



Department of
Information
Technology

Seton Hall University

*2020-21
Annual Report*



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An Overview of Information Technology

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

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

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

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 charged a smaller subcommittee to investigate the ways to change the program while still meeting the goals of the program and keeping costs the same or lower. The subcommittee investigated the effects of eliminating the two year refresh, allowing choice with greater fees and the feasibility of an opt-in option for the program.

In collaboration with the Student Government Association, Faculty Senate and Division of Finance, the Department of Information Technology has discontinued the laptop refresh and associated fee after students' sophomore years. These changes to the mobile computing program are designed to maintain the program's high quality and service while reducing costs to students. In lieu of an upgrade, the university extended the warranty period for all Lenovo laptops through the senior year for all full-time undergraduate students at no additional cost.

By eliminating the refresh and mobile computing fee, students will save more than \$500 annually in their junior and senior years. Rising sophomores will continue to pay the mobile computing fee for one more year and keep their laptop at the end of their sophomore year. Rising juniors will own their laptop immediately and will realize the fee savings this year.

Teaching, Learning, and Technology Center

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

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

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

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

Online/Hybrid Course Development

The Teaching, Learning, and Technology Center (TLTC) supports all online course development. 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

Mathematics and Computer Science Program

Course Completed:

- DASC 8212 Deep Learning - Mathematics and Computer Science program - Sophie Clachar
- DASC 9413 MS Thesis - MS in Data Science - Manfred Minimair

Course under development:

- MATH 7211 Network Analysis - Data Science - John Saccoman

Experimental Psychology

Course completed:

- PSYC7214 Cognition for Visualization - Kelly Goedert

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 completed:

- PSMA 6003 Public Policy Analysis - Patrick Fisher
- PSMA 6005 Financial Management and Budgeting - Jason Gabloff
- PSMA 7127 Public Sector Leadership - Matthew Hale
- PSMA 7124 Public Policy Analysis (Wiley) - Jason Gabloff

The Department of Political Science currently has no undergraduate courses that are offered online; all courses currently offered are extensively face-to-face. The Department feels that an online course would provide students with schedule flexibility that would not only enhance the undergraduate experience in political science at Seton Hall but also make it easier for students to graduate in the program.

Course completed:

- POLS 1211 US Politics - Patrick Fisher

The College of Arts and Sciences is developing key courses to accommodate student schedules and to increase enrollment and student retention.

Course under development:

- HIST 1301 US History I – CAS - Sara Fieldston

Religion

Course completed:

RELS 2520 Catholic Social Teaching - Dr. KC Choi and Dr. Michael Maloney

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.

Course under development:

- BFIN 7215 Capital and Money Markets - Mark Schild

Course completed:

- BITM 7127 Enterprise Wide Account Information Systems II - Benjamin Pearl
- BSAN 7021 Predictive Analytics - Viswa Viswanathan
- BFIN 7216 International Finance - MA in Business Administration - William Byrne
- BQUA 7813 Management Science - Business Analytics Program - Penina Orenstein

- BSAN 7051 Big Data Analytics - Business Analytics Program - Joseph Wilck
- BITM 3727 Advanced Software Business Tools - David Rosenthal
- BMBA 9459 Economics for Managers - Edner Bataille

College of Communication and the Arts

The College is developing online courses that will meet the needs of the students in the online undergraduate and graduate Music programs to provide more enrollment opportunities and program offerings.

Course completed:

- MUHI 1102 Music Civilization - Jason Tramm

School of Diplomacy

MA in Diplomacy and International Relations; Executive and Online MS. That gender should have a central place in international relations is finally beginning to take hold in the discipline. This course aims to provide students with an introduction to feminist epistemologies and methods, as well as to how postcolonial and indigenous theories intersect with feminism. It is one of three courses being developed by the School of Diplomacy and International Relations to address students' needs for more courses that reflect diversity and inclusion.

Course under development:

- DIPL XXXX MA in Diplomacy and International Relations; Executive and Online MS - Fredline M'Cormack-Hale

Course completed:

- DIPL 6001 Politics of Culture and Ethnic Pluralism - Margarita Balmaceda
- DIPL 6115 Cross Cultural Negotiation and Conflict Management - Zheng Wang

The School of Diplomacy is planning to launch a MS degree to extend its offerings to more students. The program will use courses from the previously developed Post-Conflict State Reconstruction and Sustainability Graduate Certificate Program and will add an additional 15 credits which will be developed over the course of the next few semesters.

Course completed:

- DIPL 6181 Statecraft: Designing Foreign Policy - Ann Marie Murphy

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 completed:

- CPSY 6316 Group Counseling - Matthew Graziano
- EDST 6441 Serving Diverse Learners 1: Foundations, Sp.Ed. Laws, Impact on Schools and Families - Grace May and Lauren McFadden (4 week Summer course)
- ELMP 7761 Management Financial Fiscal Affairs in Administration - Jan Furman

Course development cancelled:

- EDST 2501 Philosophy of Education and Curriculum - Edmund Adjapong

College of Nursing

- To align with Seton Hall University Online/Hybrid Course policy by adopting nationally recognized standards of course design excellence and processes to support their successful facilitation. The Primary Care Pediatric Nurse Practitioner program has been preparing nurses to provide a range of healthcare services that promote wellness, prevent illness and manage health and illness needs of children from birth to early adulthood.

Courses completed:

- NURS 7334 Graduate Nursing Practicum I: Younger Years - M.S.N. Primary Care Pediatric Nurse Practitioner Curriculum - Diane McClure
- NURS 7357 Graduate Nursing Practicum III: Younger Years - M.S.N. Primary Care Pediatric Nurse Practitioner Curriculum - M.S.N. Primary Care Pediatric Nurse Practitioner Curriculum - Diane McClure

Immaculate Conception Seminary School of Theology

The School of Theology is offering courses online to answer the needs of students wanting to take courses over the summer.

Course completed:

- STHO 6203 Christology - Jeffrey Morrow
- THEO 1102 The Bible: Word of God, Book of the Church - Jeffrey Morrow
- CETH 6401 Canon Law for Deacons - Msgr. Mark Condon
- JCST 6001 Christian Jew Encounters - Rev. Lawrence Frizzell/Laura Smith
- STHO 6728 Theology of the Spiritual Life - Fr. Dan Kirk

Continuing Education and Professional Services

- Market Research Certificate Courses Redesign - This project involves redesigning two existing Market Research courses to be offered through CEPS in collaboration with the Market Research Center and Stillman School of Business. The redesign involves updating textual content and multimedia, as well as some of the organization of the course content.

Online Course Development - Summer 2020

The Office of the Provost added that courses running in June, July and August would be online and were to meet the Quality Matters Rubric as stated in the Online/Hybrid Course Policy. There were over 117 courses which needed to be moved online.

To prepare for this undertaking, the Instructional Design Team leveraged templates to assist faculty with building their course to meet these standards, workshops were also tailored to meet this objective. Because of the volume of courses needing to be moved online, we deviated from our process. Our process which has proven successful in courses meeting Quality Matters would now put the development (building in Blackboard) with faculty.

The Instructional Design Team provided the following to support this initiative:

- workshops around Quality Matters
- adding content to Blackboard
- ADA compliance of materials
- engagement strategies

In addition, we provided faculty with a Blackboard template which met twelve of the QM standards and a framework which aligned to QM, and a syllabus template which also met Quality Matters standards. If all the content which was requested via the templates were added, the course would be 82 of the 85 minimum points to meet Quality Matters Standards. The courses were in various states of completion, most courses needed intervention from the Instructional Design Team to ensure materials met ADA compliance and Quality Matters.

Assessment

College of Education Assessment System – Via

The College of Education will utilize Via, an electronic data and assessment system, as the platform for students to submit key assignments for faculty to assess against national and program specific standards. Via will enable the College of Education use the data collected to meet external reporting requirements for: 1) its national accreditation report, 2) its specialty professional associations, 3) its report to the NJ Department of Education and 3) monitoring for programmatic improvement. Via is also an approved platform provider for students to submit their edTPA portfolio to Pearson, as part of the NJ requirements for state certification. The project work was completed and data was successfully loaded from Banner. Additional work will be done to automate processes.

Summer and Fall 2020 data have been loaded manually with the plan to automate this process. CEHS successfully ran a small pilot over the summer and is expanding usage throughout the Fall semester. Students have been able to upload their assessments via the Blackboard LTI Link. Faculty access the system through the chicklet in PirateNet.

Engagement and Retention Projects

Seton Hall Pledge Video

The Digital Media team produced a video detailing the Seton Hall Pledge. The video illustrates how members of the university community can keep themselves, and others, safe and secure when returning to campus. <https://youtu.be/QSAY81AWlj0>



HyFlex Classroom Walk-thru Videos

In preparation for the Fall semester, our team created videos showing the workflow for both a HyFlex classroom and a Teams HyFlex classroom. These videos were designed with the novel faculty member in mind.



- Teams HyFlex <https://youtu.be/JB4g87zYipQ>
- HyFlex <https://youtu.be/JB4g87zYipQ>

#CampusClear mobile and web application

In order to return to campus in the fall, our team was tasked with identifying and delivering an application for Covid-19 symptom tracking. Working with staff from Health Services, Human Resources and Student Services we chose to pilot and adopt the application built by our current vendor for AI-based chatbots, Ivy.ai. Their application provides both a customizable mobile and web interface allowing for any member of the campus community the ability to report their symptoms on a daily basis. Furthermore, the gathered data can be reviewed and managed by appropriate campus personal in real time. Our team worked directly with Ivy.ai to test and configure the application. We then built graphics and customized functionality, reports and system alerts. We continue to monitor and maintain the application while applying updates and reviewing new functionality as it's released by the vendor.



Video Walk-thru for Chrome River Software

The Procurement Department is launching new software in the coming year to more easily submit for out-of-pocket expenses. To this end, our team created a series for walk-thru videos explaining the process in Chrome River, software new to the University in 2020.

<https://youtu.be/ElyzFfEi-1Y>

Campus Inclusion and Community video

Working with Majid Whitney, AVP and Senior Associate Dean of Campus Inclusion and Community, our team help produce a video detailing campus inclusion and community on campus at Seton Hall University, as well as the cores of servant leadership. <https://youtu.be/MRDwAsoucsk>



Career Center Highlight Videos

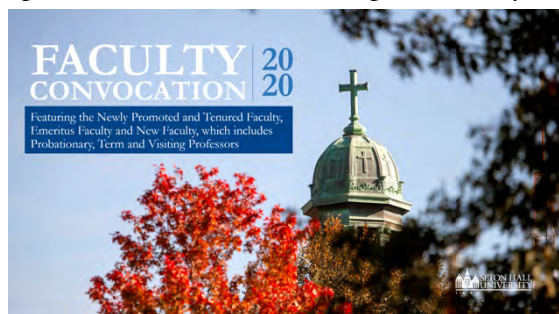
In an effort to more effectively communicate services offered by the Career Center, we created a series of videos highlighting some of the online tools offered on their website.



- Candid Career: <https://youtu.be/HRPKOWfoyhE>
- Big Interview: <https://youtu.be/dLBx6T64eQM>
- Career Shift: <https://youtu.be/A0BLcs3gfNU>
- Virtual Career Fair: <https://youtu.be/47SdTxy6FM>

Faculty Convocation 2020

Teams Live event, with pre-recorded and live video produced by the TLTC.



Market Research Center Promo Video

Highlight video for the market research center, for entry into the University Economic Development Association annual conference/contest.

https://studentshu-my.sharepoint.com/:v/g/person/petruzch_shu_edu/ERZxHeVzcXpBhCAsIvD-8xMBPZ5ZDm43MRvIMuSSZVTs2A?e=63UGsS

Science Lab Videos

At the request of Dr. Chintha Ranasinghe from the Department of Biological Sciences, the Digital Media team produced 3 videos within the McNulty science labs. These in-depth, practical demonstration videos detailed experiments dealing with Heart Dissection, Blood Testing, and the Cardiovascular Effects of Exercise.



- Cardiovascular Effects of Exercise: <https://vimeo.com/setonhall/review/460219867/7f12befb8b>
- Heart Dissection: <https://vimeo.com/setonhall/review/459490852/78435ccfc8>
- Blood Test: <https://vimeo.com/setonhall/review/459490604/576681a492>

Diaconal Formation 10th Anniversary Virtual Event

The Center for Diaconal Formation was planning for a live event to celebrate their 10th anniversary in the fall of 2020. Unfortunately, this was not to be, so they reached out to staff at the TLT Center to create a virtual event. This event featuring a 50-minute presentation via Teams Live Event, included live and prerecorded segments produced by the Digital Media team. Notable segments included messages from Deacons and their families, musical interludes, a message of support from Cardinal Tobin and a keynote speech from Deacon and former NBA referee Steve Javie.

<https://www.youtube.com/watch?v=wxgJ9RdBfCI>



Video Conference Etiquette

In our new video conference culture, we've been approached by several campus groups to create a video detailing proper online etiquette. To meet this urgent need, our team created an informational presentation for hosting or participating in a video conference.



Virtual 5k Promo Video for Seton Hall Week

To promote and advertise the virtual 5k event being held during Seton Hall Week, our team created a video.

<https://youtu.be/GNLXQnH41fY>



"Together at Home" Christmas Live Event

The Digital Media team streamed the live event for the campus community entitled "Together at Home" to celebrate the Christmas season. The video segments, created by several groups on campus and an outside vendor, featured a message from President Nyre, several musical acts, a narrative thread from Student Services and several individual messages from students, staff and faculty.

https://youtu.be/_ngivrlUytM



Employee Christmas Celebration

At the request of the Office of the President, our team produce the live employee Christmas celebration, via Microsoft teams. The production Included graphic design and pre-recorded videos to be played throughout and featured a live give-away of prizes for registered attendees. One of the highlights was a reading of “Twas the Night before Christmas” with a Seton Hall twist.

<https://youtu.be/KzoPKAMju0M>

Christmas Eve Mass: Live Stream

For the first time in our history, a request was made by Campus Ministry to live-stream Christmas Eve Mass from the Chapel of the Immaculate Conception. Our team was honored to work with all involved to bring the event to the internet.

<https://youtu.be/yNM9yeduuag>

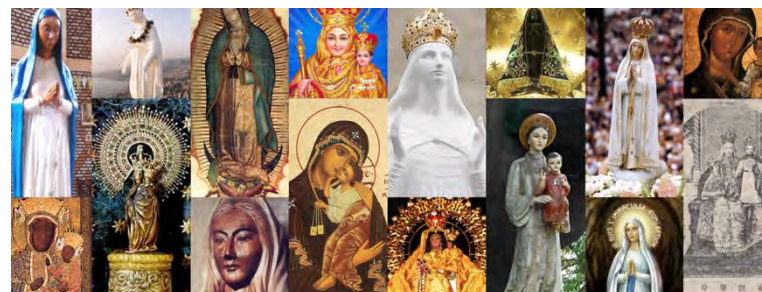
End of Semester/Thanksgiving Messaging

The team produced an End of Semester and Happy Thanksgiving message from Dr. Nyre and the executive cabinet. <https://youtu.be/Ck-i9uUn0f4>



Advent Series Videos

Having utilized the services of the TLT Center to film a few segments for Advent in the past, The Immaculate Conception Seminary School of Theology reached out again with a more ambitious project. They wanted to film a video for each of the 25 days. These videos, scheduled for release on each day of the season, served as a means for the school to connect with those of the Catholic faith and the larger community in general and was a great success. The series was titled "**Journeying with Our 'Mother of Advent' Throughout the World.**" and thematically focused on the titles of Mary. The ultimate goal was to help one to spiritually journey through the Advent season as we celebrate diverse cultures together. <https://www.shu.edu/theology/immaculate-conception-seminary-advent-video-reflection-series.cfm>



Journeying with Our "Mother of Advent" throughout the World
Immaculate Conception Seminary Advent 2020 Reflection Series

<https://youtu.be/MM6FUdWRgo4>

NJ Cybersecurity Conference

Working with members of the larger Department of Information Technology, the Digital Media team created graphics and produced the individual sessions for the 2020 NJ Cybersecurity Conference. The conference, held in October of 2020, featured distinguished speakers from around the region including both state and federal government.

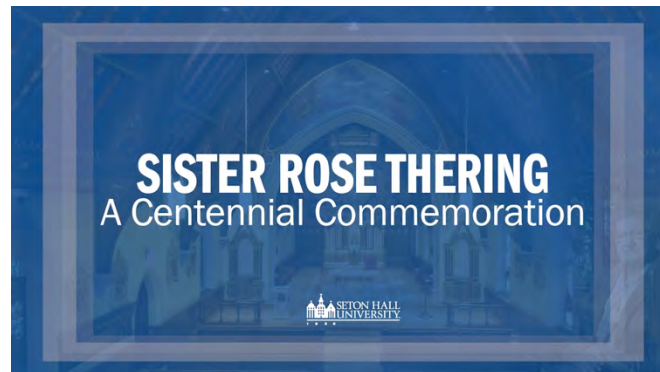
<https://www.shu.edu/new-jersey-cybersecurity-virtual-conference.cfm>



Sister Rose Thering: A Centennial Commemoration

In an effort to share this historic event with the larger community, the Sister Rose Thering Fund for Education in Jewish-Christian Studies (SRTF) enlisted the staff of the TLT Center to produce a live event. The Event featured a large amount of video and graphic design work as it featured several renowned speakers from across the country.

<https://youtu.be/J0kFriaI9nI>



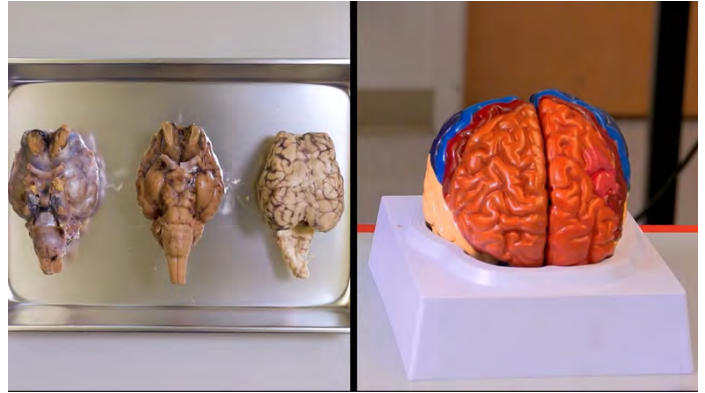
Market Research Center Promo Video

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Anatomy Lab Videos

After utilizing our services to produce a number of videos for the fall semester, Dr. Chinth Ranasinghe from the Department of Biological Sciences again enlisted the Digital Media team to produce 10 videos within the McNulty science labs for students in the spring. The resulting practical experience videos detailed dissection of the brain and the eye, digestive enzymes and urine analysis demonstrations, as well as videos on EEG activity and the knee reflex.



Brain Dissection

- Part 1 <https://youtu.be/fDMNo-DmSLY>
- Part 2 <https://youtu.be/hAjOkPsHFHU>
- Part 3 <https://youtu.be/BrPR6yCLQDU>
- Part 4 <https://youtu.be/zR9-L0XVBNw>
- Part 5 <https://youtu.be/toFY2sa9xbo>

Digestive Enzymes Demonstration

<https://youtu.be/KgfpL3DMBUE>

EEG Activity

<https://youtu.be/uABu8y8QyUY>

Urine Analysis Demonstration

<https://youtu.be/kILw2EofVkJ>

Eye Dissection

<https://youtu.be/RYq7fpgyzE0>

Knee Reflex

<https://youtu.be/c5EcAIHcA48>

REBT series, led by Dr Joffe Ellis

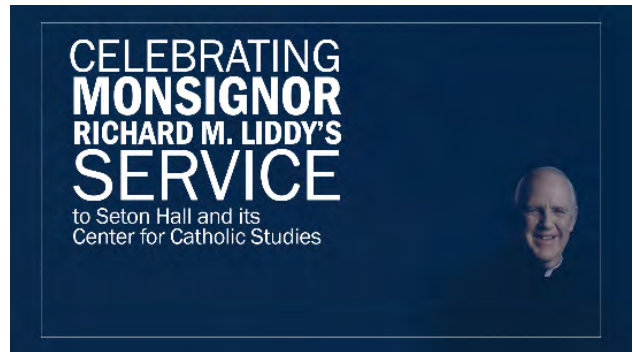
Working with Dr. Andy Simon from the Department of Psychology, our team produced the live Rational Emotive Behavior Therapy (REBT) series featuring Dr. Joffe-Ellis from Columbia University. The series provided many practical examples and much discussion around REBT which has provided the foundation of modern cognitive therapies and uses an action-oriented approach to manage cognitive, emotional and behavioral disturbances.

- Dr. Debbie Joffe Ellis: REBT for Individuals, Couples, Children and Groups
<https://youtu.be/D06IkNPtcn8>
- Dr. Debbie Joffe Ellis: Pivotal Aspects of REBT Therapy Sessions
<https://youtu.be/mKLtQHT7QOU>
- Dr. Debbie Joffe Ellis: The History, Development and Unique Elements of REBT
<https://youtu.be/FeJS0t8n10E>

- Dr Debbie Joffe Ellis: The Tools and Techniques of REBT
<https://youtu.be/t7-dgBJr8n4>

Celebrating Monsignor Liddy Live Event

In an effort to offer a remote celebration upon the retirement of Monsignor Richard Liddy, our team produced a live event which included extensive pre-recorded video and graphic design work. <https://youtu.be/AeXRJD6qghI>



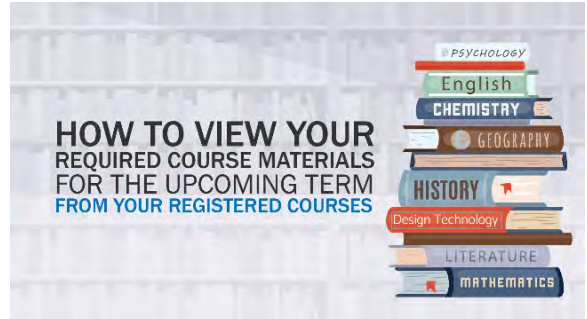
Market Research Center Promo Video

The Digital Media team worked with Adam Warner and the staff of the Market Research Center to produce a promo video which was entered in competition with UEDA (<https://universityeda.org/>). The resulting video and the work of the Market Research Center team won the Judges award at the competition

https://www.youtube.com/watch?t=5903&v=4uI3YHvnQ2g&feature=youtu.be&ab_channel=UniversityEDA

Bookstore Tutorials – Purchasing and Finding Course Materials

Needing to explain a complicated and detailed process to a remote audience, the campus bookstore reached out to our team to create video tutorials on how to find course materials and books using Banner and the bookstore website.



Using the Bookstore Website

<https://www.youtube.com/watch?v=LJUyf9OWMFo>

Finding Course Materials for Registered Courses

<https://www.youtube.com/watch?v=UiA2hbtdGvg>

Finding Course Materials With the Public Catalog

<https://www.youtube.com/watch?v=9fvisHaj9Hc>

Career Center International Student Panel

Our team did post-production for a live event run by the Career Center.

https://www.youtube.com/watch?v=7AroEQjLc0Y&ab_channel=SetonHallUniversity

High School Pirates Pitch 2020

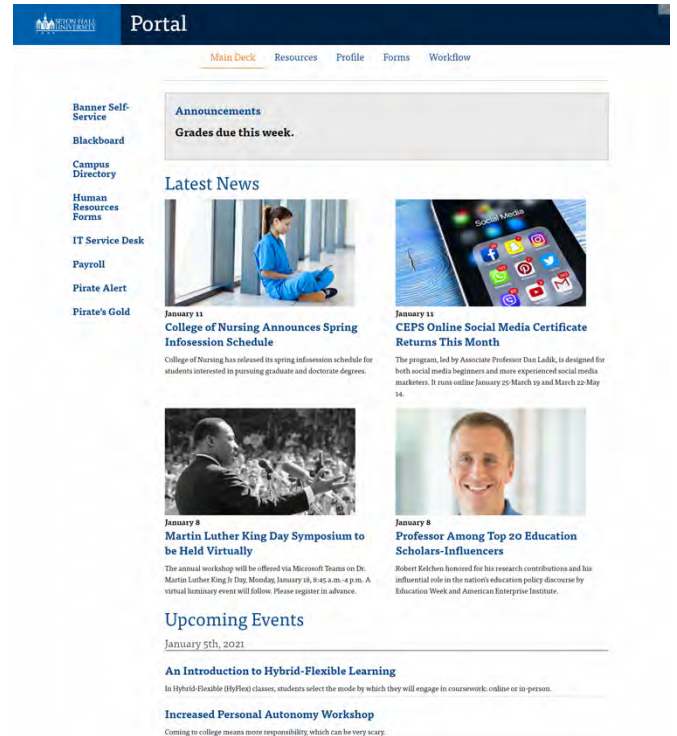
Working with Susan Scherreik, our team produced a live event for the 2020 Pirates Pitch competition for high school students. The event featured 11 innovative student entrepreneurs competing for \$50,000 in prizes. The young entrepreneurs pitched their start-up concepts or fledgling businesses in a Shark Tank-style competition hosted by the Stillman School of Business' Center for Entrepreneurial Studies.

- <https://www.shu.edu/undergraduate-admissions/pirates-pitch-competition.cfm>
- <https://youtu.be/pvcAlltq6ZQ>

PirateNet Portal Replacement

The platform hosting the University's Portal is no longer supported by the vendor and must be replaced. To this end, the Web and Digital Media team undertook a project to transfer the content from the soon to be decommissioned platform into the current content management system housing the University's website. The new Portal will continue to serve the needs of Students, Staff and Faculty from all three campuses as well as house information for New Student Orientation as incoming students go through their processes to become Pirates.

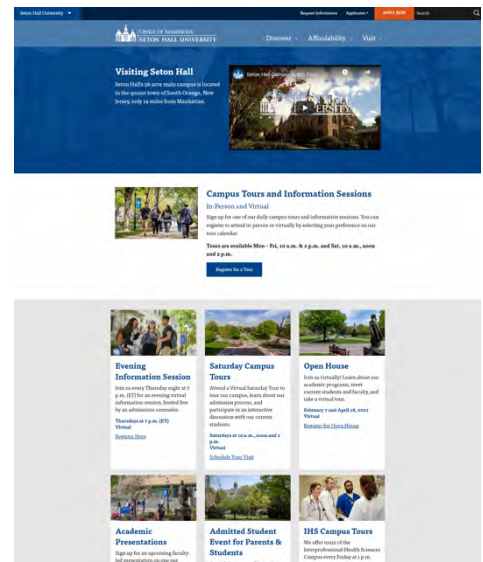
Through the term, the team worked on a modern, responsive design to replace the old, set up the Single Sign-On functionality and migrated existing content for all user groups. This new Portal is currently functional in both Production and Development environments and is in the review phase with an eye towards a February 2021 launch.



Visiting Page Redesign

The Web and Digital Media teams worked to redesign the Visiting page for Undergraduate Admissions. The site features a prominent grid layout to easily connect potential students with the information they need to both physically and/or virtually visit the Seton Hall campus.

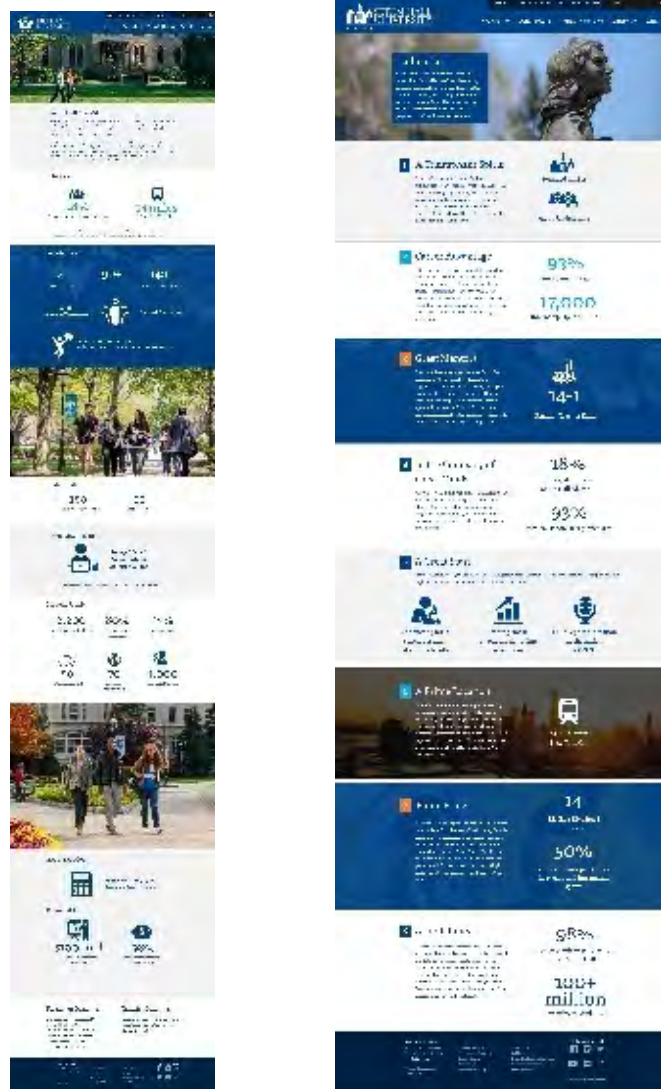
<https://www.shu.edu/undergraduate-admissions/visiting.cfm>



Redesign the Hallmarks and About pages

In an effort to bring these prominent pages in line with their printed counterparts, our team worked to create a more aesthetically pleasing layout. The results of this effort are seen in the images below:

<https://www.shu.edu/technology/classroom-information-index.cfm>



College of Education: OCEAR Web Site

Continuing work with the College of Education to transition from paper forms to electronic versions. During the term, our team built tools for managing diversity charts.

Also included was a new Experiences form. This was the paper coversheet for a physical file folder.

And is now a PDF form, which can be saved and stored into a student's computer file folder. We devised a way for PDF forms to be edited in place in Sharepoint, allowing the College's staff to work collaboratively on them.

Asian NPO

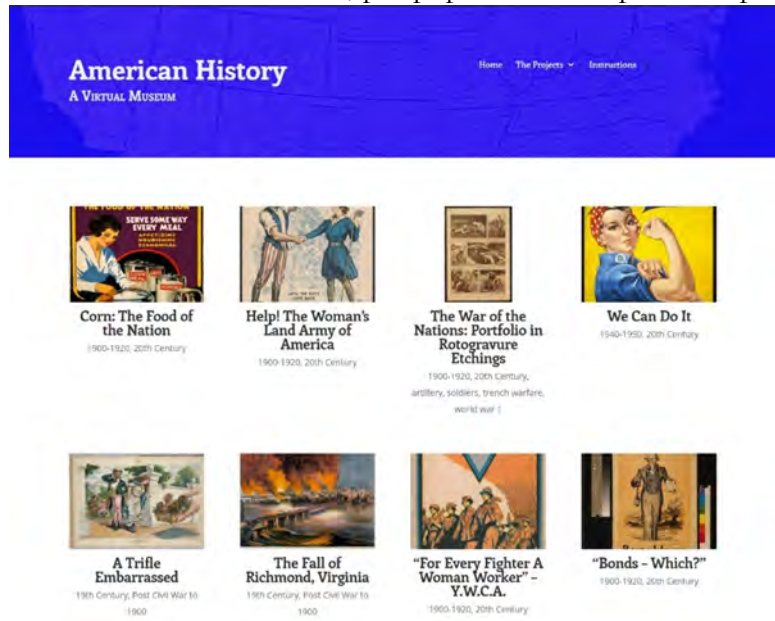
Meetings and discussions continue with Roseanne Mirabella and faculty from NCSU and Kean regarding a grant-based project to develop a multi-language version of the existing NPOs project (<http://academic.shu.edu/npo/>) covering Korea, Japan and other countries.

Learning Chinese

Preliminary investigations have begun into re-writing Prof Dong-Dong Chen's existing Java application in PHP/MySQL. This project, developed several years ago by TLT Center staff is no longer supportable and needs an overhaul and additional functionality to host new student projects.

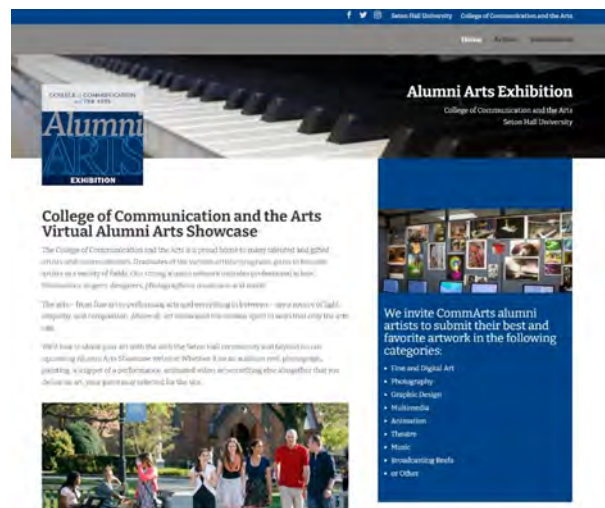
American History: A Virtual Museum (blogs.shu.edu/americanhistory).

In its second semester of use, the virtual museum holds 28 entries. Each semester requires setting up empty project shells for the students in the class, pre-populated with space for specific requirements.



Alumni Arts Showcase (blogs.shu.edu/alumniarts)

A virtual exhibit of fine and digital art, graphic design, book design, illustration, and photography, submitted by alumni of the College of Communication and the Arts. In its initial release 15 alums provided 16 works.



Intro to DH (<http://blogs.shu.edu/intro2dh>)

Now in its second year and launched with a new design. The blog now hosts 26 projects on subjects as diverse as Irish music, Seton Hall's Poetry in the Round series, local history, urban farming, data narratives, and Montessori schools in New Jersey.

Dr Martin Luther King Symposium

Working with the School of Continuing Education and Professional Studies, our team created and compiled several videos for presentation during the Dr. Martin Luther King Jr. Day Symposium. In addition, we produced the live events for the morning, afternoon, and evening sessions of the Symposium. This event was available to the entire community and was available to students as part of a 1-credit course.

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



Dr. Nyre Welcome 2021 Message

The Digital Media team filmed and produced the video welcome message from Dr. Nyre for the Spring 2021 semester opening. <https://www.youtube.com/watch?v=x-ccGAR3YC8>



Charter Day 2021 Live Event & Video Reading with Dermot Quinn

Charter Day celebrates the founding of Seton Hall in 1856 and the granting of our charter by the New Jersey State legislature in 1861. It is a special annual opportunity to reflect on our history and purpose, our Catholic identity and mission. To this end, the Digital Media team produced a video reading of the University's Charter by Prof Dermot Quinn



(<https://www.youtube.com/watch?v=8Fzom46dR6Q>). The team also produced and streamed the day's ceremonies as a live event for viewers who were unable to attend in person. This on-demand stream can be found at: <https://youtu.be/eXfXKRj1gqc>



PirateNet Video Tutorial

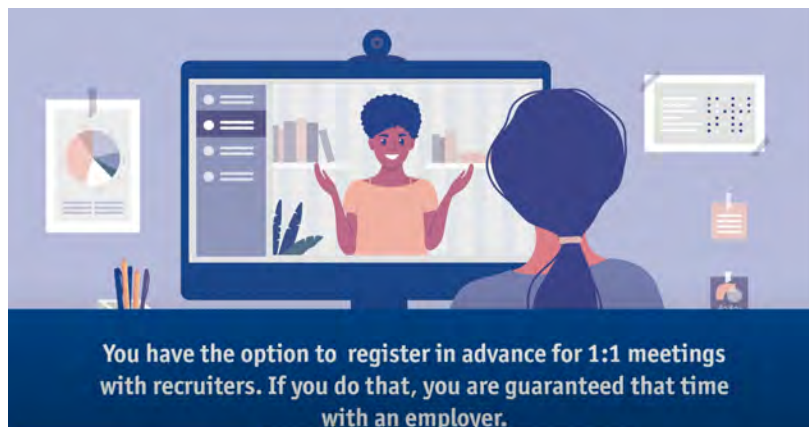
order to provide instruction for incoming students, the Office of Admissions asked our team to produce a video explaining the use and access of the PirateNet Portal. This video can be found at: <https://youtu.be/LkJjRffCnX4>

In



Virtual Career Fair Commercial

In an effort to promote awareness and attendance, our team worked with The Career Center to produce a video for the Virtual Career Fair held in the early Spring of 2021. <https://youtu.be/J9wjGELE2NE>



Employee Service Recognition Awards

Postponed in the 2020 spring semester, our team created several video elements and produced a live virtual event for the 2021 Employee Service Recognition Awards. The event, created by the Department of Human Resources recognizes those employees who have reached the 10-year milestone and higher in increments of 5 years – 10, 15, 20, 25, 30, etc.

Strategic Plan Landing Page Design

Rooted in Seton Hall's 165-year mission, our Strategic Plan fortifies our strengths and expresses our timeless values in innovative and exciting ways. To bring the Strategic Plan to the University Community, our team developed a landing page and website featuring several elements including the five equally essential commitments which form the foundation of our academic vision.

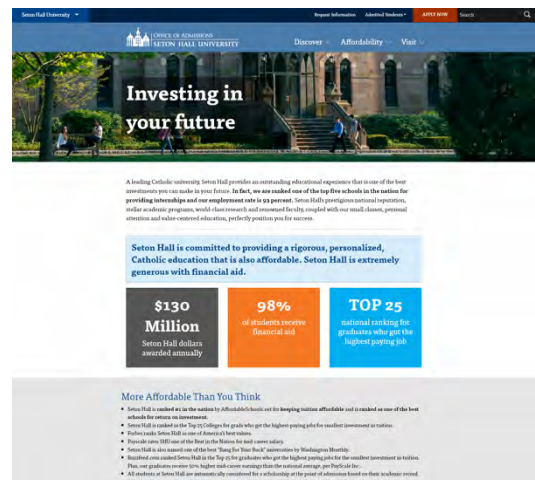
<https://www.shu.edu/strategic-plan/>



Affordability Web Page Design for Admissions

Seton Hall is committed to providing a rigorous, personalized, Catholic education that is also affordable. The Office of Admissions requested that our team build a website to clearly define this message and present it in an engaging and easily digestible manner for prospective students. The site can be found at:

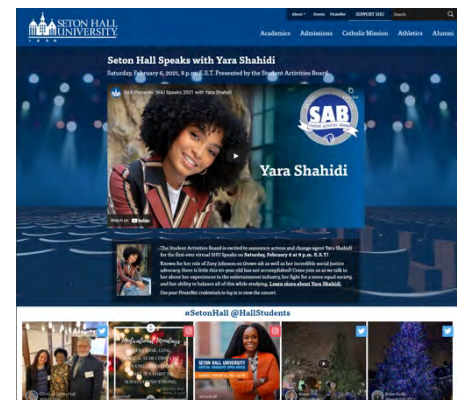
<https://www.shu.edu/undergraduate-admissions/affordability.cfm>



Seton Hall Speaks – Yara Shahidi

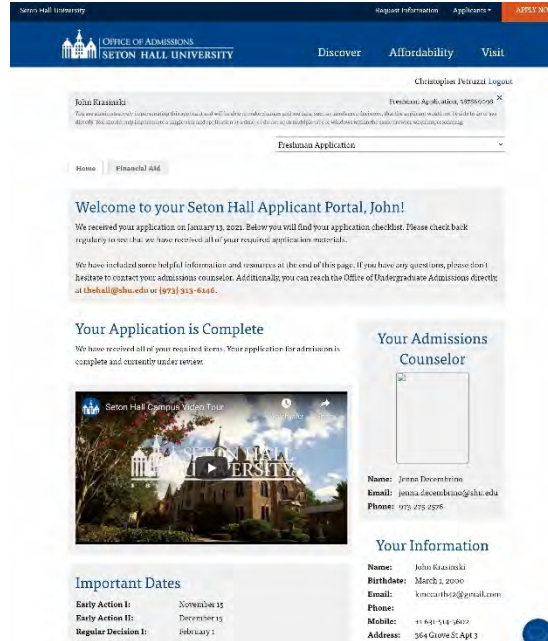
The Student Activities Board was proud to host their first-ever virtual SHU Speaks with actress and changemaker Yara Shahidi. This annual event, presented virtually by our team, brings together the campus community for an inspiring and intellectual conversation with the distinguished guest, Yara Shahidi.

<https://www.shu.edu/student-services/shu-speaks-yara-shahidi.cfm>



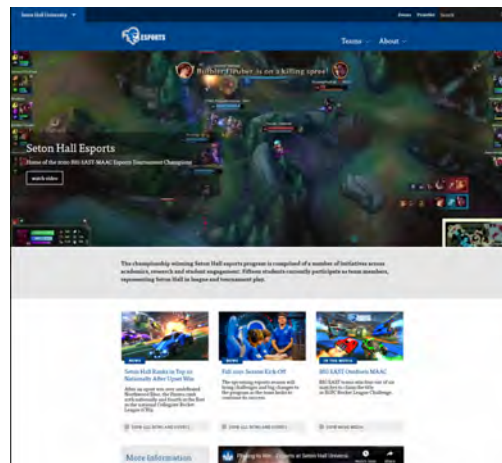
Slate Undergraduate Style Updates

Working with the Office of Admissions, our team updated styles and layouts in their Slate platform. This higher education focused Customer Relationship Management (CRM) platform is one of the primary tools for admissions and enrollment management here at Seton Hall University.



Esports Home Page Layout

Utilizing a new full width landing page template, our team created the virtual home for our eSports Teams. The site utilizes the a key message, full width video render for the top of the page and several other unique elements throughout the site.



Esports Presentation for Executive Cabinet

In addition to the website, our team of digital media professionals have been instrumental in creating graphic designs, videos and other digital media pieces for use to engage all levels of the community regarding the growing Esports movement here on campus. The graphic below is from the spring presentation to Executive Cabinet.



Get Vaccinated Digital Signage

In an effort to encourage all members of the University community to get vaccinated, our team created graphics as part of a campaign in use on digital signs all around campus. The simple but important message "Pirates, Get Vaccinated".



25th Annual Petersheim Academic Exposition

To mark this special anniversary, our team created a special trailer to honor Professor Matthew Petersheim and his legacy at Seton Hall University. This celebration of scholastic accomplishments is

of interest to the entire Seton Hall University community as it involves undergraduate and graduate students, faculty, administrators, and staff from among the various disciplines. In this video, current faculty reflected on their memories of Matthew Petersheim and talked about the early days of the exposition. Student presenters, both past and present, talked about their experiences and how it has helped to shape their lives. This video can be found at: <https://youtu.be/q6gyfn-oqiQ>



In addition to this video, our team also captured and posted dozens of hours of footage from the week which can be found in a custom playlist on the University's YouTube channel: <https://www.youtube.com/watch?v=Cbk58tsf7pY&list=PLppHCkhATHuWBipy87DnimSLC3UdB3NEy>

2021 Student Servant Leader Award Videos

The Servant Leader Award is intended to honor students who exemplify the ideals of service both on and off campus and in recognition of outstanding achievements in service to others. Our team was proud to once again work with Michelle Peterson from the Division of Volunteer Efforts and the many students, staff and faculty who nominated the honorees to create videos profiling the award winners at their 17th annual event.

<https://www.youtube.com/watch?v=F6P-lCnhj9k>



In addition to multimedia for the event itself, our team filmed and produced a special introductory piece with Dr. Nyre. https://youtu.be/NYIo_DsNvF0Í



Pirates Pitch

Pirates Pitch is the annual Seton Hall University Venture Fund Competition which encourages student teams to dream up an idea for a business or, if a student already has started a business, an idea to expand that fledgling business. The Digital Media Team worked with the Center of Innovation and Entrepreneurship to produce this year's virtual event. <https://www.youtube.com/watch?v=wQOSbbS2j4o>



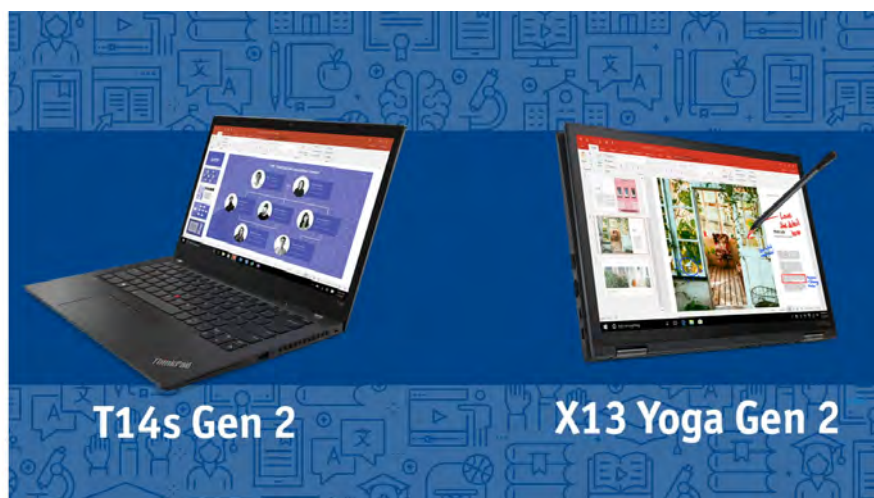
Dateline: South Orange

As part of the ongoing Sports Media Speaker Series, our team worked with the College of Communication and the Arts, to host a virtual event led by legendary ESPN broadcaster Bob Ley '76 and Professional-In-Residence B.J. Schecter. This virtual discussion concluded the speaker series for the Spring and the past 18 months during which Seton Hall students have gotten the opportunity to engage with the best and the brightest in the sports industry. The event recording can be found at: <https://youtu.be/G8i9jHN4cbI>



Mobile Computing – Laptop Selection & How to Set Up Your Seton Hall Laptop

The digital media team created several digital assets to introduce the lineup of laptops for the class of 2025 as well as guide them through the setup process to ensure their technology is configured to meet their educational needs. The selection video (<https://youtu.be/dVkh1ANO10>) details the laptop choices available to incoming students, and the forms they are required to complete.



The setup guide (<https://youtu.be/vLb7T7GFJMI>) explains what is available on the Lenovo laptops, helps the student set it up their technology, and gets them up and running with tips for the apps they

will use every day. A printable step-by-step guide is also available at <http://www.shu.edu/laptopsetup>

Educational Opportunity Program (EOP) Application Video

The Educational Opportunity Program combines the financial assistance from the Educational Opportunity Fund, along with academic support: tutoring, structured study, academic advisement, opportunity for community service, internships and counseling services throughout the college experience: undergraduate and graduate. Our team created a video (<https://youtu.be/CreWnAyN86Q>) to guide students through the steps to take to be considered as a candidate for the Educational Opportunity Program.



President Joseph E. Nyre Welcomes the Class of 2025

Viewed at orientation for the incoming freshman Class of 2025, our team filmed and produced a welcome message from for Dr. Nyre. https://youtu.be/BmQ1ZVNB_n4



Commencement Ceremonies 2021



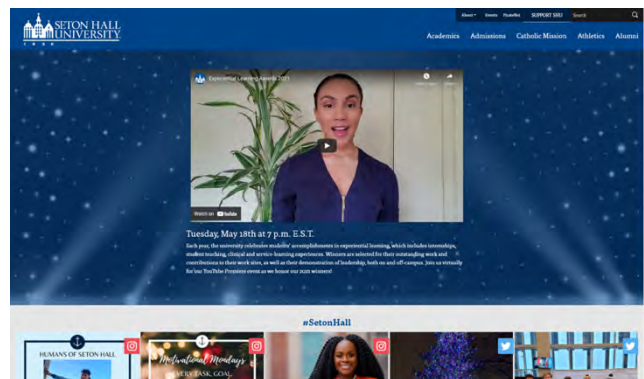
The six Commencement Ceremonies for the classes of 2020 & 2021 were produced and streamed live via the University's YouTube channel from both the Prudential Center and MetLife stadium

- <https://youtu.be/5ab5kjP-kZA>
- <https://youtu.be/wvinrbvr8AY>
- https://youtu.be/fGsUa_wDawo
- <https://youtu.be/xQ5Miy0MbOU>
- <https://youtu.be/n3SVDLZELRc>
- <https://youtu.be/v-0lpjhoF8g>

Experiential Learning Awards

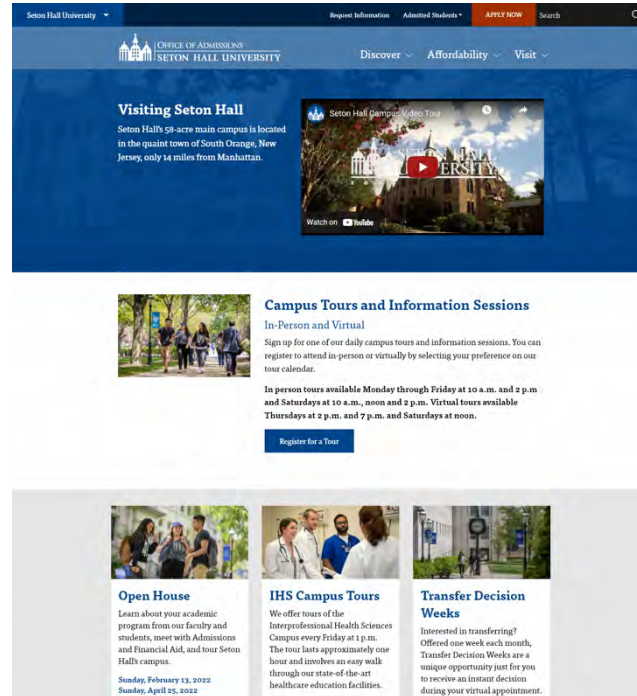
Each year, The Career Center celebrates students' accomplishments in experiential learning. These programs include internships, student teaching, clinical and service-learning experiences. Our graphic designers, web developers and video team worked with several groups to create a robust website and related videos for the event:

<https://www.shu.edu/career-center/experiential-learning-awards.cfm>



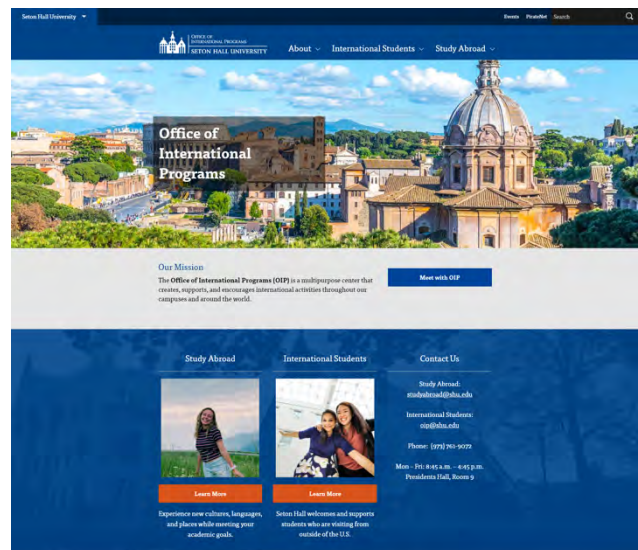
Visiting Page for Admissions

Working with the Office of Undergraduate Admissions, our team redesigned and updated the Visiting Seton Hall page. This redesign utilizes a new, full width landing page design and can be found at: <https://www.shu.edu/undergraduate-admissions/visiting.cfm>



Office of International Programs (OIP) Index/Landing Page Design

The Office of International Programs (OIP) is a multipurpose center that creates, supports, and encourages international activities throughout our campuses and around the world. Our team worked with their office to expand the use of our new, full width landing page design and incorporated a number of other traditional design elements to create this unique experience: <https://www.shu.edu/international-programs/>



Board of Regents Presentation Template

Our graphic designers created a presentation template for the Office of the Provost and the Board of Regents to use for their official presentations.



Microsoft Teams IP Phone - Informational Flyer

MICROSOFT TEAMS IP PHONE
QUICK START GUIDE | shu.edu/servicesdesk | servicedesk@shu | 973-275-2222

YOUR PHONE

Navigation Control, Start Key, Volume Keys, Mute Key, Transfer Key, Speakerphone Key, Touch Screen, Answer/Repeat Key, MMRN Key, VOICEMAIL Key, CONFERENCE Key, REDIAL Key, TRANSFER Key, HOLD Key, Microphone

TO SIGN IN WITH YOUR USERNAME AND PASSWORD

- After connecting to the network, touch the sign in button
- Enter your username (username@shu.edu)
- Enter your password (the same as your Platenet password)

TO CHANGE YOUR PRESENCE STATUS

Swipe right, touch the current presence status, then select the presence you require.

LOCK THE SCREEN

To protect confidential information when you'll be away or with a visitor, lock the phone's screen. You will still be able to receive phone calls, but not make them. To access the phone's lock setting, select and then **Settings > Device settings**.

MANAGE YOUR CALLS

Select **Calls** to access your **Favorites**. These may include speed dial contacts, your delegates, or people you support brought over from the Teams desktop. Select **Recent** for your call history and make calls with a single click. Want to add the caller as a **speed dial contact**? Select the caller and then the star. To remove a caller, simply select the star again to cancel the selection.

PARTICIPATE IN MEETINGS

Join a meeting from your calendar or a notification with a single click. Once inside, you'll be able to:

- Send and receive video, and turn off incoming video to reduce required bandwidth, if your hardware offers video capabilities.
- Start recording the meeting.
- Raise your virtual hand to indicate you want to contribute.
- Turn live captions on and off

Select **More options** to access the menu.

DELEGATE YOUR CALLS

You can select someone in Teams to be your delegate, permitted to receive and make calls on your behalf.

- On the **Calls** screen, select and then **Settings > Manage delegates**.
- Select the person and then set their permissions.

To set additional options such as call forwarding, go to **Settings > Calling**. Once you've been added as a delegate, you can make and receive calls on someone else's behalf. You can also monitor the other person's phone activity and take over calls that are on hold.

ADD CONTACTS AND GROUPS

Go to the **People** screen to view and connect with all your contacts, and to organize them into groups so that they're easier to find. Select to add a contact to the current group (above, the current group is **All Contacts**), or to create a new group. To switch the view from **All Contacts** to a different group, select next to **People** and select the group.

One sheet explaining how to use the new Teams phones around campus. Printed and distributed around campus, also made available online and communicated via email.

Fall 2020 Return to campus site

The Web and Digital Media teams worked to design and develop a new “return to campus” website, as a communication platform detailing all plans for staff and students. Elements for the site include a video for the University Restart Plan, the latest communications, a listing of topics, updates and frequently asked questions, information regarding HyFlex teaching and learning as well as services and resources related to the Covid-19 pandemic.

<https://www.shu.edu/health-intervention-communication/index.cfm>

Classroom Technology Directory

During the late summer of 2020, the need arose to develop a means for faculty and students to see the types of classroom they will be in for the fall semester. Our team built a custom application allowing users to filter on building, campus, and classroom or do a text-based search to find a room on any campus and review the technology available in each.

<https://www.shu.edu/technology/classroom-information-index.cfm>

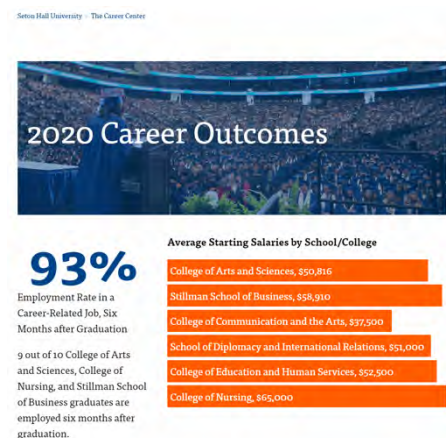
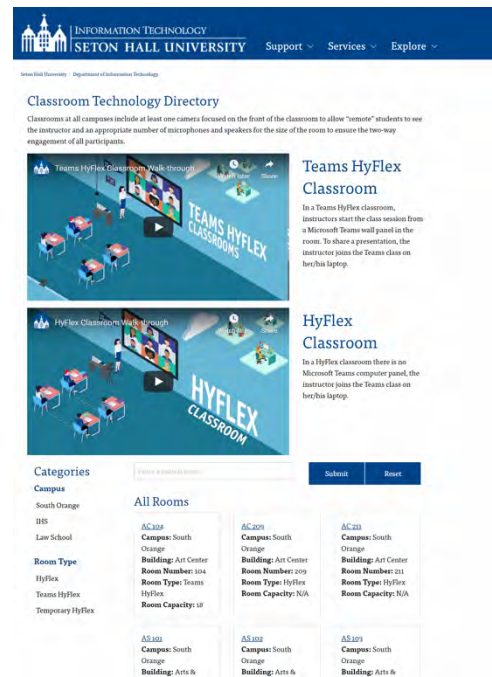
Hallmarks and About Redesign

At the request of the Executive Director for Web and Digital Communications, our team embarked on redesigning the Hallmarks and About pages on the University’s website. This redesign aims to be more aesthetically pleasing to all visitors and particularly to our prospective students.

2020 Career Outcomes

Design an Infographic styled page for the Career Center that details career outcomes statistics for the class of 2020.

<https://www.shu.edu/career-center/career-outcomes.cfm>



Blackboard Ultra Template and Branding Update

Update the style and branding of the blackboard templates for the new Blackboard Ultra layout.

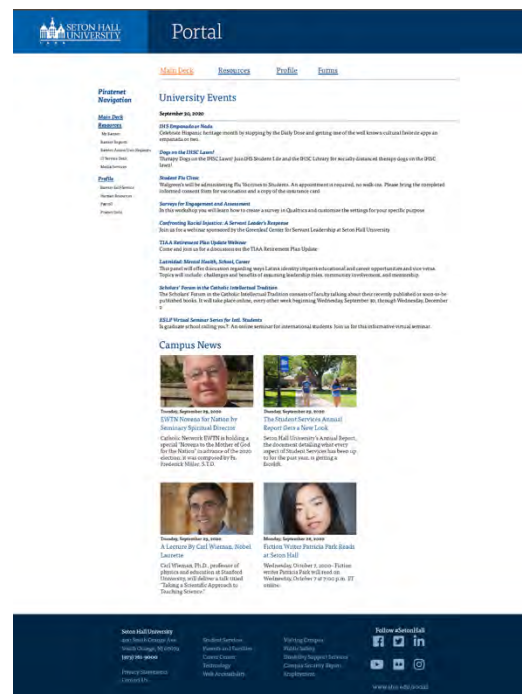
HyFlex Classroom Walkthrough Flyer

With new technology in so many classrooms across the campus, we were tasked with designing a simple and effective flyer for posting in the rooms. Our design details the steps for using the in-classroom technology within a HyFlex or Teams HyFlex room.



PirateNet Portal Replacement

New work has begun on replacing the University's internal portal currently hosted on the Luminis platform. This platform is outdated and very near it's end of life with no replacement on the horizon from the vendor. In light of this, the web and digital media team are embarking on plans to reproduce this portal within the CommonSpot web environment, currently housing the University's main website. While moving this portal from Luminis to CommonSpot, the team will make minor modifications to the look to bring it in line with the University's website and will develop with a responsive, mobile-friendly framework. Once the content has been successfully migrated to a stable environment, the team will begin a process of reviewing functionality with several groups of the community to add future functionality.



The Golden Age of Islam

The Golden Age of Islam site, located at www.blogs.shu.edu/middle-east-i, is a classroom project blog housing student research projects on Islamic scholars. Each project contains the narrative, plus a map showing the scholars travels and, where appropriate, images. The overall project includes a timeline and a global project map.

BANU MUSA TRIO AT THE HOUSE OF WISDOM

The brothers spent almost their entire lives studying in and around the House of Wisdom in Baghdad, with a few research trips in between. They travelled to the Byzantine empire in order to purchase Greek texts to translate, and also extended the work of these Greek texts in their own works. They would occasionally be commissioned by nobility to construct things or complete research projects throughout the Islamic World. Their most important contribution would be their "Book of Ingenious Devices" or tricks book on the field of automata. The years of their deaths are not known, and much of their work has been lost to time, yet their lives of study and research at the House of Wisdom have not been forgotten.



Net Cost Calculator

Working with Enrollment services, we've modified the online calculator to include extra questions as well as update the data that estimates financial aid rewards that could be granted to a student.

NJT Pass-through

Web app that authenticates community members and passes them through to New Jersey Transit's special discount program.

OKTA-fication and Reformatting

Ongoing project of applying Okta authentication and a consistent SHU template to the applicable tlc.shu.edu projects. Completed projects include:

- Echo 360 Forms
- Clubs and Organizations selector & Involvement Fair
- Libguides
- Law School Certificates

Accessibility (SiteImprove)

As of this writing the current overall score is 96/100. Our team is actively working on 21 outstanding A or AA errors and six warnings.

Analytics & Monitoring

The use of data analysis and web monitoring tools allows for a complete view of our applications and operating environment. Tools like Google Analytics and New Relic give us the ability to quickly find root causes and fix issues quickly, while minimizing load times, and maintaining industry-standard error rates and uptime.

Instructional Technology Projects

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 TLT Center rolled out Ultra Base Navigation over winter break. A communication plan has been established and began on October 22 and will continue into January. Blackboard Ultra Base was launched on December 27. The next steps are to establish a plan for moving to Ultra Courses. This will require an updated review of tools and features available for Ultra as well as evaluating the impact to faculty and students. Transitioning courses to the new format will require training and new approach to course design.

SAMHSA Grant

The United States Department of Health and Human Services, Substance Abuse and Mental Health Services Administration has awarded Seton Hall University's College of Nursing, School of Health and Medical Sciences, and the Hackensack Meridian School of Medicine at Seton Hall University an interprofessional training grant designed to expand patient access to medication-assisted treatment for opioid use disorder.

The proposal, entitled "Seton Hall University and Hackensack Meridian Health Interprofessional Medication-Assisted Treatment Training Program," was approved with a \$404,905 commitment over three years. Led by Project Directors Kathleen Neville from the College of Nursing, Laura Goshko from the School of Health and Medical Sciences, and Stanley R. Terlecky from the School of Medicine, the training initiative will assure that all adult-gerontology nurse-practitioner, physician assistant and physician students educated at the three schools will receive interprofessional didactic instruction and clinical supervision related to opioid use disorder and medication-assisted treatment plans, while also being certified with a Drug Addiction Treatment Act of 2000 (DATA) waiver. The latter will assure program graduates have the ability to prescribe and dispense buprenorphine, a partial opioid agonist of immense value in treating (opioid) addiction. Formal development of the training program will be initiated immediately.

As the first initiated and awarded grant to the three schools in the new Interprofessional Health Sciences campus in Nutley, the three project directors remain highly committed to their collaborative partnership to address the opioid epidemic in New Jersey.

SpringShare for Law School Blackboard Courses

Every course listed with the University Registrar has a Blackboard shell automatically created using a course template. This course template has predefined content, and tools. The course template contains a tool link to the main campus iteration of SpringShare for the use of LibGuides. This is an issue for

the Law School because they have their own iterations of SpringShare. In order to prevent confusion for the Law School Community and provide the appropriate academic resources, the link needs to be removed and a new link to the Law School LibGuides needs to be created in all of Law School courses in Blackboard.

Digital Media Production Projects

A grant was received for a project between the university and the local communities. The Digital Citizenry Project: "Reimagining a Framework for 21st Century Civic Engagement" is to foster conversations across four towns: East Orange, Orange, South Orange, and Maplewood about what it means to be an engaged citizen in the 21st century. The project will provide an opportunity for the towns to work cooperatively on a timely issue of mutual interest and using social media tools (i.e. Facebook, Twitter, Instagram) to broaden current conversations, engagement, and collaboration from the local/institutional/governmental level to an intra-town level. The goals are: evidence of improved communication both within and across towns, increased involvement of town members in town blogs and forums, new bonds between towns in the form of continued/new projects, communication outside the current civic/library/educational silos, and greater confidence using social media tools/platforms.

Faculty Development, Employee and Student Training

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 657 hours of course material with an average time per viewer of 56 minutes. A total of 2,581 courses and 15,684 videos were viewed and 467 courses were completed.

Tech Skills

The Tech Skills courses have been successfully launched for the past 13 years. The goal of the courses is to provide information and resources to students about technology to help them be successful in their academic career at SHU and beyond.

- Tech Skills I - The course launched in the Freshman Studies Class of 2024 organization on September 24, 2020. ACE credit is being offered to students who successfully complete all 5 modules. This year, the module is optional as Tech Skills 2, 3, 4 are still paused until further notice. To date, 3 students have completed and 8 are in progress on the Tech Skills 1 for the Class of 2024 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

Hyflex Classroom Technology

In response to the COVID-19 pandemic, scenario for the Fall 2020 "return to campus" will be what is called a "HyFlex" structure, where faculty and some students are physically present in a classroom while other students join the face-to-face class remotely. Supporting this modality of learning sufficiently requires an investment in classroom technology on all campuses. Media Services identified 43 classrooms on the South Orange campus and 19 classrooms on IHS campus classrooms for equipment installation.

The Law School will have about 19 classrooms that will have a similar equipment installation. Adding these pieces of equipment will ensure that faculty and students in the classroom and at remote locations can have the best user experience and content delivery possible. The equipment installation will include at least one camera for "remote" viewing/participation. An appropriate number of microphones and speakers will be installed to ensure the two-way engagement of all participants. At a minimum, one display device will be present in each room to ensure that students physically present in the room can see their counterparts who are joining remotely as well as any content that the faculty member chooses to display for the class. Use of this technology will be designed so that a faculty member can operate the classroom with minimal training and/or assistance. In these rooms, cameras, microphones, speakers and USB interface designed to deliver web conferencing using Teams unified communication platform will be installed.

Technology installed may be geared toward a specific technology for a particular campus or use, but any hardware installed must be flexible enough to support various technologies both immediately and in the future. We anticipate that all rooms will be installed over the summer and ready for our students for the fall 2020 semester.

Technology Upgrades to Executive Spaces President's Hall

The technology in the Executive spaces in President's Hall will be upgraded to bring in Web Conference and the Hyflex technology. Covid-19 brought to light that these spaces needed upgrades to handle remote meetings and presentations.

Classroom Upgrades (Winter Session 2020)

In response to the COVID-19 pandemic, classrooms were upgraded, starting in the spring, to allow for the "HyFlex" structure, where faculty and some students are physically present in a classroom while other students join the face-to-face class remotely. Supporting this modality of learning sufficiently requires an investment in classroom technology on all campuses. Over the winter break additional classrooms will be upgraded and other will be outfitted with additional technology.

Chapel Camera/Recording Installation

The chapel would like to be able to broadcast masses on a regular basis using production quality equipment.

Classroom Upgrades

Six Biology Labs, two Physics labs and one General purpose classroom required technology upgrades due to failing technology or lack of technology necessary to facilitate teaching and learning. Several Teams Hyflex spaces were identified as have need for audio enhancements to assist in negotiating two way communication while in a conference call.

Additional Upgrades

- Duffy 60 – Hyflex Teams Room Conversion
- IHS – Winter Upgrade Planning for Web Conf
- McNulty Hall Science Lab Upgrade Planning
- Regent’s Suite Web Conferencing Installation
- Teams Rooms Microphone Audio Quality Upgrade Planning (SZ 101, SZ 103, AS 103) (SC 106, 107, 109) (CH 64) (SZ, 111, 112, 113)
- Campus Wide Updates for the end of life Adobe Flash Support for Crestron Touch Panels.
- Camps Wide UC Engine updates for XIO Cloud support
- Chapel Camera/Recording Installation

Technology Support

| Project Name | Business case | Status |
|---|--|-------------------|
| Implement SLA's in ServiceNow for PCSS | Create Service Level Agreement definitions in ServiceNow for specific PCSS tickets to send out emails when tickets haven't been handled after specific periods of time. | Project cancelled |
| ServiceNow & LogMeIn Integration | The IT Service Desk Technicians use LogMeIn to remote support with customers. PC Support would like to have that accessed with the IT Service Desk ticketing system ServiceNow. | Project cancelled |
| Lab Image 2021 | Create a lab image for department and public labs for deployment summer 2021 (August). Image will need standard image with current public printer drivers and discipline specific software. will attach spreadsheet of each lab needs and expected hardware model. | Work in Progress |
| Mobile Computing 2021 | Set hardware and software standard for Mobile Computing 2021. | Work in Progress |
| Telecom IDT from Lotus Notes to ServiceNow | Move Telecom IDT process for both Phone Billing (Cell/e-911/800 lines/etc) and Telecom Work Orders from Lotus Notes to ServiceNow. | Work in Progress |
| Kiosk.Walk Up Support/Online Checking | Allow customers to check in online from a Kiosk or from online to be placed in a Queue for our Walk Up/Tech Services Area. | Completed |
| Manage BYOD, Bring Your Own Devices with Intune | The Microsoft Intune Mobile Application Management application will be implemented to provide mobile app control and visibility, including the ability to wipe corporate data, encrypt app data, and other data loss prevention options. | Completed |
| Manage Windows machines with Intune | Convert user machines to Azure AD and manage devices with Intune. | Completed |

| | | |
|--|--|-----------|
| Manage Simulation Labs Computers with Intune at IHS Campus | Enroll Simulation Lab devices in Intune including laptops Create security policies for managing Simulation Lab Computers. | Completed |
|--|--|-----------|

Esports

Seton Hall University dove into the gaming world head first with the opening of the esports facility in November 2019. Since then the two Seton Hall esports teams have truly taken advantage of the lab to provide a competitive edge, bringing home two championships last year alone:

- 2020 BIG EAST-MAAC Rocket League Tournament Champions
- 2020 Big East-ESL League of Legends Champions (Spring)
- 2020 Big East-Play VS League of Legends 2nd Place (Fall)
- 2020 Big East-EGFC Rocket League 1st Seed (Fall)

Covid-19 meant only the esports teams maintained access to the facility, while following proper social distancing guidelines and upholding the Seton Hall Pledge. The team did not stick to simply performing on the virtual field however. They contributed to their fellow Setonians by giving them Tips and Tricks in their expertise as well as sharing more about the life of a collegiate esports player during Seton Hall Week. This level of action did not go unnoticed. As reported by the Big East's Esports broadcasting partner EGF, over 800 people attended the Big East x MAAC tournament on EGF's Twitch stream, and across the Fall Rocket league season, over 40, 000 viewers tuned into the 3-month tournament.

Those qualities are present in each of our team members. And showing standout performances both on and off the playing field, these four players have been recognized for their academic achievement as a part of the EGFC for holding above a 3.5 GPA:

- James Heid
- Brandon Cordiano
- Ryan Kijevcanin
- Justin Lee

The spring 2021 esports season embodied the university's motto, Hazard Zet Forward, as the team charged ahead despite the challenges of remote learning and playing, the loss of several graduating seniors, and other factors affecting the team.

Seton Hall Spring 2021 NBA2K eSports Challenge

The esports team partnered with Athletics and Two Men And A Truck to create the inaugural Seton Hall NBA2K Challenge - the first Seton Hall Athletics Esports tournament. Entry was free for all students and prizes for the top 3 players included an Apple iPad, a team-autographed basketball jersey, and a \$100 gift card to the university bookstore.

Esports Manager

The University created an official full-time esports manager position, which is the first for a BIG EAST university and reaffirms Seton Hall's commitment to engaging students. The new manager, Victor

Gomez '17 is a Seton Hall alumnus and an original founder of esports on campus. Gomez, previously served an advisor role in addition to other duties at the university.

Collaboration with College of Communication and the Arts

The esports team began a pilot project with students from professor Kathryn Lancioni's public relations class to bolster the program's brand, public relations, and marketing. The partnership generated a month over month 1,400% increase in Twitter profile visits and a 214% increase in mentions. The esports website generated a 158% increase in pageviews.

Esports Scholarships

A budget was proposed and approved to acquire additional equipment, jerseys, and limited travel for in-person Big East tournaments. The program also received funding to provide \$10,000 in scholarships for the Fall 2022 semester, in coordination with Enrollment Services. Additional budget was secured to develop a co-curricular multimedia production space which will be used by students to broadcast and stream esports matches.

Additional Program Highlights

- Created highlight reel to showcase esports at Seton Hall, the state-of-the-art gaming lab, and the championship winning team performance: (<https://www.youtube.com/watch?v=ssnNINUCJfc>)
- Finished 2nd place in BIGEAST League of Legends
- Collaborated with Communication and the Arts and Stillman School of Business to integrate esports into the curriculum and potential future academic programs.
- Submitted 4 academic honors nominees to EGF for EGF x Big East Honor Roll
- Assisted Villanova University in establishing and improving their esports program.
- The program was also able to secure \$20,000 in donations and equipment from Lenovo and Dell via an Intel SEED Fund. The donated hardware included two broadcasting workstations and a state of the art Alienware Aurora gaming PC.

Gaming Lab Highlights

- Single sign-on enabled for GGLEAP, a cloud-based e-sports venue management software. The new sign-on feature allows students to seamlessly sign-in to use a gaming computer by using their existing Seton Hall PirateNet credentials.

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 policies 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.

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 2020-21)

| | |
|---|--|
| AppStream and SharePoint Migration | The AppStream and SharePoint Migration project has several objectives that when completed will eliminate the need for department share drives, reduce the number of Amazon Web Services (AWS) accounts for only "power users", and move other Amazon Web Services (AWS) accounts to AppStream. The priority is to reduce the number of AWS accounts by March 31, 2021. |
| Automation of Onboarding for New Employee System Access | Automate new hire onboarding steps within SHU to improve experience for supervisors and employees. First focus will be for administrators and staff and the second focus will be for adjuncts and faculty. |
| Beacon Cloud Print Services | The University is implementing a managed print program called BluePrint. In order to centralize print for all three campuses and realize the estimated University cost savings we must implement a cloud print solution. The University current print management vendor Pharos has a cloud print product called Beacon. |
| 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 & Expense operations by automating currently processes. |

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|---|---|
| Degree Works Implementation | Implementation of degree auditing system. |
| Enhancements to Tuition Remission Application | Update Tuition Remission Application to handle policy updates and enhancements to the process. |
| 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. |
| Financial Aid Delta Files for Graduate Slate Instance | The change of the financial aid files from full to delta will allow the graduation admissions team to communicate with those students whose aid has changed and notify them when the addition or deletion of funds occurs improving the overall enrollment process by more clearly communicating financial aid information at a time when students are becoming hypersensitive to price. |
| 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. |
| Handshake (Career Center replacement of Symplicity CSM) | Handshake platform replaces all the functionality of Symplicity CSM (a.k.a. Navigator). |
| HMH file feeds to manage the synchronization of university systems for SoM students and employees who need IHS access | This project is for the file feeds to/from HMH to manage the "synchronization" of university systems with students and employees. HMH needs a feed of all SHU students and employees who need access to the IHS Campus, as they are taking over the management of access controls for all external doors/turnstiles. SHU needs a feed from HMH of all SoM students and employees who need access to the IHS Campus, so we can provision their access to the library, SIM Center, classrooms, printing, and internal door access. |
| Management of Apple Computers | We currently lack an appropriate system to manage Apple computers in our environment. With Apple school manager and JAMF we would possess the tools necessary to make managing Apple computers possible |

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|---------------------------------------|---|
| Technology Chatbot | In order to efficiently provide accurate technology information to answer questions and provide current information we are partnering with Ivy to create artificially intelligent "chatbot" available via multiple platforms at all hours. The goal is to produce a functional chatbots to be hosted on the University's website, accessible via Amazon's Alexa, SMS and Facebook Messenger. The chatbots will be able to answer questions based on the subject areas for which they were created. In the event they cannot answer a posed question, our staff will be notified and will work with the vendor to fix any issues. Our team will have access to a platform to assess the effectiveness of the chat bot and review analytics based on the bot's activities and metrics including, but not limited to, questions answered and unanswered. |
| TRiO Programs platform | TRiO Programs platform: Student Support Services (department in Student Services) is in process of reviewing vendors to support the TRiO program. |
| Upgrade Cognos from 11.0.13 to 11.1.7 | To ensure continued vendor support for Cognos from IBM, Seton Hall will need to upgrade our existing Cognos 11.0.13 to the next long term support version 11.1.7 . |
| Vaccination Declaration Engagement | The University announced that all community members must be vaccinated for the Fall semester unless they request an exception. A mechanism for the university community to declare their vaccination status or request a waiver needs to be developed and launched in a way so all members of the community will receive a forced pop-up to fill out the form before accessing university systems. |
| Voice System Replacement | 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. |

Projects (Completed – AY 2020-21)

| | |
|---|--|
| Banner 9 Application Development Environment | Modifications to Banner 9 applications require a completely different development environment than prior update processes. This project is to plan, develop, and implement the process and tools for banner 9 source code modification. |
| Banner - 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 |

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| | added benefits of improving the speed of the Banner database and reducing the overall operating cost of maintaining our databases. |
| Transact - move to new on-prem equipment | Transact is not compatible with AWS, and an alternate option to have it hosted by Transact in their Azure environment requires VPN access to our system, so it is also a no-go. Transact has to be upgraded to the latest version no later than 7/13 or it is no longer supported. On-prem upgrade is the only available option. |
| 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. |
| Follett Connect Once | To provide integration from our Banner ERP system and the Follet online bookstore. The integration will provide basic student and faculty information along with class information in order to provide a simpler book ordering process for students. |
| 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 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. |
| 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 the university is in compliance. |
| Portal Replacement | Currently the portal is maintained in Luminis which is at end of life. Modules are either static content or custom application written to retrieve data from Banner and other systems. The purpose of this project is to research and plan replacement modules for the University's Portal as we move forward into another system. |

| | |
|---|---|
| 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. |
| Regulatory Compliance Calendar Portal | Develop a portal to automate the University-wide Regulatory Compliance Calendar to serve as a central source of data related to the compliance reporting obligations across the University. |
| Transact Mobile Ordering | Gourmet Dining and Administrative Services has requested we add Transact's Mobile Ordering functionality to allow students to order, and pay, for their meals from their phones and then pick them up. In theory, it eliminates lines and helps reduce volume in the dine-in areas of the cafeteria and beyond. |

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: | \$17,832,000 |
| Salaries and Wages: | \$ 9,873,000 |
| General Operating Budget | \$ 7,959,000 |

| | |
|--|-----------|
| Full Time Employees: | 91 |
| Employee Breakdown by Functional Area: | |
| Office of CIO | 5 |
| IT Security and Project Management | 4 |
| University IT Services Administration | 4 |
| Systems Administration (Systems Support) | 7 |
| Network and Communications Support | 6 |
| Web Services & Development (Application Development) | 7 |
| Production Control | 5 |
| Teaching, Learning, Technology Center | 28 |
| PC Support Services | 16 |
| Technology IHS Campus | 9 |

Summary of FY’21 Expense Budget

| | Amount (\$000) | % of Budget |
|--|---------------------------|------------------------|
| Salaries and Wages (with fringe) | 9,873 | 55% |
| Major Subdivisions in the Office of IT | | |
| Office of Information Technology | | 4% |
| IT Security and Project Management | | 2% |
| University IT Services Administration | | 3% |
| Systems Administration (Systems Support) | | 5% |
| Network and Communications Support | | 4% |
| Web Services & Development (Application Development) | | 5% |
| Production Control | | 4% |
| PC Support Services | | 8% |
| Service Desk | | 1% |
| Teaching, Learning, Technology Center | | 16% |
| Technology IHS Campus | | 3% |

| | | | |
|---|---------------|-------------|-------------|
| Operating | 7,959 | 45% | |
| Major Operating Expense Categories | | | |
| Computers and Software (Faculty, Admin/Staff, Public Labs) | | | 1% |
| TLT Center (CDI, Media Eq., Digital Media & Web Dev., Instructional Design, PCSS, Service Desk, etc.) | | | 2% |
| Telecommunications (Level 3, AT&T, Verizon, Internet Connection) | | | 2% |
| Computing Operations (UITs Operating – AWS, Banner, Oracle, Microsoft Campus Agreement, Cisco System Computer Hardware Maintenance, Microsoft Premier Support Service, Single Sign-on etc.) | | | 20% |
| Central Equipment Purchases | | | 7% |
| Security, Compliance, Budgets, Project Management and Office of CIO | | | 4% |
| IHS Campus (Level 3, Internet Connection, Audio-visual Equipment in Labs and Classrooms, Firewall Palo Alto and B-Line Maintenance, Printer Maintenance - Labs and Library) | | | 4% |
| TLT Center (Temp staffing (Laptop distribution, beginning of Fall semester) | | | 1% |
| TLT Center (Blackboard Software, Blackboard Help Desk) | | | 2% |
| TLT Center (Contract Help Desk and Service Now Licensing) | | | 2% |
| Total Expense Budget (with fringe) | 17,832 | 100% | 100% |

| | |
|---|-----------------------|
| Summary FY'21 Major Operating Expenses | Amount (\$000) |
| Description | |

Computer Operations

| | |
|--|-----|
| Amazon Web Services (Cloud-based Data Center) | 882 |
| Banner Software Maintenance | 674 |
| Microsoft Campus Agreement | 292 |
| Internet Service (Level 3) | 222 |
| Oracle Software Maintenance | 225 |
| Security Log Analysis Software (Novacoast/Splunk) | 158 |
| T-1, OSNA and Special circuits, POTS lines, E911 on & off campus | 128 |
| Cisco System Computer Hardware Maintenance | 126 |
| Information Security Endpoint Software | 115 |
| Slate Admission Software (Technolutions) | 115 |
| Microsoft Campus Agreement (Faculty) | 100 |
| OCLC (Library Catalog) | 99 |
| Active Directory Single Sign-On (OKTA) | 93 |
| Red Hat SW Maintenance | 85 |
| Microsoft Premier Support Service | 69 |
| CommonSpot SW for web site | 59 |
| Telephone Service – Local and Long Distance (Level 3) | 52 |
| IT Leaders Advisor (Gartner) | 46 |

Teaching, Learning, and Technology Center

| | |
|---|-----|
| Blackboard Software | 428 |
| Service Now | 197 |
| Blackboard Help Desk (NJEdge Vale) | 119 |
| Printer Maintenance - Labs and Library | 71 |
| Temp staffing (Laptop distribution, beginning of Fall semester) | 50 |
| Linked-In Learning | 48 |
| Faculty Support Initiatives (CDI, TLTC Faculty) | 48 |

IHS Campus

| | |
|---|-----|
| Internet and Phone Service (Level 3) | 254 |
| Firewall Palo Alto Maintenance (SHI) | 114 |
| Cisco System Computer Hardware Maintenance | 100 |
| Voice Maintenance (Aspire) | 70 |
| Enterprise Security License Support (Guide pointe-Splunk) | 65 |
| B Line Medical Maintenance | 50 |
| Campus Maintenance Agreement | 44 |
| License Subscription - Mersive Technologies | 28 |

IT by the Numbers

Laptop and Desktop Support

| | 16-17 | 17-18 | 18-19 | 19-20 | 20-21 | YoY % |
|-------------------------------|-------|-------|-------|-------|--------|-------|
| Internal Service Desk Calls* | 9,997 | 6,486 | 3,662 | 5,041 | 9,291 | +84% |
| External Service Desk Calls* | 7,912 | 7,872 | 9,419 | 6,568 | 10,183 | +55% |
| Field Support Visits | 847 | 367 | 650 | 378 | 615 | +63% |
| Laptop Services** | 643 | 590 | 3,781 | 7,447 | 5,012 | -33% |
| Remote Support Sessions | 278 | 163 | 65 | 55 | 180 | +227% |
| ServiceDesk User Satisfaction | n/a | n/a | 92.0% | 93.1% | 95.3% | +2.2% |

* 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 to include all services related to laptops.

Training Session Attendance

| | 16-17 | 17-18 | 18-19 | 19-20 | 20-21 | YoY % |
|------------------------|-------|-------|-------|-------|-------|-------|
| Faculty Development | 149 | 207 | 228 | 1,202 | 1,433 | +19% |
| Student Training | 31 | 20 | 84 | 39 | 124 | +218% |
| One-on-One Instruction | 98 | 99 | 52 | 100 | 240 | +140% |
| Special Group Training | 243 | 489 | 728 | 569 | 497 | -13% |

Instructional Technology Support

| | 17-18 | 18-19 | 19-20 | 20-21 | YoY % |
|------------------------------------|--------|--------|--------|--------|-------|
| Lecture Capture Recordings Created | 2,061 | 2,260 | 4,682 | 2,928 | -37% |
| Blackboard Courses | 64,299 | 68,538 | 68,271 | 66,447 | -3% |
| Qualtrics Survey Responses | 30,224 | 30,374 | 49,327 | 27,123 | -45% |

Media Services Equipment and Classroom Support

| | 17-18 | 18-19 | 19-20 | 20-21 | YoY % |
|---------------------------------|-------|-------|-------|-------|-------|
| Equipment Deliveries | 2,406 | 3,666 | 2,270 | 604 | -73% |
| Equipment Loans | 1,446 | 610 | 593 | 209 | -65% |
| Classroom Support | 209 | 528 | 884 | 1,229 | +39% |
| Classroom Equipment Maintenance | 992 | 828 | 778 | 462 | -41% |

Esports

| | 17-18 | 18-19 | 19-20 | 20-21 | YoY % |
|------------------------|--------|--------|---------|---------|-------|
| Twitter Impressions | 20,876 | 14,318 | 125,194 | 73,170 | -42% |
| Instagram Impressions | n/a | n/a | n/a | 14,135 | n/a |
| Instagram Engagements | n/a | n/a | n/a | 474 | n/a |
| Twitch Viewers | n/a | n/a | n/a | 40,546 | n/a |
| Twitch Minutes Watched | n/a | n/a | n/a | 629,605 | n/a |

IT Managed Rooms and Labs

| | 17-18 | 18-19 | 19-20 | 20-21 |
|--------------------------|--------|--------|--------|-------|
| IT Managed Rooms (Hours) | 3,722 | 4,155 | 2,806 | 0* |
| Labs (Events) | 13,012 | 990 | 364 | 0* |
| Labs (Open Lab) | 7,582 | 31,841 | 20,412 | 0* |
| Mobile Carts (Events) | 136 | 337 | 204 | 0* |

*Suspended in 20-21 due to Covid-19

System Uptime and Maintenance

Monitored systems include: Amazon WorkSpaces, AppStream, Banner, Blackboard, Blueprint, Cognos, Compass, Duo Two Factor, Jira, Microsoft Office 365, Network and Internet, Okta Single Sign On, Phone and Voicemail, RPNOW, Seton Hall Website, SHU Portal.

| Product | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |
|--------------------|------|------|--------|------|------|------|------|--------|--------|--------|--------|------|
| Banner | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Blackboard | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| BluePrint | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 99.93% | 100% | 100% | 100% |
| Cognos | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Compass | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 99.98% | 100% | 99.07% | 100% |
| Microsoft365 | 100% | 100% | 99.71% | 100% | 100% | 100% | 100% | 99.94% | 99.94% | 99.87% | 99.82% | 100% |
| Network & Internet | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Okta SSO | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Phones | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| RPNOW | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 99.95% | 100% |
| Portal | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Website | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |

Organizational Chart



Stephen G. Landry

Chief Information Officer

- **Project Management**
Georgianna Maroulakos, Project Coordinator

Paul Fisher

Associate CIO

- **Instructional Design**
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.
- **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 strategy.

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

Penetration Test 2021

Findings and Recommendations

Prepared For:

Seton Hall University

Issued:

August 4, 2021

Prepared by:

George Nam

Executive Summary

Project Overview

Novacoast's purpose at Seton Hall University was to assist in the evaluation of the environment by attempting to scan, probe, and test the network from outside and assess services found. Novacoast uses common hacking tools and little knowledge about the network itself in external situations. The questions this assessment can answer are:

- How quickly and completely can your key assets and resources be compromised?
- What level of risk is your critical information at for unauthorized access?
- How secure are the services and applications in use?

External Risk Summary



Compared to prior year assessments, the external posture appears to be improving with no critical or high issue identified. However, there are still a few medium-risk misconfigurations relating to the usage of outdated PHP and usage of deprecated SSL protocols, particularly SSLv3 which stopped being supported by most browsers since 2018. It is worth noting that the PHP version in use was more up-to-date than the previous year's assessment, and as result, less severe vulnerabilities exist for the given host. This may point at a coverage gap in the patch and update management to ensure these services are updated as soon as newer versions are released.

Additional lower risks were identified, such as missing of security headers, the utilization of TRACE HTTP verb, and sites that could benefit from using Web Application Firewalls (WAFs). Addressing these can further harden against a changing threat-landscape.

Lastly, a brief open-source reconnaissance revealed multiple SHU employees had their work emails affected by third-party credential (eg. LinkedIn, Dropbox, Adobe) leaks that could be useful to attackers in credential stuffing or social engineering attacks.

Based on the results of the security assessment, access to the external network and systems were found to be at a **Low to Medium** risk level.

Internal Risk Summary



During the assessment, and within the given scope, the internal environment was found to have fewer issues than in prior years. The main issues being identified were the susceptibility to IPv6 DNS poisoning and the usage of deprecated SMB version 1 with signing not required. Note that these issues can be opportunistically used in conjunction to hijack user accounts, access SMB shares, or potentially gain remote code execution on hosts (if a privileged account is captured).

Because of COVID leading to an increase of remote work, very little activity was identified during attempts at DNS poisoning and hijacking sessions. However, if a return to a workplace environment leads to an increase of traffic between hosts, this can potentially be exploited to gain a deeper foothold in the internal network.

Based on the results of the security assessment, access to the internal network and systems were found to be at a **Medium** risk level.

Lastly, we were tasked with testing segmentation controls between the On-Prem network and the AWS environment. From our given location, 10.7.2.231, we were able to access a handful of IPs in the AWS environment, but with severe restrictions to the open ports. No vulnerabilities or risks were identified from those hosts; however, it is recommended that a review be done to see if access to the affected hosts via the open ports are necessary.

Overall Risk Summary



Based on the results of the security assessment, access to the organization was found to be at a **Low to Medium** risk level.

Mobile Computing Student Survey: Preliminary Results

Executive Summary

Student use and expectations of technology

- Students are primarily using their smartphone for personal tasks such as surfing the internet, playing games, and social media (99%). For academic tasks such as writing documents, research, and using Blackboard, respondents report primarily using their Seton Hall laptop (94%). Similarly, respondents indicate they are primarily using their Seton Hall laptop for administrative tasks such as checking grades and accessing PirateNet (60%).
- 98% of respondents expect robust and universal Wi-Fi across campus, while 96% expect to easily connect their own devices to the Seton Hall network.
- 82% of respondents expect Seton Hall to provide them with an appropriate laptop computer and software, while 90% expect a laptop repair facility on campus.

Mobile Computing Program

- 28% of respondents found out about Seton Hall's Mobile Computing Program at Pirate Adventure. Students also found out about the Program at Open House (27%) or during the application process (25%).
- If given the option to pay a reduced fee and provide their own laptop and support services, 69% of respondents report they would rather stay in the existing Mobile Computing Program and pay the current \$675 fee per semester.
- 74% of respondents strongly or somewhat agree that they prefer the current Mobile Computing Program where the University provides a laptop, software, and technical support.
- If Seton Hall ended the Mobile Computing Program, 43% of respondents would use a computer or laptop they already owned, while 40% would purchase a new computer or laptop. 9% of respondents indicated they would not have access to a computer or laptop.
- If respondents had to use or buy their own laptop, 56% would use a MAC as their primary device. 65% report they would keep the same computer for all four years and 51% would purchase insurance or a repair policy as a maintenance plan.
- If Seton Hall no longer provided laptops to students, 86% of respondents would still expect Seton Hall to provide students with the same software currently pre-loaded on laptops.

Overall Evaluation

- 88% of respondents evaluate the entirety of their education experience at Seton Hall as “excellent” or “good.”
- If students had to make the decision again, 82% of respondents would “definitely” or “probably” choose Seton Hall again.
- 79% of respondents agree the use of technology in their courses has generally met their expectations.

Methodology

The Stewardship Initiative Task Force on Mobile Computing administered the Mobile Computing Student Survey from January 25 – February 15, 2019. The survey was sent to all registered undergraduate students (n=5,549) via email through Campus Labs. Follow up emails were sent to non-respondents four times during the survey period. Respondents were entered into four raffle drawings of \$50 worth of Pirate’s Gold. A total of 1,382 students responded to the survey, representing a 25% response rate. A total of 1,281 completed the survey, representing a 23% completion rate. Percentages below are rounded.

Respondent Profile *(as identified in Banner):*

| | |
|-----------------------|---|
| Gender | Female - 67% Male - 33% |
| Race/Ethnicity | White/Caucasian - 53% Hispanic/Latino - 20% Asian - 14% Black/African American - 8% Other (two or more races, Native Hawaiian/Pacific Islander, American Indian/Alaskan Native)- 5% |
| Resident/ Commuter | In-state - 70% Out-of-State - 30% Commuter - 53% Resident - 47% International - 5% |
| College | Arts & Sciences - 48% Business -23% Communication- 8% Nursing- 8% Diplomacy - 7% Education - 6% Theology - <1% |
| Year/Other Categories | First-year – 26% Sophomore- 26% Junior- 23% Senior- 25% First-generation – 29% Pell grant recipient- 25% Transfer- 11% |

Q1. In the past month, what types of technology devices did you use and for what purpose?
(Check all that apply).

| | Personal Tasks (e.g., surfing the internet, playing games, social media) | Academic Tasks (e.g., writing documents, research, using Blackboard, recording and creating videos or presentations) | Administrative Tasks (e.g., checking grades, accessing PirateNet, etc.) | I don't use this type of device |
|--|--|--|---|---------------------------------|
| My desktop computer | 15% | 11% | 6% | 82% |
| Seton Hall laptop | 79% | 94% | 60% | 5% |
| My personal laptop | 41% | 25% | 17% | 58% |
| My smartphone | 99% | 63% | 46% | <1% |
| My tablet (e.g., iPad, Android, MS Surface) | 20% | 7% | 4% | 79% |
| My gaming console (e.g., Playstation, X-box) | 31% | 1% | 1% | 69% |
| My eReader (e.g., Kindle, Nook, Sony) | 8% | 5% | 1% | 89% |
| Computer in Seton Hall Labs | 3% | 27% | 6% | 71% |
| My wearable technology (e.g., smartwatch, headset) | 41% | 6% | 4% | 59% |

Q1A. How old are the devices used?

| | 1-2 years old | 3-4 years old | 5 years old or more |
|--|---------------|---------------|---------------------|
| My desktop computer | 33% | 29% | 38% |
| Seton Hall laptop | 96% | 3% | <1% |
| My personal laptop | 39% | 40% | 21% |
| My smartphone | 73% | 25% | 2% |
| My tablet (e.g., iPad, Android, MS Surface) | 40% | 36% | 24% |
| My gaming console (e.g., Playstation, X-box) | 34% | 40% | 26% |
| My eReader (e.g., Kindle, Nook, Sony) | 40% | 30% | 30% |
| My wearable technology (e.g., smartwatch, headset) | 84% | 14% | 2% |

Q2. When did you first find out about Seton Hall's Mobile Computing Program?

| | Percent |
|--|---------|
| During Pirate Adventure | 28% |
| During Open House | 27% |
| During the application process | 25% |
| Other/ Unsure/ I don't know | 12% |
| I have always been aware of SHU's Mobile Computing Program | 9% |

Q3. If the University eliminated the Mobile Computing laptop program, the undergraduate technology fees could be reduced from the current \$675 per semester to \$400 per semester. Please select your preference.

| | Percent |
|---|---------|
| I would rather stay in the existing Mobile Computing Program and pay the current \$675 per semester technology fee that includes a laptop and laptop support services (<i>software, repairs, etc.</i>). | 69% |
| I would rather pay \$400 per semester and provide my own laptop and laptop support services (<i>software, repairs, etc.</i>), reducing the technology fee by \$275 per semester. | 31% |

Q4. If Seton Hall University ended the Mobile Computing Program (i.e., no longer provided laptops to undergraduate students), what would be your primary alternative solution for computer use?

| | Percent |
|---|---------|
| I would use a computer or laptop that I owned prior to coming to SHU.** | 43% |
| I would purchase a new computer or laptop.** | 40% |
| I would have no access to a computer or laptop. | 9% |
| I would use the computers in the library. | 4% |
| I would borrow a computer or laptop from a friend or family member.^ | 2% |
| I would use the computer labs on campus. | 2% |

**^ Follow-up questions (Q4A- D) were asked for these respondents.

Q4A.** Approximately how much would you spend on your primary computer or laptop used to complete school related work (n=1,107)?

| Amount | Percent |
|------------------------------------|---------|
| \$1 - \$1,000 | 35% |
| \$1,001 - \$2,000 | 27% |
| \$0 – use a computer I already own | 26% |
| Unsure/ I don't know | 9% |
| Over \$2,000 | 3% |

Q4B.**^ What type of computer or laptop would you likely use as your primary device?

| | |
|---|-----|
| Mac (<i>e.g., iPad, Pro, Air, MacBook, etc.</i>) | 56% |
| PC (<i>e.g., Microsoft, Lenovo, Dell, HP, etc.</i>) | 39% |
| Other/ Unknown | 5% |

Q4C.**^ How often would you plan on upgrading or replacing your primary computer or laptop while at Seton Hall?

| | |
|---|-----|
| Keep the same computer or laptop for all four years | 65% |
| Unsure/ I don't know | 17% |
| Every two years | 15% |
| Every year | 3% |

Q4D.**^ What would your support plan be for repair and maintenance of your computer or laptop?

| | |
|--|-----|
| I would purchase insurance/repair policy (<i>e.g., Apple Care, Geek Squad, etc.</i>) | 51% |
| Unsure/ I don't know | 28% |
| I would use a back-up computer or laptop that I own or could borrow | 16% |
| Other | 5% |

Q5. Technology Expectations

| | Strongly/ Somewhat Agree | Neither Agree or Disagree | Somewhat / Strongly Disagree |
|--|--------------------------------|------------------------------|---------------------------------|
| a. I expect Seton Hall to provide an appropriate laptop computer and software for my use. | 82% | 11% | 7% |
| b. I expect Seton Hall to provide a laptop repair facility on campus. | 90% | 6% | 4% |
| c. I expect Seton Hall computer labs to be equipped with the latest software. | 92% | 7% | 1% |
| d. I expect robust and universal Wi-Fi across all Seton Hall campus locations. | 98% | 1% | <1% |
| e. I expect to have access to computer labs at Seton Hall with desktop computers and relevant software for my use. | 89% | 9% | 2% |
| f. I expect to easily connect my own devices to the Seton Hall network, and access personal/social web services. | 96% | 3% | 1% |
| g. Generally, the use of technology in my courses at Seton Hall has met my expectations. | 79% | 11% | 10% |

Q6. Mobile Computing Program

| | Strongly/ Somewhat Agree | Neither Agree or Disagree | Somewhat / Strongly Disagree |
|---|-----------------------------|------------------------------|------------------------------------|
| a. I prefer the current Mobile Computing Program where the University provides a standard laptop computer, software, and technical support. | 74% | 13% | 13% |
| b. The Mobile Computing Program has enhanced my learning experience at Seton Hall. | 65% | 21% | 14% |
| c. I would prefer to have the University provide a computer, software, and technical support, but I would like to have a greater choice of computers. | 68% | 22% | 10% |
| d. I would prefer to opt out of the Mobile Computing Program and purchase my own computer, understanding that I would be responsible for computer software and repairs on my own. | 30% | 21% | 49% |

Q7. Expectations if Seton Hall no longer provided laptops to undergraduate students.

| | Strongly/ Somewhat Agree | Neither Agree or Disagree | Somewhat / Strongly Disagree |
|--|-----------------------------|------------------------------|------------------------------------|
| a. I would expect Seton Hall to expand existing computer labs on campus. | 69% | 22% | 9% |
| b. I would expect Seton Hall to provide students with the same software currently pre-loaded on student laptops. | 86% | 10% | 4% |
| c. I would expect Seton Hall to continue to provide loaner devices for students. | 80% | 13% | 7% |
| d. I would expect Seton Hall to continue to provide the same level of computer support/repair services for students. | 80% | 11% | 9% |

Q8. How would you evaluate the entirety of your educational experiences at Seton Hall?

| | |
|-----------------|-----|
| Excellent/ Good | 88% |
| Fair/ Poor | 12% |

Q9. If you had the chance to make the decision again, would you come to Seton Hall?

| | |
|--------------------------|-----|
| Definitely/ Probably yes | 82% |
| Probably/Definitely no | 18% |

Q10. Qualitative Responses – Pending