of learning scenarios that range from easy to more difficult with feedback given on how to improve incorrect answers. The learning scenarios will not be created solely by me as I will solicit information from colleagues who teach the core courses noted above and serve the role of editor in organizing and reviewing their comments on and submissions of different scenarios.

- **The Future of Innovation in Teaching and Learning Through Computer-Based Simulation - Natalie Neubauer and secondary faculty participant Caryn Grabowski**
  Simulation technology can be used to assess student's clinical competencies as well as a tool for providing experiential learning opportunities for speech-language pathology students. Simucase&trade; is an advanced, high fidelity computer-based simulation technology that has been proven highly effective for academic and clinical teaching. Simucase&trade; requires an annual subscription to be purchased for all students (each cohort is 50 students) and faculty. All faculty would need to be trained, so this platform can be consistently and accurately implemented across the curriculum as a learning resource. Additionally, students will require formal training and practice on the use of Simucase&trade; prior to implementation to encourage student efficiency, and motivation for this new technological teaching tool.

- **Standardized Interactive Module and Quiz for Safety Engagement for General Chemistry 1125 and 1126 Courses - Jacob Goldsmith and secondary faculty participant Cos Antonacci**
  The primary goal of this project is to get students actively thinking about safety instead of passively being lectured about the topic. A second goal is to standardize student exposure to the safety SOP across different instructors and/or course sections. A third goal is to focus graphic and interactive content on important topics, such as cross contamination, waste disposal, and lab etiquette. The objective of this project is to have an interactive tutorial and quiz which graphically engages students while going through the safety SOP document. In approaching the content from through this scope, student retention of this information should be enhanced and improve overall safety standards for General Chemistry labs. Another objective of this project is to apply another level of accountability to students. At the end of the day, we would like to have implemented a portable and modular product.

- **Assessment of Patient Interactions during Simulated Encounters - Leslie Rippon and secondary faculty participant Vicci Lombardi**
  The standardized patient suite where the interactions are typically recorded does not simulate a realistic environment for athletic training students. The IHSC facilities that do simulate an athletic training room environment (Interventions Lab 1217, Exercise Physiology/Therapeutic Exercise Lab 1218, Rehabilitation Gym 1216) lack adequate video/audio recording options to support student self-reflection. Students can receive verbal feedback from the standardized patients and faculty members, but they are not able to watch their interactions and self-assess their performance.

- **Using Technology to Strengthen Field Education in Social Work - Dawn Apgar**
  In recent years, there has been a desire by the BSW and MSW programs to use software which would enhance the effectiveness and efficiency of field education. The use of Tevera will allow students to use electronic methods to choose their field sites, manage their required documentation, and ensure competency in nine areas of practice. Proof of mastery of competencies by students is required by outside accreditors. Tevera will be paid by students ($195 one-time lifetime user fee per student) but requires some upfront costs to ensure that faculty are trained on its use and to ensure innovation in field education which is at the heart of this proposal. Tevera can be customized and fully operational in the BSW Program in Fall 2019 for Senior social work students (with the BSW Junior social work students joining in Spring 2020) and the MSW Program joining in Fall 2020. It will result in enhanced integration of content between Junior Practicum (SOWK3811) and Theory and Practice I (SOWK3611), as well as Senior Practicum (SOWK4811, SOWK4812) and Theory and Practice II/III (SOWK4611, SOWK4612).

**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. A beta test was conducted with feedback provided by participants. Feedback will be incorporated into the buildout.

**APA Tutorials**
Students are having trouble grasping and executing correct APA format and citation in the online counseling programs. The courses are being developed by Noelany Pelc. To ensure students understand the required citation and to provide them with resources for it, a self-paced course will be embedded into beginner courses to provide them with extra support. This was previously done through the APA website at a charge of $90 for each student, but the site was full of glitches and the content could not be altered. If successful, the course may be pitched to other departments for adoption.

**Learning Management System (LMS) Review**
Seton Hall University has been using Blackboard as its Learning Management System (LMS) since 2000. The university recognizes the need to redesign and expand components of our learning environment to establish a next-generation digital learning environment.

The Teaching, Learning, Technology Center in conjunction with the Teaching, Learning, Technology Roundtable is establishing a Learning Management System (LMS) review committee comprised of key stakeholders and representatives from across the institution to investigate both the University's needs and the available technology and to recommend a solution that works best for Seton Hall at an overall lower price.

The four major criteria for this search are:
- Pedagogical: providing the tools needed for faculty and students.
- Technology Management: system architecture, scalability, security, development, quality assurance, etc.
- Organizational Administration: policy issues (academic, operational), data retention, user support, training, etc.

- Cost: hardware, software, lifecycle, operations and maintenance, staff, etc.

**SHMS NJDOH – Five Minutes to Help**
The School of Health and Medical Sciences has been awarded a grant from the New Jersey Department of Health to produce educational materials: Incorporating NJ's EMS into Opioid Recovery initiatives through Education and training. The project is led by Jennifer McCarthy and Anne Hewitt. The goal of this project is to provide a general orientation to the complexities of treating opiate overdose in the out-of-hospital setting. The course will be made available to New Jersey first responders via the New Jersey Department of Health (NJDOH) online platform.

**Accessibility**
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. The accessibility compliance score has improved 20% since the tool was first made available in Fall 2018.

## 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, Seton Hall faculty, staff, and students viewed over 768 hours of course material (a 26.4% increase from the previous reporting period) with an average time per viewer of 1 hour and 27 minutes. A total of 2,352 courses and 14,695 videos were viewed and 390 courses were completed.

**Summer Series**
The TLTC held several events over the summer as part of its annual Summer Series program. Sessions included manipulating data with Office 365, cloud storage best practices, and communication tool tips. This year's events were the highest attended summer events for the TLTC.

**2019 Entrepreneurship Bootcamp**
The Instructional Design team led a special training session for the Entrepeneuirship Bootcamp. The session explored emerging technologies, the ins and outs of designing their own logos, and communication tools.

**Digital Literacy Bootcamp**
The ten students that were participating in the summer bootcamp coordinated by Arts and Sciences faculty member Mary Balkun were broken out into teams with each team being introduced to

technology including Sphero Robots, Chroma Key Wall, Oculus V, Raspberry Pi Gaming, and 3D printing.

**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 course officially launched on July 1. As of October 23, 1,583 students have completed the Fall 2019 course.

**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.

**In Person Training**
In addition to the online training available on LinkedIn Learning, the TLT Center offers a wide range of in person training to help the University community utilize technology to learn, study, and use in their everyday work tasks.

## Classroom Technology Support

**Market Research Center, Stillman School of Business**
Two existing cameras were updated to HD and a new Sony camera was added in the observation room for an additional point of view. The TV monitor was updated with HD connections and wireless display capabilities. Two new Crestron panels were added in each room to allow for manual source selection.

**Fahy 58A**
A new Sony laser projector, wireless projection for display, pulldown screen, wireless microphone, 2 cameras and a lecture capture appliance was installed and located in the rack.  A 10" wireless Crestron panel controls and provides source selection for the devices that make up the system.

**Fahy 58B, Mac Lab**
A new Epson laser projector, fixed screen and new speakers, wireless display and push button controller and source selection were installed. An HDMI wall plate for wired connection and desktop PC source was added. This room had not been updated in over 12 years.

**Fahy 41, Graphics Lab**
A new Epson laser projector, fixed screen and new speakers, wireless display and push button controller and source selection were installed. An HDMI wall plate for wired connection and desktop PC source was added. This room had not been updated in over 6 years.

**Art Center 211**
Added two large monitors, wireless display connection, and push button controller for source selection. An HDMI wall plate for wired connection and desktop PC source was added.

**Jubilee Hall 460**
Added an Epson short throw projector with full interactive capability with push button control for source selection. Wireless display technology was added for content sharing and collaboration. Speakers and HDMI connection added at the wall for wired connection.

**eSports Gaming Space**
eSports is one of the fasting growing industries today. Schools across the country are using eSports to attract, engage and retain students, including our peer schools in the Big East Conference. After several meetings with the Big East in the spring of 2019 and a survey of our students which reports that close to 60% of current Seton Hall students report that they would not attend a traditional sporting event, but would attend an eSports event, the Department of Information Technology created a state-of-the-art gaming space in Jubilee Hall.

A facility already on the schedule to be upgraded and with the approval of the Provost, the Department of Information Technology, replaced a traditional computer lab with a facility that will support both teaching and student gaming. The gaming lab has 33 desktop PCs, 16 gaming desktops preloaded with games, an ADA workstation, and 2 wireless stations. Students also have access to the latest video game consoles from Sony, Microsoft, and Nintendo and can wirelessly project to six different HD monitors in the room. The space is open to Seton Hall's eSports team as well as the general student body 7 days a week.

**Organic Chemistry Lab and Classroom, McNulty Hall**
Installed an interactive short throw projector and whiteboard, two large monitors, and two Crestron control panels for source and control. Added a lecture capture appliance, camera, USB interface for web conference possibilities, and wireless display for collaboration and content sharing. In the lab space, 4 monitors were added, 2 per station and between the hoods, for students to display reference materials and lab assignments using wireless display capabilities.

## Technology Support

**Technology Service Desk**
The Technology Service Desk continues to improve the customer support experience (5.4% satisfaction rate improvement to FY19) by utilizing the latest technology. The Service Desk call center was upgraded with the ability to record calls, listen to calls, and assist during quality assurance. The upgrade will also allow the Service Desk to control the workflow of calls and to generate stats. Upgrades have also been made to improve the integrated password reset functionality within ServiceNow, giving the Service Desk the ability to reset a customer's password within ServiceNow and not access it through AD Manager. The customer facing Service Desk tool, ServiceNow, was also upgraded to the latest version, focusing on a new mobile-first design, giving our community a better support experience.

**South Orange Campus Pharos Print Management Server Installation**
The infrastructure necessary to implement the managed print program, Blueprint, has been deployed on the South Orange campus. Blueprint ensures that departments have reliable, secure, up-to-date, and supported printing, copying and scanning resources while also ensuring the University is providing this service in a sustainable and cost-efficient manner. The new program is estimated to save the university $500,000 over 5 years.

## Web Development

**Compliance Scorecard**
All University employees are required to complete the University's Compliance Training Program as well as annual certifications. A Compliance Scorecard was created to list a user's status with respect to all available trainings. It also links directly to courses and related policies. The scorecard delivers reports to Human Resources staff alerting them to the compliance status of all users.



**Academic Awards/Scholarships "2.0" - Advanced Search**
The web team is working on updating the functionality around searching and gaining access to Academic Awards and Scholarships. A custom element has been created in the Content Management Systems to better utilize the data inherent to all academic awards and scholarships. In addition to this, custom filters have been created so users are now able to filter their results based on keywords, award amount and/or the program that an award is slated.

**Infographics for shu.edu and IHS**

Working with content contributors development has been completed on over 40 pre-designed images used as background for the Infographic element in use across the University website. This new element is featured on several school and college landing pages as well as the University's main page and affords our content contributors the ability to quickly enter infographic data into a sleek and predetermined layout increasing efficiency, readability and accessibility.

In addition to this general element for infographics, a more custom infographic was created for the Office of Diversity and Equity at the School of Medicine: https://www.shu.edu/medicine/diversity-equity/

**Crisis Communication Site**

The web team has started work on updating the University website to better handle communications in time of crisis. The plan is to direct traffic to a lighter-weight version of the University website which clearly and succinctly delivers information needed by the University Community in times of crisis. Users will be able to continue to the University's traditional homepage and interact with the site as per usual.

IT Governance

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

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

The IT Governance Structures at the University are:
- Banner and Admin Computing Steering Committee
- Teaching, Learning and Technology Roundtable

## Administrative Computing Steering Committee

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

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

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

Other Banner IT Governance Structures:

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

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

## Teaching, Learning, and Technology Roundtable

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

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

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

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

- **Faculty Development & Best Practices** (chaired by Mary Balkun, Renee Cicchino and Lysa Martinelli)– will showcase exemplars of good teaching and student engagement across all schools and colleges at Seton Hall University.
- **Mobile Computing Committee** (chaired by Joan Guetti and Steve Landry) – gathers and evaluates data from students and faculty on the mobile computing program to determine the further directions of the Mobile Computing Program.
- **Classroom Technology Committee** (Deirdre Yates and Eva Rosmaninho – will work with the Senate's 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.

Information Technology Services

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

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.

## Information Security

In 2020, Seton Hall's security posture was significantly improved by the implementation of new technologies and the enhancement of existing tools. These included endpoint and edge protection, increased monitoring, and remediation.

When COVID-19 led to remote work and classes, Information Security increased and enhanced monitoring, investigation, and threat hunting, despite a staff reduction. The 24/7 Security Operations Center was maintained and increased through partnering with a Managed Service Partner and SHU personnel on-call procedures.

A centralized tool was implemented to manage compliance and risk registries for the university. This allows for compliance with NIST framework standards. It is also being used for assisting with 3rd party vendor risk assessments.

In late Spring, the University was notified of a 3rd party vendor breach with potentially significant impact to the SHU community. The Blackbaud breach affected thousands of organizations worldwide, the SHU portion was investigated by Information Security and a cyber liability insurance claim was managed with external counsel and support. All regulatory notifications were sent, and the incident was closed with no reported financial or reputation damage to SHU or its constituents.

## 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 2019-20 academic year:

**Projects (Work in Progress – AY 2019-20)**

| | |
|---|---|
| AI Chatbot | In order to efficiently provide accurate information to answer the questions of both current and prospective students, the group is looking to partner with an outside vendor to create artificially intelligent "chatbots" available via multiple platforms at all hours. |
| Purge Older Prospect and Applicant Records from Banner | The University would like to put more formal data management practices in place to reduce the risks associated with maintaining PII for approximately 150,000 prospect and applicant records from 2015 and prior for individuals that have never registered for classes. These data management practices which would involve moving older data |

| | |
|---|---|
| | from the transactional system to an archival system would also allow us to reap the added benefits of improving the speed of the Banner database and reducing the overall operating cost of maintaining our databases. |
| Automation of Onboarding for New Employee System Access | When new employees start, there are several steps to get them system access, phone numbers, laptops and Multi-Factor Authentication. This project is to streamline those steps. |
| Banner 9 Financial Aid Self-Service installation | The Banner 9 self-service modules have additional functionality that will help our students. Financial Aid wishes to make this available to our students as quickly as practical. The Banner 9 Financial Aid Self Service module is expected to be available from Ellucian in early Fall. Some modifications to the current Banner 8 Self Service page will need to be re-implemented using the Banner 9 PageBuilder system. The requested date for project completion is the start of the Spring semester. |
| Blackboard Transact to AWS | Blackboard Transact currently runs on old hardware on Seton Hall's campus. This project will move this application and database to Amazon Web Services. |
| Compliance Training | Compliance Training will be required of all employees, within standard timeframes. The project will include data feeds, automated reminders, and reports. |
| Chrome River (Travel & Expense) Implementation and Integrate with Ethos | Based on a recommendation from the Huron study, the Board of Regents has directed management to streamline the Travel &amp; Expense operations by automating currently processes. |
| Display Student ID Photos in Banner 9 and EAB Compass -Phase 1 of 2 | For many years, student's photos have been imported from the Lenel ID Card system to Blackboard, so that faculty can see a photo roster of students in their classes. This import uses flags set by the Registrar's Office to allow students to "opt out" of using their ID photos in this way. Several other systems allow the use of student photos to enhance the student and faculty experience, including the Banner 9 self-service modules, the EAB Compass system, the Maxient student conduct incident management system, and the ERezLife housing system. The requested timeframe is to complete import of student photos into the Banner 9 Student and Advisor Profile and EAB Compass by the start of the Fall semester, with additional modules later in the Fall. |
| ePAF and Workflows for HR Transactions | 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. |
| eRezLife Implementation | eRezLife will replace Adirondack Housing Director (THD), our current Housing and Residence Life software platform. eRezLife will handle those functions currently handled by THD (housing application, selection of roommates, student selection of meal plans, room assignment, duty night log reports, staff weekly reports, student interaction logs) as well as some that may or may not be handled |

| | |
|---|---|
| | currently by THD (room condition reports, conflict mediation reports, student-at-risk assessment, staff progress reports, overnight guest tracking, staff selection services). eRezLife is vendor-hosted solution (housed on AWS servers). |
| ESM e-Procurement system | Based on a recommendation from the Huron study, the Board of Regents has directed management to streamline the Procurement operation by automating current purchasing processes including an e-Procurement system. |
| Ethos Integration | 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 "Ethos Integration". 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. |
| Front End application for new Workflow for Registrar Office - Course Schedule Changes | Front End application for new 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. |
| HMH View Into NuPark | HMH has the need to lookup information in NuPark. NuPark cannot separate the SO and the Nutley campuses and HMH should not see the SO student and employee information. NuPark has given us access to their API to develop a view for HMH |
| Law School Anonymous Grading | 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 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. |
| Multifactor Authentication (MFA) | Implement MFA for PirateNet Multi-factor adds additional security for all students, faculty, and staff. All employees have been enrolled as of 10/31/2019. Full-time faculty are currently being enrolled and students are scheduled for Spring 2020. |

| | |
|---|---|
| NIST Compliance Project | Seton Hall University is not NIST 800 - 171 Compliant which could possibly expose the university to unnecessary security risks. This IT Security project is to ensure that we are in compliance. |
| Oracle 12c Migration for Banner | Oracle 12c Migration for Banner |
| Oracle 12c Migration for NON-BANNER databases | Oracle 12c Migration for NON-BANNER databases: EMREP, RMAN, Luminis, Bosscars, Reports and Vmware 1. |
| Resolver Perspective: Move to vendor-hosted solution | This project would move our current on-prem Resolver Perspective (which includes two products within the same environment: Perspective and Dispatch) to a vendor-hosted option that is setup the same way. |
| Service Account Review and Clean Up | Service Account Review and Clean Up. The goal is to move towards using Lieberman to manage all service accounts, but this will first require understanding what each service account is currently used for and whether or not they are able to be managed by Lieberman based on how they are coded into each application. Extensive discussion is needed with all relevant parties. |
| Time Entry and Employee Profile -Banner 9 | Implement Banner 9 Time Entry and Leave Management version 9.7 with increased functionality for Web Time Entry (student workers) and Leave Reports (administrators). |

**Projects (Completed – AY 2019-20)**

| | |
|---|---|
| Cognos 11.0.13 Upgrade | Cognos 11.0.12 Upgrade - Upgrade to the current institutional reporting system for ERP, COGNOS to the latest supported version. |
| eTranscript Implementation | eTranscripts is a secure interface between a client's transcript vendor and the Ellucian administrative system that the client institution uses. It facilitates real-time movement of transcript ordering data into the Ellucian system (including student identification and holds notifications), eliminates manual intervention, provides end-to-end efficiencies and ensures consistency throughout the process. |
| Laundry WIFI | SHU has selected the laundry vendor Fowler. Their application called CyclePay that needs to connect the laundry machines to WIFI and to integrate into the SHU mobile app. |
| Microsoft Enterprise Mobility Suite | This will provide incoming freshmen with the ability to have their laptops delivered at home and be able to configure them off campus. |
| Wireless Upgrade | 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. |

An Overview of IT Operating Budget

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

**Annual Operating Budget:**                                          **$23,198,000**

    Salaries and Wages:                                     $11,467,000
    General Operating Budget                                 $11,731,000

**Full Time Employees:**                                                     **100**
  **Employee Breakdown by Functional Area:**
    Office of CIO and Project Management                          7
    IT Security                                                  4
    University IT Services Administration                        4
      Systems Support                                        9
      Network and Communications Support                     7
      Application Services & Development                      7
      Production Control                                     5
    Teaching, Learning, Technology Center                       29
    PC Support Services                                         18
    Technology IHS Campus                                       10

**Summary FY'20 Major Operating Expenses                    Amount ($000)**
**Description**

## Computer Operations

| | |
|---|---:|
| Amazon Web Services (Cloud-based Data Center) | 812 |
| Banner Software Maintenance | 723 |
| Microsoft Campus Agreement/Premier Support Service | 535 |
| Telephone Service – Local and Long Distance | 347 |
| Internet Service (Level 3) | 294 |
| Oracle Software Maintenance | 213 |
| Security Log Analysis Software and Health Check (Novacoast/Splunk) | 187 |
| Cisco System Computer Hardware Maintenance | 154 |
| Information Security Endpoint Software | 148 |
| SAAS compliance third party management | 125 |
| Slate Admission Software (Technolutions) | 110 |
| OCLC (Library Catalog) | 99 |
| Active Directory Single Sign-On (OKTA) | 98 |
| Red Hat SW Maintenance | 80 |
| Computer Hardware Maintenance | 63 |
| CommonSpot SW for web site | 61 |

## Teaching, Learning, and Technology Center

| | |
|---|---:|
| Lease Payments for Laptop Computers | 3,537 |
| Blackboard Software | 487 |
| Contract Help Desk and Service Now Licensing | 203 |
| Faculty Laptops | 177 |
| Audio-visual Equipment in Labs and Classrooms | 176 |
| Blackboard Help Desk (NJEdge Vale) | 119 |
| Printer Maintenance - Labs and Library | 70 |
| Linked-In Learning | 49 |
| Faculty Support Initiatives (CDI, TLTC Faculty) | 43 |
| Temp staffing (Laptop distribution, beginning of Fall semester) | 30 |

## IHS Campus

| | |
|---|---:|
| Internet and Phone Service (Century Link) | 257 |
| Voice Maintenance (Flex Spark) | 70 |
| Cisco System Computer Hardware Maintenance | 59 |
| B Line Medical Maintenance | 50 |
| Firewall Palo Alto Maintenance (SHI) | 43 |
| Printer Maintenance - Labs and Library | 38 |
| Audio-visual Equipment in Labs and Classrooms | 32 |

IT by the Numbers

## Laptop and Desktop Support

|  | 15-16 | 16-17 | 17-18 | 18-19 | 19-20 |
|---|---|---|---|---|---|
| Internal Service Desk Calls* | 10,843 | 9,997 | 6,486 | 3,662 | 5,041 |
| External Service Desk Calls* | 10,682 | 7,912 | 7,872 | 9,419 | 6,568 |
| Field Support Visits | 472 | 847 | 367 | 650 | 378 |
| Laptop Repairs** | 490 | 643 | 590 | 3,781 | 7,447 |
| Remote Support Sessions | 607 | 278 | 163 | 65 | 55 |
| ServiceDesk User Satisfaction |  |  |  | 92.0% | 93.1% |

* 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

|  | 15-16 | 16-17 | 17-18 | 18-19 | 19-20 |
|---|---|---|---|---|---|
| Faculty | 446 | 149 | 207 | 228 | 1,202 |
| Student | 7 | 31 | 20 | 84 | 39 |
| General | 235 | 236 | 111 | 231 | 759 |
| One-on-One Instruction | 119 | 98 | 99 | 52 | 100 |
| Special Group Training | 768 | 243 | 489 | 728 | 569 |

## Instructional Technology Support

|  | 17-18 | 18-19 | 19-20 |
|---|---|---|---|
| Lecture Capture Hours* | 5,798 | 31,522 | 20,492 |
| New Surveys (Qualtrics) | 1,334 | 1,046 | 925 |
| Survey Responses (Qualtrics) | 30,224 | 30,374 | 27,123 |

*reflects the number hours that recordings were viewed

## Media Services Equipment and Classroom Support

|  | 16-17 | 17-18 | 18-19 | 19-20 |
|---|---|---|---|---|
| Equipment Deliveries | 6,095 | 2,406 | 3,666 | 2,270 |
| Equipment Loans | (combined with above) | 1,446 | 610 | 593 |
| Classroom Support | 908 | 209 | 528 | 884 |
| Classroom Equipment Maintenance | (combined with above) | 992 | 828 | 778 |

## IT Managed Rooms and Labs

|  | 17-18 | 18-19 | 19-20 |
|---|---|---|---|
| IT Managed Rooms (Hours) | 3,722 | 4,155 | 2,806 |
| Labs (Events) | 13,012 | 990 | 364 |
| Labs (Open Lab) | 7,582 | 31,841 | 20,412 |
| Mobile Carts (Events) | 136 | 337 | 204 |

**Information Security**

| | 19-20 |
|---|---|
| Security Incidents Remediated | 741 |
| Mean Time to Remediate (hours) | 140 |
| Duo Two-Factor Authentications | 521,844 |

Organizational Chart

**Stephen G. Landry**
**Chief Information Officer**

- **Project Management**
  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.

**Matthew Stevenson**
**Executive Director University IT Services**

- **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 Architect
  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**