THE HERBERT W. BOYER SCHOOL OF NATURAL SCIENCES, MATHEMATICS AND COMPUTING

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Under the guidance of Dr. Derek Breid, associate professor of engineering, six seniors — Reese Capo, Danielle Koehler, Michael Moresea, Eric Pennella, D.J. Rossi and Jonas Wudkwych — embarked on a year-long capstone project of building a functioning concrete canoe with the aim of sailing it on Saint Vincent Lake upon its completion.

INSIDE

New Academic Programs Added for Fall 2021

Science Foundations for Health Professions Post-Baccalaureate Certificate Program

Sponsored by the Herbert W. Boyer School of Natural Sciences, Mathematics and Computing, the science foundations for health professions (SFHP) post-baccalaureate certificate program is for students who did not major in the sciences but would like to enter medical, dental, optometry, veterinary, podiatry or chiropractic schools; nursing programs or graduate programs in physical therapy, pharmacy, physician assistant; or study occupational therapy. The program will allow students to complete prerequisite courses and prepare for entrance exams before applying to their program(s) of interest.

Students will learn the foundations of sciences essential for their future education and complete the prerequisite courses needed for their program(s) of interest and entrance exams. Through the coursework the students complete, they will gain the scientific knowledge they were not exposed to during their undergraduate careers. The program director will work with each student to ensure they are successfully completing the coursework needed and are prepared for their entrance exams and certificate completion.

Each SFHP certificate candidate will be required to enroll in general biology, chemistry and calculus courses and then earn a minimum of 25 additional credits, including at least three courses with a lab component. Based on the candidate's background and his/her desired health professions program, these additional credits can be accrued in courses offered by the Biology, Chemistry, Integrated Science, Physics, Psychological Science and Sociology Departments. The program director will work one-on-one with each student to develop a plan of courses and timeline based on the student's goals.

DEAN'S MESSAGE

Dear Friends,

Here on campus we just completed a wonderful Homecoming week and are nearing the mid-point of the semester. Our students and faculty are enjoying cooler temperatures, and the beauty of the fall season is more visible each day across campus.

This is our first Boyer Bulletin since the pandemic started in the spring of 2020. I am proud of our students and faculty who have worked hard throughout this pandemic to continue to learn and to teach in ways that demonstrate how a Saint Vincent education is special.

I hope you will take a few minutes to read through the articles about some of the activities and accomplishments that have taken place in the Boyer School since last summer.

I would also like to thank all of our alumni and the many friends of the College who have given so generously through the years in support of our students and our programs. A special thank you to all who continued to give during the pandemic; your gifts are truly appreciated. The College's Annual Students First Fund is focused on helping to educate capable students with financial need.

I would like to mention two specific areas in the Boyer School where your gifts could be directed that also help our students: equipment and research. All undergraduate programs in the Boyer School require our students to complete a senior research or capstone project/experience. In some departments these are individual with a faculty mentor and in others they are group projects, again with a faculty mentor. A critical component of this student experience are the instruments and equipment available in our laboratories. Gifts towards the maintenance, replacement, and purchase of new instruments and equipment for our laboratories are always appreciated. Another gift area is the support of undergraduate research with a faculty mentor.

Separate from the instruments and equipment, we would like to fund more summer research projects for undergraduates with a faculty mentor. While many of our students are involved in internships or part-time jobs in their discipline over the summer or are satisfying requirements for shadowing hours in health disciplines, providing intensive research experiences is very valuable for students who wish to continue their studies in graduate school.

I was able to fund some of these a few years ago through a gift from an anonymous foundation. These small pilot projects provided a small budget that allowed the students and faculty to receive stipends for their work as well as an allocation for supplies needed in the project. This pilot program was well received by students and faculty and is one we have longed to grow and make a more permanent part of what we do during summers in the Boyer School.

If you are interested in giving to support one of these areas, our advancement office has provided this link: **https://ssl.charityweb.net/stvincent/boyerschool.htm**, or you can contact our advancement office directly at (724) 805-2590.

May God Bless you and your families this fall,

Steve

Engineering Students Named Clare Boothe Luce Scholars

An earlier version of this article appeared on stvincent.edu on May 19, 2021. Information presented herein was accurate at the time of original publication, though may have changed since.

Two Saint Vincent College students have been named Clare Boothe Luce Scholars in conjunction with a program sponsored by the Clare Boothe Luce (CBL) Program for Women in STEM of the Henry Luce Foundation, designed to increase the number of women who will enroll and graduate as leaders in computing, engineering and physics.

Mary Maceda, a senior engineering major from Leesburg, Virginia, and Grace Tavitas, a senior engineering major and mathematics minor from Pittsburgh, have been named CBL Scholars and will receive full tuition, room and board for their junior and senior years through a combination of grant and college funds.

Top: Mary Maceda
Bottom: Grace Tavitas

Maceda and Tavitas will meet with Dr. Stephen Jodis, dean of Saint Vincent College's Herbert W. Boyer School of Natural Sciences, Mathematics and Computing, to map out their plans for service and scholarship. Scholars who select the service component will participate in the Clare Boothe Luce Scholar STEM Module Development Summer Program, a six-week residential program from mid-May to the end of June. The Scholars will work with a faculty member to develop modules for use in middle and high school programming that encourages girls and young women to pursue STEM fields. These modules will be implemented by the team during summer programs at Saint Vincent College, such as the Young Men and Women in Charge program, a three-day residential science camp for disadvantaged and historically underrepresented high school students from the Philadelphia area.

Scholars who choose the research component will be encouraged to apply for a summer assignment through the National Science Foundation's Research Experiences for Undergraduates (REU) program or at a national laboratory initiative or will be paired with a Saint Vincent College faculty member to conduct summer research. During the academic year, they will be encouraged to serve as either Collaborative Learning Program leads or tutors and will participate in activities Saint Vincent College hosts for high school students, such as the Pasta Engineering Bridge Competition and Cybersecurity Day.

Scholars will also participate in admission events to meet and talk with women interested in the selective majors, while each Scholar will participate in a mentoring program with first-year female students majoring in the CBL Scholars' fields.

CBL Scholars are selected based on academic achievement and past service, as well as a recommendation by a faculty member from the Boyer School. The Saint Vincent College selection committee includes Dr. Jodis; Dr. John Smetanka, associate professor, physics; Dr. Stacy Birmingham, chair of Saint Vincent College's Department of Engineering; Dr. William Birmingham, chair of the Department of Computing and Information Systems; Dr. Daniele Arcara, chair of the Department of Mathematics; and Dr. David Grumbine, chair of the Department of Physics.

The Clare Boothe Luce Program for Women in STEM is celebrating its 31st year of helping to increase participation of women in the sciences, mathematics and engineering. Catholic institutions with strong science programs are encouraged to apply for these prestigious grants. In 2018, Saint Vincent College was one of just 10 institutions to receive the grant, joining George Washington University, Iona College, Lawrence University, Purdue University, the University of Chicago, the University of North Carolina at Chapel Hill, the University of San Diego, the University of San Francisco and Virginia Tech.

Previous Saint Vincent College CBL Scholars include 2018 recipients Clare Galvin and Sarah Wozniak and 2019 honorees Lynn-Marie Vaughan and Danielle Zemba.

Clare Boothe Luce (1903-87) was instrumental in establishing the Atomic Energy Commission and became the first U.S. woman to represent her country to a major world power when she was named U.S. Ambassador to Italy in 1953. In 1981, President Ronald Regan appointed her to the President's Foreign Intelligence Advisory Board, and in 1983 she received the Presidential Medal of Freedom.

Boyer School Graduates to Pursue Graduate Degrees

Front, left to right: Dr. Jennifer Koehl (chair of the Biology Department), Dr. Michael Rhodes (associate professor of biology), Natalie Lamagna, Anmarie Misterkiewicz, Rachel Keller, Marion D'Aurora and Dr. Jennifer White (assistant professor of mathematics). Middle, left to right: Connor Thropp; Taylor Berardi; Reese Capo, Emily Rohm, Alyssa Baker, Dr. Stephen Jodis, (dean of the Herbert W. Boyer School of Natural Sciences, Mathematics and Computing) and Dr. Steven Gravelle (chair of the Chemistry Department); Back, left to right: Brandon Lowe, Nicholas Driscoll, Michael Kardos, Nathaniel Rizza, Dr. James Kellam (professor of biology), Dr. Daniel Vanden Berk (associate professor of physics), Dr. Daniele Arcara (chair of the Mathematics Department) and Dr. Ian Taylor (assistant professor of chemistry). (Absent from photo: Grace Leonard)

Fourteen students from Saint Vincent College's Herbert W. Boyer School of Natural Sciences, Mathematics and Computing will pursue graduate degrees at schools across the U.S. following their graduation from Saint Vincent.

The students include:
Alyssa Baker, a biology major from Thurmont, Maryland, who will attend Clemson University to pursue a master of science and Ph.D. in biological sciences.

Taylor Berardi, a mathematics education major from Altoona, who will pursue a master of science in curriculum design and instruction through a graduate fellowship at Saint Vincent College.

Reese Capo, an engineering major from Greensburg, who will pursue a Ph.D. in materials science and engineering at Case Western Reserve University.

Marion D'Aurora, an integrated science major from Leonardtown, Maryland, with a chemical and biological analysis concentration, who will attend the University of Maryland's School of Public Health to pursue a master of public health degree in biostatistics.

Nicholas Driscoll, a chemistry major from Greensburg, who will attend Penn State University to pursue a Ph.D. in chemistry.

Michael Kardos, a biology major from Vandergrift, who will pursue a Ph.D. in biological sciences at Duquesne University.

Rachel Keller, a biology major from Saint Marys, who will pursue a master of health science in infectious disease epidemiology at Bloomberg School of Public Health at Johns Hopkins University.

Natalie Lamagna, an environmental science major from Murrysville, who will pursue a master of science in environmental science and management at Duquesne University.

Grace Leonard, a biology major from Greensburg, who will enroll in the master of sustainability program at Chatham University.

Brandon Lowe, biochemistry major from Hollywood, Maryland, who will pursue a Ph.D. in pharmaceutical sciences at the University of Maryland-Baltimore County.

Anmarie Misterkiewicz, a chemistry major from Mohrsville, who will attend the University of Georgia to pursue a Ph.D. in inorganic chemistry.

Nathaniel Rizza, an engineering major from Cape Coral, Florida, who will pursue a master of science in electrical and computer engineering at the University of Florida.

Emily Rohm, a biology major from Lemont Furnace, who will pursue a master of science in auditory and language neuroscience at Arizona State University.

Connor Thropp, a physics major from Irwin, who will pursue a master of science in medical physics at the Warren Alpert Medical School of Brown University.

An earlier version of this article appeared on stvincent.edu on May 19, 2021. Information presented herein was accurate at the time of original publication, though may have changed since.

Engineering Students Embark on Creating Concrete Canoe

Under the guidance of Dr. Derek Breid, associate professor of engineering, six seniors – Reese Capo, Danielle Koehler, Michael Moresea, Eric Pennella, D.J. Rossi and Jonas Wudkwych – embarked on a year-long capstone project of building a functioning concrete canoe with the aim of sailing it on Saint Vincent Lake upon its completion.

Breid explained that the project is the product of the Engineering Department's revamped curriculum, which includes an emphasis on larger scope, group-based design projects for each students' required capstone.

"Last spring," Breid said, "I met with our junior students to give them an overview of what we're looking for in a capstone and asked if they had any ideas in mind as far as projects or applications. One of the things I suggested was taking a look at some of the design competitions sponsored by various engineering societies. Over the summer, I heard from two of the students, Danielle and Jonas, who had looked into the concrete canoe competition offered by the American Society of Civil Engineers (ASCE). This seemed like a doable project for where our program is right now and the students seemed really interested in it."

Since the beginning of the fall semester, the group has been tasked with every aspect of planning and constructing a functioning canoe. Such a broad project mirrors many real-world engineering projects, which require the cooperation of a group of engineers, each with a different specialty.

"This project brings in a lot of areas of engineering and a lot of concepts that maybe not every student has experience with," said Breid. "It providese an opportunity for a chemical engineer, a material engineer and mechanical engineer to all work together."

He noted that the students concentrating in chemical and material engineering have been working to develop the proper mix of concrete and the process by which it is mixed, poured and cured, while the mechanical engineering students are tasked with analyzing the stresses produced by the canoe supporting its own weight and the weight of its occupants, while floating in the water.

"Part of the requirements," he said, "is that the students are to analyze the design by modeling these stresses that are going to be put on the canoe and modeling the flotation. This includes measuring the force that the water is putting on the canoe, plus the canoe's own weight and the weight it will be carrying. Doing mechanical analysis is a big part of it, as they'll be modeling the stresses that are going to be developed and then work with materials engineers to see if the concrete mix works."

Wudkwych, whose focus is mechanical engineering, has enjoyed working in a group setting and has been fascinated by watching the progress made.

"It has been great having a group of students with such different interests and knowledge working together. My focus has been working on the hull shape of the canoe and ensuring that it will float. We have two basic groups: the chemical and material engineering students are focused on the concrete mixture, while the mechanical students are working on the physical hull design. It has been really interesting applying the knowledge gained from school to a real-world problem."

Koehler, who also has a mechanical engineering focus, said that projects like this are what initially drew her to the engineering field.

"My favorite aspect is watching the canoe become alive," she said. "Taking an idea and building it is why I became an engineer in the first place. I have come up with so many designs, but have never actually built them. Now, I have the opportunity to bring an idea to life. We all intend to be paddling in Saint Vincent Lake before the end of the semester."

The group met twice a week during the fall 2020 semester to conduct research, test concrete mixtures and create the design of the canoe. They moved into the building stage in February and had the canoe ready to test by the early spring. While they are proud to be the first Saint Vincent contingent to take part in the concrete canoe capstone, Wudkwych and Koehler said that being the pioneers also comes with some challenges.

"We don't have anyone that we can readily ask who actually has experience working on a concrete canoe," said Wudkwych. "While we can research other schools in past competitions, it isn't a replacement for actually experiencing completing a build."

Koehler agreed, saying that it's difficult to know whether the group is always on the right track, but she has faith in her and her colleagues' work.

"We feel that we have put in a lot of effort up to this point and are confident that it will work out as planned."

Though they may be the first SVC group to take part in the concrete canoe capstone, they don't plan to be the last and have recruited a trio of underclass engineering major: juniors Anthony Berardelli and Zachary Kuzel and sophomore Cara Luallen. "We felt if we invited underclassmen to join the project," said Koehler, "the project could continue in the coming years."

The students followed rules and parameters from previous ASCE concrete canoe competitions and are planning to form a chapter of the society at Saint Vincent, which will enable SVC to take part in future competitions. While they may not get to showcase this year's project on a national level, Breid feels that the students are amassing significant hands-on experience that will prove invaluable for their future.

"This gives students experience in teamwork, designing, planning, building and testing," he said. "We talk about career readiness and how to talk about yourself in interviews. How are they going to set themselves apart in an interview from someone who may have gone to a larger school? This capstone project is one of the ways. It's something that's pretty unique here."

An earlier version of this article appeared on stvincent.edu on April 7, 2021. Information presented herein was accurate at the time of original publication, though may have changed since.

Mary R. Anand Named 2021 President's Award Recipient

Senior biochemistry major Mary R. Anand has been named the winner of the 47th annual Saint Vincent College President's Award. The College's highest honor, the award is annually presented to a member of the graduating senior class who best embodies what the Catholic, Benedictine, liberal arts and sciences college values in its students – outstanding academic achievement, student leadership and community service.

In bestowing the honor on Anand, College president Father Paul R. Taylor, O.S.B., commented, "For her academic accomplishments and conscientious, insightful approach to learning; for the ways in which she exemplifies a holistic education rooted in the liberal arts and sciences by integrating her coursework with her vocation, including an exploration of the relationship between theological teachings and her career aspirations to become a physician; for her leadership in academics, service both locally and abroad, campus ministry and student life; and for embodying the mission of Saint Vincent College by undertaking the opportunity for a transformational experience of the mind and spirit: it is my honor as president of Saint Vincent College to convey upon Mary Anand the President's Award on the fifth day of May, 2021."

A native of Wexford, Pennsylvania, Anand has been named to the Dean's List in each of her seven semesters at Saint Vincent College. She is a Benedictine Leadership Studies fellow in addition to being enrolled in the SVC Honors Program, and she has earned inductions into the Alpha Lambda Delta, Gamma Sigma Epsilon and Alpha Chi honor societies. Anand has beemn a member of the SVC Respect Life Club for four years, serving as secretary her senior year, and has volunteered with Bearcat B.E.S.T. as a Bearcat Buddy for the past three years.

For the duration of her time at SVC, she has been active with Campus Ministry, regularly serving as lector, eucharistic minister and altar server. She was also honored to have the opportunity to deliver the "I Have a Dream" speech at the College's 2018 celebration of Rev. Dr. Martin Luther King Jr. Day.

She is a mentor for the American Medical Student Association, having presented seminars on MCAT preparation and sharing her experiences on applying to medical school with her fellow SVC health professions students. Off-campus, she has volunteered at the Mission of Mercy Clinic and has worked at Canonsburg Hospital as a patient fall prevention volunteer, purposeful patient volunteer and general volunteer.

In 2019, Anand was named Outstanding Intern in the Allegheny Health Network Singer Medicine Institute research internship program as a member of the gastroenterology research team under Dr. Shayam Thakkar. Also in the summer of 2019, she took part in the Faith, Work and God in India service-learning trip, where she volunteered at the Missionaries of Charity Home for disabled girls in Kolkata.

She is the daughter of Herm and Anita Anand and the older sister of Joseph, Thomas and Regina Anand. A member of Saints John and Paul Roman Catholic Parish in Sewickley, Pennsylvania, Anand is certified by the Diocese of Pittsburgh as a Level 1 Catechist in the Catechesis of the Good Shepherd program.

Following graduation, she will pursue a medical degree with plans to become a physician scientist, performing both clinical care and medical research.

An earlier version of this article appeared on stvincent.edu on May 5, 2021. Information presented herein was accurate at the time of original publication, though may have changed since.

WATCH THIS!

Engineered Musically
https://youtu.be/9VLZPsRanMU

SVC Student Nick Pietrusinski, a double major in music and engineering with a minor in mathematics, embraces the opportunity to blend the arts and sciences at Saint Vincent College. Merging his interests in these distinct programs has Nick on a path to success while pursuing his passions.

Austin Kemp administers a vaccine at the April 21 vaccination clinic in the Fred M. Rogers Center.

SVC Community Bands Together in Vaccination Efforts

Saint Vincent College has served as a regional hub for public vaccination efforts since the public launch of the Moderna and Pfizer vaccines in late January.

Through Saint Vincent College's partnership with Mainline Pharmacy, more than 17,000 doses have been distributed at twice-weekly vaccination clinics held in the Fred M. Rogers Center during the past three months, staffed primarily by volunteers from the Saint Vincent student body, staff and administration.

The clinics were initially limited to the 1A group for the first eight weeks, but as the public vaccination rates have increased, so has the list of those eligible to receive the vaccine. As a result, a special vaccination clinic was held for Saint Vincent College students and community members on Wednesday, April 21.

For the duration of the COVID-19 pandemic, Dr. John Smetanka, vice president for academic affairs and academic dean, has been leading the College's health and safety efforts as chair of the SVC Forward Together Advisory Committee. Also the driving force behind launching the College's partnership with Mainline Pharmacy, Smetanka stressed the significance of being able to offer a clinic solely to the SVC students and community.

"Not all colleges have the opportunity to offer vaccinations on campus, especially small colleges without a medical school or hospital," he said. "Having the Mainline clinics on campus has provided a rare opportunity for our students to both get the vaccine themselves, and also to support the community. This vaccination clinic marks an important milestone in our efforts to contain COVID-19.

"Many students," he added, "have been vaccinated already through volunteering at earlier clinics in February and March."

The volunteer roles by the SVC students have included checking in patients, scheduling patients' second doses, parking lot management, shuttling patients and guiding patients throughout the Rogers Center.

Recently, this list of volunteer roles has grown, as students in the Saint Vincent College/Carlow University collaborative bachelor of science in nursing (BSN) program have been entrusted to administer the vaccinations, enabling them to garner important hands-on experience while also helping the community curb the spread of the virus.

Smetanka proposed the idea of having nursing students administer vaccines to Carla Tomas, director of the Saint Vincent/Carlow BSN collaboration, shortly after forming the partnership with Mainline Pharmacy. Tomas promptly accepted the offer, and after her students received extensive vaccination training during the early weeks of the semester, they delivered their first shots in the Rogers Center as part of their clinical training.

"Because they are students and aren't yet licensed," Tomas explained, "anything that they do related to giving medication or a vaccination has to be overseen by a licensed faculty member. So, the best way for us to give them this experience of giving a vaccine was to have the vaccine clinic take the place of a typical clinical day, when they normally would have been at the hospital."

The nursing students work the vaccination clinics each Friday in the Rogers Center from 9 a.m. – 2 p.m. in lieu of their typical clinical day, scheduled on Mondays from 7 a.m. – noon at Excela Westmoreland Hospital. While this new arrangement has forced some scheduling adjustments, Tomas said that there was no hesitation on the part of both her students and their faculty at Excela Health.

"Everyone was willing," she said. "They understand the importance of it and want to be part of something good."

During the special Saint Vincent vaccination clinic on April 21, senior Austin Kemp was among the nursing students who administered the Pfizer vaccine. A native of Sarver, Pennsylvania, Kemp was thankful for the opportunity to help his fellow students and the community.

"I think that it's a great opportunity," he said. "Obviously, this pandemic has affected everyone's lives dramatically. To be in the health care field is an honor in itself, and to be able to help during the pandemic is an incredible experience."

The April 21 clinic marked the third time at which Kemp administered vaccines after receiving extensive education and training.

"In class," he said, "we really covered in-depth how to distribute medication, and immunization shots in particular. It's been really cool to be able to apply what we've learned like this. We all really jumped at the opportunity to help. It's very important to get the vaccine in order to effectively protect ourselves, our family members and everyone else, and I'm pleased to be able to help."

Fellow nursing major and vaccinator Nicole Abrams, a junior from Pittsburgh, was excited when she first learned that the Rogers Center would be a vaccination site. When she received word that she and her classmates would be given the opportunity to actually administer the vaccines, she was even more overjoyed.

"I just really love it," she said. "We can just come down here, right on our campus, to volunteer and get this experience."

Among the score of students that Abrams vaccinated during the April 21 clinic was her roommate, Cara Luallen, a junior engineering major from Pataskala, Ohio. She had been eager to get vaccinated since the vaccines were first approved shortly after Christmas, and even considered traveling the 200 miles back home to do so. When she learned of the clinic coming to Saint Vincent, she was elated.

"I was very excited that the vaccinations were being offered here," she said. "I am glad I was able to do it here so super conveniently. It's incredible. It's such a good opportunity, and I am glad that it has been offered to everyone."

Tomas, who is also a member of the Forward Together Advisory Committee, has

continued

Students enrolled in the SVC/Carlow University collaborative BSN program at the April 21 vaccination clinic at the Fred M. Rogers Center.

continually reiterated to her students the importance of being vaccinated.

"I tell them that if things are ever going to get back to normal on this campus," she said, "it's because we achieved herd immunity, which is done through immunization. I've had students tell me that they are tired of being contact traced and tired of being quarantined, so they got the vaccine. That's what it takes.

"One of our students here today," she continued, "said that she was able to convince her friends to get the vaccine because she was the one who would be giving it."

Luallen realizes that some have been tentative about receiving the vaccine, but said that she never hesitated to do so because of both its effectiveness and the hope that it could help hasten the return of normalcy to daily life on campus.

Nicole Abrams administers a vaccine at the April 21 vaccination clinic in the Fred M. Rogers Center.

"I can understand why people were nervous," she stated. "You hear of people who may have had issues with vaccines in the past. But, I think getting this COVID vaccine is very important. It's going to help the common good for everyone, and it's going to help us just get back to normal."

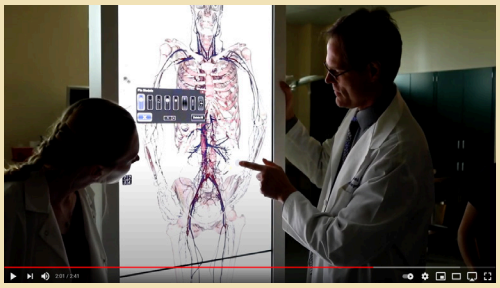
Having overseen Saint Vincent College's response to the pandemic for the past year, Smetanka said that he is proud of the resiliency, compassion and dedication shown by the SVC community in mitigating the spread of COVID-19. He acknowledged that its disruption to normalcy has forced many great sacrifices but reinforced that as more members of the community get vaccinated, the return to normal will be sooner.

"Having a significant fraction of the campus community vaccinated takes us one step closer to full classrooms, dining rooms, bleachers and concert venues," he said. "It's one step closer to visitation in residence halls, welcoming visitors to campus and not having to be physically distanced in social situations.

"Plus," he continued, "reducing the number of COVID-19 infections is central to eliminating the possibility of more contagious variants developing and to finally putting this pandemic behind us for good."

An earlier version of this article appeared on stvincent.edu on April 23, 2021. Information presented herein was accurate at the time of original publication, though may have changed since.

In spring 2021, Saint Vincent College students studying health sciences were introduced to the new, state-of-the-art Anatomage Table, the most technologically advanced 3-D anatomy visualization and virtual dissection school for anatomy and physiology education. Located in the Liberatore Human Anatomy Lab in the Sis and Herman Dupré Science Pavilion, the Anatomage Table allows for exploration and learning of human anatomy beyond what any cadaver could offer. The laboratory is used by undergraduate students for the study of human anatomy and physiology, facilitated by cadaveric dissection. The lab is also used by external clients for surgical training and demonstrations.



Anatomage Table
https://youtu.be/_N_6M4SEBTQ

WATCH THIS!

Cybersecurity Program Earns National Recognition

The National Security Agency (NSA) and Department of Homeland Security (DHS) have named Saint Vincent College a Center of Academic Excellence (CAE) in Cyber Defense Education for its bachelor of science program in cybersecurity.

The jointly sponsored award program aims to reduce vulnerability in our national information infrastructure by promoting higher education and research in cyber defense and producing a growing number of professionals with cyber defense expertise in various disciplines. The program takes into account an institution's academic program of study, including curriculum, faculty profiles and qualifications and maturity of the program.

"We are honored to receive this prestigious designation," said Dr. Stephen Jodis, dean of Saint Vincent College's Herbert W. Boyer School of Natural Sciences, Mathematics and Computing. "This recognition places us within a select group of colleges and universities across the country that offer cybersecurity programs that have this certification from the NSA. It also demonstrates our commitment to continue building high-quality programs in the sciences and in our Department of Computing and Information Systems."

Saint Vincent College is one of only 10 four-year institutions in the state of Pennsylvania to hold the honor of being a Center of Academic Excellence in Cyber Defense Education and will maintain the distinction through the 2024-25 academic year.

"This prestigious designation for our cybersecurity program is great news for our region, Saint Vincent College, the Computing and Information Systems Department and, most importantly, for our current and future students," said Dr. William Birmingham, chair of the Saint Vincent College Computing and Information Systems Department.

For its work in achieving the distinction, Birmingham lauded the SVC faculty and credited Dr. Anthony Serapiglia, associate professor and director of the SVC Center for Cybersecurity Studies, for spearheading the efforts.

"This was made possible by the leadership of Dr. Serapiglia," said Birmingham, "who developed the excellent curriculum and facilities required by the designation. Cybersecurity touches on all aspects of government, commerce, manufacturing and personal life. Through our department's cybersecurity degree program, our students will gain valuable and sought-after knowledge and skills to help ensure a more secure world."

Dr. Anthony Serapiglia presides over a class in the Sis and Herman Dupré Science Pavilion.

"This acknowledgment of our program is very important to all of us in the Computing and Information Systems Department here at Saint Vincent," stated Serapiglia. "Over the past decade, we have put together our cybersecurity program thoughtfully, focusing on areas we knew would be of value to our students and the community. This is validation that we have made the right choices along the way in developing our courses and curriculum."

The designation was awarded following a thorough evaluation by the NSA, DHS and Central Security Services. Among the required benchmarks were the program's curriculum, as well as community outreach, collaboration with other programs, faculty research and student activities and competitions.

"This was a very rigorous process," stated Jodis, "and this achievement is a testament to the hard work and perseverance of our faculty."

"After a self-evaluation of our program and institution," said Serapiglia, "we realized that we had a very strong existing program that only needed a few additions to meet the award's requirements. Over the past three years, we've been able to strengthen the program and integrate those last couple of pieces to be able to enter the application process."

Serapiglia explained that the program's rigorous curriculum was thoroughly vetted, being evaluated on 22 total knowledge units containing specific topic items and outcomes. Eight of the items are the core fundamental areas of cybersecurity, while the other 14 are optional areas that highlighted SVC's cybersecurity program's strengths and differentiated it from others, including forensics, networking, ethics and cryptography.

"In the end," he said, "there were 272 topics and 74 outcomes that we had to prove are included within our program. We cover that through a subset of 11 courses that are required as part of the cybersecurity degree."

Among the factors that the evaluation took into account beyond the curriculum was how Saint Vincent College as a whole embraces the ideals and everyday awareness of cybersecurity issues.

"We had to engage administration, other departments and student groups to show that this exists outside of our classroom and our department," Serapiglia said. "Everyone involved stepped up and helped out. It is amazing when you reach out and start to look around campus to see how many other areas are already addressing various aspects of cybersecurity, whether they know it or not. Areas such as social media, e-commerce and supply chain, online bullying, privacy and regulatory compliance all have aspects that address cybersecurity."

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Serapiglia also lauded the SVC cybersecurity students for their proactive approach in raising awareness and educating the community on the importance of cybersecurity. The SVC Cybersecurity Club has offered presentations at Latrobe's Adams Memorial Library and for the Franklin Regional School District, while also taking part in competitions against students from other institutions, including the Mid-Atlantic Collegiate Cyber Defense Competition this past spring.

"These types of student activities are essential to maintaining both the technical area and the interpersonal skills necessary to interact with multiple audiences in the workplace," he said. "They proved to be an invaluable portion of our application and an integral part of our program."

Along with gaining recognition on the national scale, Serapiglia noted that a number of benefits come with being named a Center for Academic Excellence for both students and faculty.

"For our students," he explained, "it immediately provides access to a pipeline of government positions and other job opportunities. There are CAE-exclusive job fairs and possibilities for scholarships. The notation they will have on their transcript and their résumés will help their applications stand out in any venue.

"For our faculty," he continued, "there is a vibrant research community to collaborate with and learn from. The CAE program sponsors regional resource centers for workshops, training and consultation. As we continue to grow and expand, we are always looking to forge partnerships with industry and outside organizations. Having this designation is a major calling card that announces the quality and standing of our program."

With a growing focus on cybersecurity throughout the world, the number of colleges offering cybersecurity programs continues to increase. Serapiglia said that at Saint Vincent, however, cybersecurity has been incorporated into the CIS program for decades, which is another factor that has enabled SVC to stand out.

"This has given us experience in developing and evolving a mature program," he said. "We've been able to take a very strong computer science foundation and expand it to focus on and apply to areas of demand and need for today in cybersecurity. We provide a lot of hands-on experience in our labs that really lets students experience what tasks are actually like, rather than simulated virtual exercises. This is one of the aspects that allows our students to enter the workforce ready to hit the ground running, already over any fear factor of touching things for the first time."

Serapiglia also feels that the Catholic, Benedictine, liberal arts foundation that students receive during their Saint Vincent College careers is invaluable.

"The core curriculum demands that students hone their critical thinking, writing and presentation skills," he said. "Taking courses in philosophy and theology provides reasoning and moral and ethical guidance. Combining these with the technical skills from our department makes for a noticeable difference that we hear about all the time from employers who have hired our graduates or sponsored internships. A person who holds a Saint Vincent College cybersecurity degree is absolutely like no other cybersecurity graduate anywhere else. They really stand out."

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Having now achieved a level of national prominence, Serapiglia is excited to see what the future holds for SVC's cybersecurity program and looks forward to helping it continue to grow.

"Being included on the national list of recognized Centers of Academic Excellence allows anyone in the country – and the world – to see our program," he said. "It introduces us to a much wider audience and affirms our standing on an exclusive stage. It may sound cliché, but receiving this designation is not the finish line. It's a launching pad from which we are going to continue to grow this program. We've been able to put in place a program that is graduating students who contribute immediately and greatly in an area of much need and importance today.

We want to take this program and continue to push it forward. This opens the door to many opportunities and we are very excited about the future."

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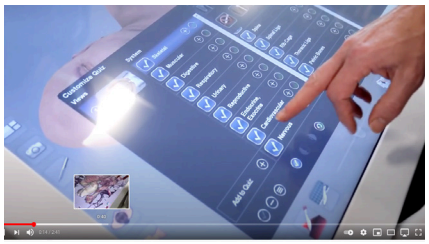

Saint Vincent College Nursing Simulation Laboratory

https://youtu.be/gOntBEuK4V4

How does simulation technology promote an excellent learning experience? See it all come together in the nursing sim lab at Saint Vincent College.

An earlier version of this article appeared on stvincent.edu on July 2, 2020. Information presented herein was accurate at the time of original publication, though may have changed since.